

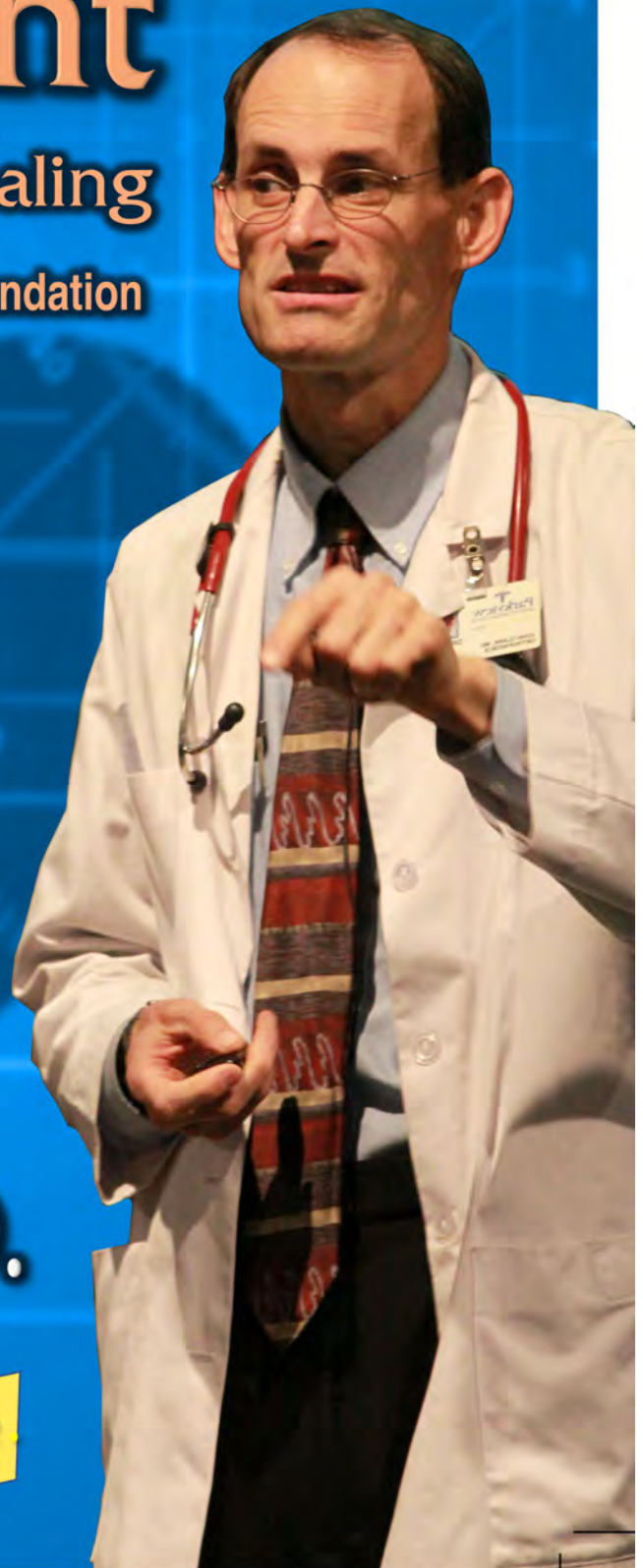
Blueprint

For Health And Healing

Reversing Disease From Its Foundation

John Clark, M.D.

A Medical Missionary Resource



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FOREWORD

I could hear the scream of the siren in the background as I took the radio call from one of our ambulances. “We have a 49-year-old male who was unconscious on the scene. He has no pulse. We shocked him 3 times and are bagging him and doing chest compressions. We are 2 minutes out.”

“Okay. We’ll get the team ready. You’ll be in trauma bay 1,” I responded. As an emergency medicine doctor, this scenario was all too familiar to me. I knew what the likely outcome was going to be, but I always hoped for the best.

When the paramedics rushed into our emergency department, we directed them to trauma bay 1 and took over the patient’s care. We put a tube in his throat and continued breathing for him. We continued chest compressions. We started another IV and gave medications to try to get his heart started. We shocked him multiple times. But, in the end, his heart never beat again. And, yet again, I had to go tell another family that their loved one was dead. We did everything we could, but we couldn’t reverse, in a few minutes, what he had spent the last 47 years doing to himself.

It wasn’t just the heart attacks, which are almost exclusively the result of one’s lifestyle. It was the diabetic patients with foot infections requiring amputation. It was the cancer patients with intolerable pain. It was the autoimmune patients with painful and debilitating flair-ups. It was the congestive heart failure patients struggling to breathe, their lungs full of fluid. The vast majority of these could have avoided their health problems by applying simple lifestyle principles to their lives.

Eventually, I left the emergency department work forever. Instead, I transitioned to a

practice that exclusively utilized lifestyle interventions and natural remedies. Instead of putting people on medication, I took them off it. I learned how to use those simple lifestyle principles to help people change their lives around for good.

As I was transitioning from emergency medicine to lifestyle medicine, I came across Dr. John Clark’s work. He made the transition from a conventional practice to a lifestyle practice several years before I did and had produced a number of excellent articles on various diseases and the lifestyle factors and natural remedies that could help reverse them. I was impressed by how thorough his articles were and by how extensively scientific they were (with upwards of 250 scientific references in some of his articles). I studied those articles as I was learning how to treat my own patients, and I saw the positive results firsthand.

Of course, Dr. Clark has seen the power of these principles in his own practice, as he has counseled with many, many patients through the years and helped them to reverse their diseases. Those articles have been brought together in this book, *Blueprint for Health and Healing*. Those articles are now in your hands. And you can experience the profound results in your own life as you learn and apply these principles. So, study, underline, highlight, write notes, and most importantly, put into practice what you read in this book. It will make a tremendous difference in your life and your health.

Mark Sandoval, MD, President: New Paradigm Ministries, Former President & Medical Director: Uchee Pines Institute

WHY THIS BOOK?

“As religious aggression subverts the liberties of our nation, those who would stand for freedom of conscience will be placed in unfavorable positions. For their own sake, they should, while they have opportunity, become intelligent in regard to disease, its causes, prevention, and cure. And those who do this will find a field of labor anywhere.”ⁱ

KNOWING THE CAUSE HELPS DIRECT THERAPY

“Disease is an effort of nature to free the system from conditions that result from a violation of the laws of health. In case of sickness, the cause should be ascertained. Unhealthful conditions should be changed, wrong habits corrected. Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system.”ⁱⁱ

AN OUNCE OF PREVENTION...

“Teach the people that it is better to know how to keep well than to know how to cure disease.”ⁱⁱⁱ

CURE COMES WITH COOPERATION

“Natural means, used in accordance with God's will, bring about supernatural results. We ask for a miracle, and the Lord directs the mind to some simple remedy. We ask to be kept from the pestilence that walketh in darkness, that is stalking with such power through the world; we are then to cooperate with God, observing the laws of health and life. Having done all that we possibly can, we are to keep asking in faith for health and strength. We are to eat that food which will preserve the health of the body. God gives us no encouragement that He will do for us what we can do for ourselves. Natural laws are to be obeyed. We are not to fail of doing our part. God says to us, ‘Work out your own salvation with fear and trembling. For it is God which worketh in you both to will and to do of his good pleasure’ (Phil. 2:12, 13).”^{iv}

This book gives you background information on the causes of common diseases, plus simple natural remedies and lifestyle changes necessary to prevention and recovery.

ⁱ White, E. G. (1923). *Counsels on Health*. Mountain View, CA: Pacific Press Publishing Association. p. 506.

ⁱⁱ White, E. G. (1905). *The Ministry of Healing*. Mountain View, CA: Pacific Press Publishing Association. p. 127.

ⁱⁱⁱ White, E. G. (1912, June 6). “Home Preparation for Camp-Meeting.” *The Review and Herald*. Art. B, par. 8.

^{iv} White, E. G. (1958). *Selected Messages Book 2*. Washington, D.C.: Review and Herald Publishing Association. p. 346.

PREFACE

My journey from allopathic medicine, as an orthopedic surgeon,
to a true medical missionary.

My great-grandfather, Dr. Warner, the father of my maternal grandmother, was a medical doctor for the Sanitarium in Nevada, Iowa in the early 1900's. The sanitarium was built and operated by the Seventh-day Adventists. The emphasis of the Sanitarium was on disease prevention and health maintenance. (<https://www.amespubliclibrary.org/archive/1909/1447914-6>)

My Great-grandfather often took in patients who were sick with disease that Mayo Clinic had given up on and helped restore those patients to health without the use of drugs or surgery.

My maternal grandmother was a nurse that served as a Seventh-day Adventist missionary in Africa from 1926 to 1928.

My mother went to Loma Linda University School of Medicine in California and served as a missionary physician at a Seventh-day Adventist hospital in Monument Valley, Utah from 1978 to 1980.

My youth was filled with rich influence from my family and church to the wonderful joy of mission service. I heard and read about miracles and lives being saved both physically and spiritually. I longed to experience this joy and made decisions that set my course to be a medical missionary for Jesus Christ.

In my youth I learned farming and mechanics from my grandfather and father. In my first year of high school, I read the book "Counsels on Diets and Foods" and immediately changed to eating a completely plant-based diet. I was privileged to listen to many stories from returned missionaries. Sometimes I would work in the school kitchen and learned how to prepare and cook healthy food from the garden.

I also learned how to build, weld and plumb in high school and after graduating from high school, I worked at a boarding academy. There I learned the electrical trade.

From there I went to college and thought I should become an engineer because one of the stories that influenced me greatly as a boy was the story of Dr. Richli called "The Flying Doctor of the Philippines". Dr. Richli was a missionary medical doctor who was also a gifted self-taught engineer, who restored hospital facilities and designed and built hydro-electric plants to benefit the institutions he was serving.

During college, I took 15 months off from school to serve as a student missionary in the Philippines and Korea. In the Philippines I helped build a clinic and a church, and in Korea I taught English as a second language and witnessed five baptisms as a result of the Lord blessing my work. Upon return, I decided to change my major to pre-med because it seemed that the need was greater to help people with their health than to restore hospital facilities and design and build hydro-electric plants.

Upon finishing college, I applied to the General Conference of the Seventh-day Adventist Church to be on the deferred mission appointment program. This is a program where the conference agrees to amortize the student loans for a student to study medicine and then serve in the mission field for ten years. The conference helps place the physician where he or she can best serve the needs of the foreign clinics and hospitals.

To make a very LONG story short, upon completion of residency, I ended up in a situation where I was dropped from the

deferred mission appointment program due to a series of events that forced me to remain in the United States working as an orthopedic surgeon in the Midwest. This long story could be a book on its own but, to spare the reader and myself, the bottom line was that I found myself in an extremely distressing position.

Everything I had been working toward and looking forward to was no longer accessible to me. Instead, I was stuck in a contract at a hospital with a very large university school debt and I was unable to locate my wife and two children, who had disappeared without a trace.

After many months, while working full time as a new young surgeon, my wife surfaced far, far away and had no intention of keeping our marriage vows. She proceeded with divorce in spite of my pleas to return, and after the divorce she married the other man.

I found myself working in a medical system that I was discovering to be a living nightmare. One day, I recall looking down the hall and saw a woman who had been my patient, coming into my clinic to give money to my secretary with coins. After she left, I asked my secretary why she was there, and she explained to me that she was making a small weekly payment with coins for a bill that came to her for my services. Mind you, I was not self-employed. I was an employee of a medical group.

I was utterly horrified. I told my secretary to cancel the bill for that woman. The nightmare was beginning to dawn on me of the unbelievable system I was in.

I was working in a system that was very political and rife with undercurrents. There was competition and massive pressures. There were patients who were seekers of drugs, work comp and disability. I was in a place I never intended to be.

One day, my pastor from the local church I attended, encouraged me to help him with health ministries for the church and community. At that time, I was friends with Don Macintosh in Kansas, who was involved with the Coronary Health Improvement Project (i.e. CHIP) with Dr. Hans Diehl. And so, I shared with my pastor all

about the CHIP program and how getting training for that would be a great program to do for the church and community.

After attending the training for CHIP with my pastor, we found out the hard way that the majority of the church and community there in Iowa where we lived were not at all interested in changing their diet and so our burden for health education did not achieve any results at that time.

Within a couple of years of my being divorced, I met my current wife. We married, had a baby and then in 2005, we relocated to a place where I took a position as an orthopedic surgeon for a small independent Seventh-day Adventist Hospital in Brunswick, Maine. This hospital had an in-house program structured very similar to the CHIP program, only the health education lectures were given by doctors who practiced at the hospital.

Soon after I arrived to work there, I began giving health education lectures for their program on the topic of arthritis. I then was asked by the wellness nurse to create another lecture on osteoporosis. Not long after that, I made one for diabetes. The way I did this was to research the counsels given in the Spirit of Prophecy and the Bible, and then find the science and research that verify it.

The hospital became excited about my health lectures and began having me give them for the local community around the hospital on a regular basis, as part of the public relations program. The meetings became popular and often the venue was filled to its maximum capacity, so that they would have to either turn people away or do a second meeting for those who missed the first one.

Also, during this time, the conference president would come around monthly to the hospital board meetings, and he began asking me to help him with health ministries for the conference. After several requests, I was finally convinced.

I then began working with the conference evangelist and the conference director of literature evangelism and very quickly I found

that my work at the hospital was conflicting with my health ministry work.

Meanwhile, strange things were taking place in the hospital that were directly involving me that is beyond what I could briefly describe here. Let's just say it was deeply disturbing and I was feeling convicted that I could no longer work in the hospital system, nor the medical system, also known as allopathic medicine. I will give you one small example. A gentleman came to the hospital with necrotizing fasciitis of his elbow. After his surgery, the next morning while I was making rounds, I was with him in his room and the dietician came in to get this man's wishes for his diet. Part of what she offered him was a few different desserts. I spoke out and said, "You don't want any of those!" They both laughed and he picked one. I then said, "I am trying to keep you alive!" They chuckled and his choice was made in complete dismissal of my comments and recommendation. It is a strange thing that a patient will come to a doctor and ask the doctor to save them but then will ignore and/or reject anything outside the scope of medication and surgery.

It was in early 2006 that I took an enormous step of faith. I resigned from the hospital and left my practice to do full-time faith-based health ministry. My conviction was that Jesus never charged anyone to help them with their health and so I too did not charge anyone for the health ministry I felt the Lord was calling me to. We cashed in our retirement fund and began living off -our savings. We accepted donations but did not solicit them.

I began receiving call after call and traveled all over the United States doing health programs for churches and schools. People seeking relief from sickness would approach me privately. I

have seen countless hopeless cases turn around and people being restored to good health. I have been on many television and radio programs in the United States and around the world. We went to Australia for just under five years and did the same there.

Since the COVID pandemic struck in 2020, we have traveled very little, but my work as a medical missionary and health educator has not diminished. Instead, it just changed from traveling to be on location to staying at home and "zooming" online into all kinds of meetings, all over the world.

God has continued to be faithful. We have never failed to experience His watch care and support. If we are faithful to Him and His work, He will provide for all our needs.

Since this ministry's inception, my wife always encouraged me to make my presentations in written form in addition to the video form. She prefers to read information rather than hear it and so I have been doing that all along. Many of the topical chapters in this book took me well over six months of research to put together.

Recently, my wife began considering that maybe we should publish the many papers I have written since 2006 into a book and that is how this book came about.

In closing, true medical missionary work, compared to that of allopathic medicine, seeks to find the cause of the disease and correct it rather than just treat the symptoms. I hope that this book will be a valuable resource for those seeking to find the cause of the diseases from which people suffer and to provide ideas useful for the treatment and reversal of many of the illnesses plaguing society today.

“Nature will want some assistance to bring things to their proper condition, which may be found in the simplest remedies, especially in the use of nature’s own furnished remedies--pure air, and with a precious knowledge of how to breathe; pure water, with a knowledge how to apply it; plenty of sunlight in every room in the house if possible, and with an intelligent knowledge of what advantages are to be gained by its use. All these are powerful in their efficiency, and the patient who has obtained a knowledge of how to eat and dress healthfully may live for comfort, for peace, for health, and will not be prevailed upon to put to his lips drugs, which, in the place of helping nature, paralyzes her powers. If the sick and suffering will do only as well as they know in regard to living out the principles of health reform perseveringly, then they will in nine cases out of ten recover from their ailments.”ⁱ

- E.G. White

ⁱ White, E. G. (1932). Medical Ministry. Mountain View, CA: Pacific Press Publishing Association. p. 223.

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Section One:

Reversing Disease from Its Foundation

How to use this section:

Read the chapter pertaining to the condition you hope to learn more about, then go to the chapter entitled, “How Can I Apply Healthy Principles in My Daily Life?” and organize what you have learned into a systematic daily lifestyle program to get results.

“Sugar clogs the system. It hinders the working of the living machine.”ⁱ

– E. G. White

ⁱ White, E. G. (1923). Counsels on Health. Mountain View, CA: Pacific Press Publishing Association. p. 149.

Chapter 1

DIABETES: THE BUTTER WITH THE SWEET

March 1, 1954. The United States tested the largest nuclear device ever tested, and they tested it in the Marshall Islands of the South Pacific. It was 1,000 times larger than the atomic bomb dropped on Hiroshima. It sent a cloud of fire 100,000 feet into the air. The heat created gale force winds that blew vegetation from surrounding islands. The Marshallese were not amused. Enraged, they raced to court and sued the United States government. The United States conceded, and money started rolling into these remote South Sea Islands.

But what does an islander do with money on an isolated island? Soon products had to be imported to spend cash on. People who once subsisted on tropical fruits, vegetables, and fish, now became enamored with Spam and frozen turkey tails, (as well as other convenience foods high in fat, salt, and sugar, and low in nutrition.) The health results of such lifestyle changes quickly became apparent. Type II diabetes, almost unheard of in the Pacific islands prior to these dietary changes, now rendered 30% of the people over age 15 diabetic, with resultant high rates of hypertension, cardiovascular disease, kidney failure, eye disease, and amputations.¹

“But I thought diabetes was inherited.” someone may be thinking.

Inherited from the grocer, I might caution.

WORLDWIDE EPIDEMIC

Sadly, diabetes proliferation is not limited to the Marshall Islands. Worldwide, diabetes is expected to increase by 46% in the next 10 years. The largest increases will be in the developing countries of Africa, China, India and South America²—countries that can ill afford the increased medical complications and costs associated with such a disease.

Nor is the United States immune to such increases in the number of diabetics. According to the CDC, the U.S. had 5.8 million diabetics in 1980. By 2005 this number had jumped to an all-time high of 20.8 million³, and we know the population has not tripled during that same time. If diabetes were inherited we would have to conclude that diabetics are having far more babies than the rest of society! This is not actually possible because diabetics have difficult pregnancies.

“What are my chances of getting diabetes?” someone may be wondering.

Lifetime risk of getting diabetes in the United States for Caucasians is 39% for women and 33% for men. Hispanics suffer a little higher incidence at 53% for females and 45% males.⁴

Diabetes is one of the greatest causes of amputations in the United States. A diabetic has ten times the risk of amputation. There are over 80,000 amputations per year in diabetics alone.

The American Diabetes Association estimates the 2002 total cost for diabetes in the United States at \$132 Billion. With the rise in diabetes, they calculate that by 2020 we will be spending nearly \$200 Billion on diabetes.⁵

COMPLICATIONS OF DIABETES

Diabetes causes multiple complications, if blood sugar is not controlled. Complications can take many forms, and can occur in various places throughout the body.

Heart disease⁶ and stroke⁷ kill 80% of diabetics.

Three out of four diabetics have high blood pressure.⁸

Diabetes is the number one cause of blindness accounting for 24,000 new cases each year.⁹

In 2005 there were 46,000 new cases of kidney failure resulting from diabetes, and an ongoing total of 179,000 cases.¹⁰

Thirty to 50% of diabetics suffer nerve damage that results in carpal tunnel syndrome,¹¹ pain or numbness in the feet or hands (peripheral neuropathy),¹² and slowed digestion of food.¹³

Diabetes is one of the greatest causes of amputations in the United States. A diabetic has ten times the risk of amputation. There are over 80,000 amputations per year in diabetics alone.¹⁴ Diabetics who experience amputations on both legs never get back to walking like they once did.

Diabetics are 10 to 34% more likely to become depressed.¹⁵ They experience more mood and memory changes, and studies show that their brains actually shrink.¹⁶

Infections occur more frequently in diabetics making them more likely to die from pneumonia or influenza. Life expectancy of diabetics is reduced by 12-14 years.¹⁷ Not only does diabetes shorten one's life, but it more than triples the risk of ending up in a nursing home in middle age.¹⁸

HISTORY OF DIABETES

The earliest recorded history of diabetes comes from Egypt in 1552 B.C.¹⁹ It is interesting to note that this would have been around the time that the Israelites were enslaved in that country. Upon emancipation, scripture records that God told them, "If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the LORD that healeth thee."²⁰ Apparently, if the Israelites followed God's instructions they would be spared the metabolic syndrome embarrassment.

WHAT IS DIABETES?

Diabetes is too much sugar in the blood and urine. Blood sugar is tested on a fasting blood test. Normal blood sugar should be between 70-99 mg/dl. A blood sugar after fasting of between 100-125 mg/dl is defined as pre-diabetes. Any fasting blood sugar above 125 mg/dl confirms the diagnosis of diabetes.²¹

WHAT CAUSES DIABETES?

In an effort to answer this question, Dr. James Anderson, renowned diabetologist, decided to feed healthy young men two pounds of sugar a day and check for signs of diabetes. Thirteen weeks into the study there were still no signs of diabetes.²²

"I thought diabetes was too much sugar in the blood and urine," you may be thinking.

Recent research has confirmed the real culprit—fat. People on a low-fat diet, (10-15% fat calories), where the fat comes from vegetable sources, have a relatively low risk of getting diabetes. On the other hand, people eating 46% of their calories as fat have a 40% higher risk of diabetes. Certain fats are especially dangerous. Just 3% of calories coming from trans-fat will raise the risk of diabetes by 44%, and 270 mg of cholesterol, little more than that found in one egg, will increase the risk by 60%. If the majority of fat in the diet, (36% of calories), comes from saturated fat (usually animal sources) the risk of diabetes goes up to 64%.²³ Animal studies have shown that increasing the fat intake to 65% of calories increases the incidence of diabetes by 350%.²⁴ Fat makes a difference!

Various fats have different physiological effects on the body. Saturated and trans-fats tend to increase cholesterol, raise blood pressure, and diminish the good HDL cholesterol levels. They also increase the risk for heart disease, stroke, certain cancers, and diabetes.^{25,26} Unsaturated fats, taken in their moderate amounts, (10%-15% of calories), tend to lower cholesterol, help maintain healthy HDL levels, provide essential fatty acids, and lower the risk for heart disease, stroke and diabetes.^{27,28}

Some of the healthiest fats comes from natural plant sources. Five servings of nuts a

Diabetes: The Butter with the Sweet

week have been shown to decrease the incidence of diabetes by 30%.²⁹ Unhealthy fats tend to come from fast foods, which are high in fat and low in nutrition. Two or more fast food meals per week will not only increase obesity but also can double the risk of diabetes.³⁰

Fat is not the only culprit in fast foods; one sugar-sweetened soft drink per day can increase the risk of diabetes by 83%.³¹ These drinks are sweetened with a sugar once thought to be of no harm to diabetics because it did not increase the sugar measured in blood tests. The problem with this theory is that fructose is not the sugar being measured in tests for total blood sugar. As it turns out, refined fructose is more dangerous for you than other available sugars.³² Some sources of refined fructose include corn syrup, high fructose corn syrup, and agave syrup. Now this is not to say that the small quantities of naturally occurring fructose found in fresh fruit, well balanced with all the other nutrients, is a problem, it is not.³³

There are other causes of diabetes. Remember the old “four food group” posters that hung on grade school classroom walls – dairy, meat, grains, and plant foods? These posters were not an initiative of the National Institute of Health or National Academy of Sciences, they were an advertisement. Studies show that milk and red meat consumption increases insulin resistance leading to the development of obesity, cardiovascular disease, and diabetes.³⁴ Meat is not friend to the diabetic. Just 4-ounces per day of beef, lamb, pork, or hamburger, increases the risk of diabetes by 20%. Process that meat, e.g. bacon, hot dogs, sausage, salami, bologna, etc., and just 2 ounces per day will increase your risk of diabetes by a whopping 50%!³⁵

Stimulants can also increase diabetes. Smoking increases the risk of diabetes by 60%.³⁶ Caffeine increases diabetic blood sugars by 28%³⁷ and decreases the effectiveness of exercise in lowering blood sugar.³⁸ Alcohol increases obesity and destroys the pancreas’ ability to produce insulin.³⁹ Narcotics increase insulin resistance within the cells.⁴⁰ Even excess salt increases your risk for diabetes.⁴¹

DRUGS And DIABETES

There are certain prescription drugs that increase the risk of diabetes. Blood sugars tend to be harder to control with the use of some blood pressure medications (thiazide diuretics and beta-blockers, etc.), atypical antipsychotic drugs (Clozapine, Zyprexa, Seroquel, etc.), steroids such as prednisone,⁴² and oral contraceptive pills.⁴³ The risk of diabetes goes up by 48% to 71% with use of cholesterol lowering statin drugs.^{44,45} And, what about diabetes medications themselves. In a 4 year study, aggressive blood sugar control with typical diabetes medications and/or insulin increased the risk of dying by 20%.⁴⁶ Drugs do not cure disease.

EMF and Diabetes

Do you love your smart phone, wifi, smart meter and wireless devices? Think again. Electromagnetic fields (EMF) generated by these devices are known causes of blood sugar elevations. Living within 600ft of a cell phone tower can significantly raise your risk of diabetes.⁴⁷

Late Dinner and Late Bedtime

Eating a late dinner, as most Americans are accustomed too, influences the bodies ability to process sugar negatively, giving rise to glucose intolerance, which over time results in diabetes.⁴⁸ The best practice is to maintain a healthy two meal a day schedule--breakfast and lunch.⁴⁹ The more regular you can keep your schedule the lower your risk of diabetes.^{50,51} A regular bedtime, before 10:00pm, decreases not only the risk of diabetes, but stroke, hypertension, cardiovascular diseases, and obesity.⁵² In fact, going to bed between 6:00pm and 10:00pm cuts the risk of diabetes in half!

“DIABESITY”

Obesity is one of the most powerful risk factors for type 2 diabetes.⁵³ While people that are considered underweight have a 7% lifetime risk of acquiring diabetes, those who meet the criteria for “very obese” have a 57% lifetime diabetes risk.⁵⁴ In fact, just 2 pounds weight gain

can increase the risk of diabetes by 4%.⁵⁵ As more and more Americans become obese, the number of diabetics goes up proportionately. The most dangerous fat is that which accumulates inside the abdomen, around the belly, by the organs—what we call central fat, or visceral fat. An increase in this fat increases resistance to the action of insulin and increases the risk of heart disease⁵⁶ and other complications.

STRESS: DIABETES AND OBESITY

People with type A personality tend to have more stress. Type A personalities have more than twice the risk of diabetes.^{57,58} Psychosocial stress unbalances the body's hormones promoting central obesity, diabetes, and cardiovascular disease.⁵⁹

WHY IS DIABETES A PROBLEM?

When fat cells are too full, as in obesity, they lose the ability to respond to insulin. The fatigued pancreas eventually loses its capacity to produce enough insulin, and blood sugar rises even higher.

Each fat cell has insulin receptors. When these receptors are stimulated by insulin they facilitate the passage of sugar into the cell. Think of insulin receptors as doorknobs and insulin as the doorkeeper who opens the doors. The way the cells regulate how much sugar they take in is by increasing or decreasing the number of insulin receptors (doorknobs) available for insulin to activate (open the door to sugar). For example, a normal cell puts some of its insulin receptors (doorknobs) out into the blood stream where insulin can activate them (open sugar doors). Sugar then moves out of the blood stream into the cells lowering the blood sugar. Overfed fat cells pull all of their insulin receptors into the cell (leaving no doorknobs to open). As a consequence, the sugar accumulates in the blood stream increasing blood sugar to dangerous levels. When the diabetic starts to exercise, the cells get hungry and start putting more receptors into the blood stream, thus making way for more sugar to enter the cells, lowering the blood sugar.⁶⁰

GLYCEMIC INDEX AND GLYCEMIC LOAD

Glycemic index indicates the effect specific carbohydrates have on blood sugar levels in comparison to the effect of pure sugar. High glycemic index foods raise blood sugar and insulin levels much higher and more rapidly than low glycemic index foods.⁶¹ For example 50 gm of glucose has a glycemic index of 100, it enters the blood stream 100% as fast as pure sugar. A bowl of corn flakes and milk has a glycemic index of 92, meaning that the sugar in a bowl of corn flakes and milk enters the blood 92% as fast as pure sugar. Broccoli has a glycemic index of around 15, meaning that the carbohydrate in broccoli has 15% the effect of pure sugar on blood sugar.

The amount of food consumed is a major determinant of blood sugar. Glycemic load takes into account the amount of a certain glycemic indexed food eaten.⁶² High glycemic load foods include calorie dense foods such as snack foods, fast foods, pastry, cookies, sweets, soda pop, white bread and white rice, refined carbohydrates, and white potatoes. Low glycemic load foods include whole-grain breads and cereals, including oatmeal and brown rice, legumes, peas, beans, garbanzos, soy, tofu, fresh fruit and vegetables, nuts, protein rich foods and healthy fats.

We were not made to eat high glycemic load meals. Rats fed a high glycemic diet develop marked obesity in 32 weeks.⁶³ Fat rats are generally not seen out in nature. Humans fed high glycemic meals eat a larger volume of food, feel less satisfied, and get hungry sooner.^{64,65} This sounds like the prescription for an addiction, and it is!

A bowl of corn flakes and milk has a glycemic index of 92, meaning that the sugar in a bowl of corn flakes and milk enters the blood 92% as fast as pure sugar.

CONSEQUENCES OF HIGH BLOOD SUGAR

High blood sugar causes triglycerides to go up.

"Why would triglycerides go up?" Someone may be wondering, "I thought triglycerides were fats!"

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The body has no little box in which to store sugar cubes. That's right. In order to store excess sugar, the body needs to convert it to something it can store, like fat. So, up go the triglycerides.

High blood sugar causes proteins to be glycated.

"Glycated! What's glycated?" you may be wondering.

Glycated is when sugar sticks to, or coats the proteins in the body, like blood cells and blood vessels. Sugar clogs the system.

High blood sugar provokes insulin to rise.

Insulin is not just for chasing excess blood sugar into cells; it's also a growth factor.⁶⁶ As a growth factor it needs building blocks for growth. Cholesterol is one of these building blocks. Elevated insulin results in elevated cholesterol, heart disease and also increases blood pressure.⁶⁷ Insulin not only makes the abdomen grow (in central obesity) but it also can make tumors grow increasing the chance of cancer.^{68,69}

Sugar weakens the body's white blood cell's ability to destroy bacteria. Studies show that on a good day, one white blood cell can kill 14 dangerous disease-causing bacteria. With the intake of just 12 teaspoons of sugar, the amount contained in most soft drinks, each white cell can only destroy 5-1/2 bacteria. Double the soft drink intake and the number of bacteria a white cell can destroy drops to just one!⁷⁰ Most Americans consume more than 52 teaspoons of sugar a day!⁷¹

BLOOD SUGAR RESPONSE TO WHOLE FOODS

The more carbohydrates are refined, the higher their glycemic index. For example, orange juice is the refined product of oranges. Not only is the fiber removed, but also in the process of preservation the juice is "pasteurized", meaning that it has been heat treated in an effort to reduce the number spoilage causing microbes. This process of heat-treating has a further refining influence on the carbohydrate in oranges, breaking it down into shorter chain starches and simpler sugars. Commercial orange juice is little different than soda pop in its effect on the body.⁷² As a consequence drinking commercial orange juice elevates blood sugar very rapidly and to an

excessive degree. What's more, once the body responds with insulin, the blood sugar drops precipitously leaving the individual faint and craving more refined carbohydrate. By comparison, eating a whole orange has a very different effect. The whole orange has not only sugar, but fiber, vitamins, phytochemicals, and minerals which help slow the passage of sugar into the blood stream and help the body use the sugar more efficiently. Because the sugar enters the blood more slowly, and over a longer period of time, a precipitous fall in blood sugar, that triggers hunger and faintness, does not occur.⁷³ The consumption of one serving of fruit as juice, instead of as whole fruit, increases the risk of diabetes by 36%.⁷⁴

Diabetics tend to eat foods of higher glycemic index.⁷⁵ The effect is that their blood sugar goes up quite quickly. The body responds with a surge of insulin to take care of the emergency. Insulin can rise rapidly but it cannot drop as rapidly as blood sugar. Consequently, before long the sugar runs out and the person becomes hypoglycemic—low on blood sugar—faint and hungry. They then look for food, probably long before the next *scheduled* meal. The foods they choose to fulfill their low blood sugar needs are usually junk foods that compound the process and the problem.

In order to ameliorate this problem, diabetics are told just to eat many little meals all day long.^{76,77} Does this work? Sort of, for two reasons, first, if little meals are eaten all day long, eventually all the blood sugar spikes will coalesce into one big long sugar rise with less variability, and there will be no more dangerous peaks and troughs. This method does not stop the diabetic complication. Frequent meals, like this, more than doubled the risk of cancer!^{78,79}

The problems with eating more often are not limited to increased cancer risk. The stomach is a bit like the common household washing machine. A load of clothes is started washing. Halfway through the cycle some unruly person comes with more dirty clothes and adds them to the load. If the clothes are to be cleaned the whole cycle must be started over and perhaps more soap added. This is just the way the stomach works. If more food is added before it finishes its work, it has to start over and add more digestive juice.⁸⁰ Thus the machinery is jammed, sugar digestion impeded, and the

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diabetic controls this blood sugar at the cost of the delicate digestive organs.

What is the real solution? If the diabetic eats an unrefined whole food breakfast—high in fiber (low glycemic index)—the blood sugar rises slowly, the sugar supply will be steady, and there will be no precipitous fall in blood sugar at the end of digestion. By lunch time the diabetic is just starting to feel hungry. Lunch is a meal of whole vegetables and legumes, and the sugar is held at a manageable level all day long.

SUGAR CLOGS THE SYSTEM

Glucose (blood sugar) is the preferred fuel of the cell. But too much glucose in the blood clogs blood vessels and coats the blood cells with sugar. As blood sugar rises, excess sugar begins to stick to proteins—blood cell and blood vessel walls. These sugar-coated blood cells are called hemoglobin A1c or HbA1c. HbA1c predicts increased risk of heart disease and overall mortality even for people without diabetes. HbA1c indicates the average blood sugar concentration over the past three months. A HbA1c of 7.0 or higher may indicate diabetes. An increase of just 1% in HbA1c is associated with roughly a 30% increase in mortality from all causes and a 40% increase in mortality from coronary heart disease. In one study 70% of non-diabetics over 45 had a hemoglobin HbA1c of 5% or greater. Thus 82% of excess mortality due to blood sugar elevations is in non-diabetics.⁸¹ And here we were all patting ourselves on the back because we are not diabetic. Living the lifestyle of a diabetic may not make everyone diabetic, but it may still provide us with all the same complications as the diabetic.

Medications reduced the incidence of diabetes by 31% and lifestyle modification by 58%! This demonstrates that lifestyle change is a much stronger medical intervention than medications.

When HbA1c goes up, so does glycation of the vessel walls. Thus, not only do the blood cells have trouble functioning, due to the sugar coating, but the sugar-coated blood vessels

pose an additional barrier to nutrients reaching body tissues. When this happens, body tissues starve for oxygen and nutrients making them more susceptible to fatigue, damage, and infection. This explains some of the complications listed earlier, such as the elevated risk of amputation.

On the other hand, a 1% reduction in HbA1c lowers the risk of stroke by 17%, fatal heart attack by 18%, diabetic deaths by 25%,⁸² amputation,⁸³ kidney failure, and diabetic retinopathy that leads to blindness each by 30%.⁸⁴

SIGNS OF DIABETES

What are the signs of diabetes?

The signs of diabetes include:

- Low energy.
- Fatigue.
- Extreme thirst.
- Frequent urination.
- Blurred vision.
- Irritability and mood changes.
- Weight changes.
- Tingling and numbness in hands or feet.
- Frequent infections.
- Extreme hunger.
- Cuts and bruises that are slow to heal.
- Nausea and vomiting.
- Dehydration.
- Reduced conscious level.

Reduced consciousness! I was in the emergency room one day. In the stall next to where I was working an ER doctor was trying to awaken someone.

“Wake up! Wake up! Can you hear me?”

“What, who me? Where am I?”

“Did you know your blood sugar was 300? Are you a diabetic?”

“What? Who me? A diabetic?”

Sad to say this is the way all too many people discover they are diabetics. Their blood sugar goes too high, they pass out, and someone finds them and sends them to the hospital emergency room. This is not the way to discover you are diabetic. By this time the complications of diabetes are well on their way.

CAN PEOPLE REVERSE THEIR DIABETES?

Kit Carson was taking 85 units of insulin daily. He was a big guy - 6'8" and 440 lbs. He relied on his vehicle to go even short distances. Two days into a "Reversing Diabetes" lifestyle program his blood sugar, which had been as high as 500, returned to normal. In two years, he lost 135 lbs. He never used insulin again. He says, "This program has changed my life."⁸⁵

Can lifestyle changes really have that great of an effect on diabetes? The New England Journal of Medicine answered this question. They reported on an intervention trial to prevent diabetes in pre-diabetics that compared the effects of placebo (doing nothing), pharmacological medications, or lifestyle interventions. The results? Medications reduced the incidence of diabetes by 31% and lifestyle modification by 58%!⁸⁶ This demonstrates that lifestyle change is a much stronger medical intervention than medications. Well, it makes sense; lifestyle caused the diabetes in the first place, not pills. And what were the lifestyle interventions? Lifestyle intervention included weight loss with a goal of 7% weight reduction; daily exercise with a goal of 150 minutes per week; improved eating including higher fiber intake, lower saturated fat, and lower glycemic load. After 3 years, the incidence of diabetes was 58% lower in the lifestyle intervention group.

LIFESTYLE INTERVENTIONS

What lifestyle changes was Kit Carson asked to make?

Change the diet to the "whole plant food whole" diet. Okay, so aren't there too many "wholes" in that sentence? The point to be made is, eat plant foods and eat them in their entirety—don't let anyone "refine" them.⁸⁷ So, what are some examples of "whole plant foods whole"? —brown rice, whole wheat flour products, fresh carrots, broccoli, spinach, and granola, etc. What are some examples of foods that are not whole plant foods whole; cow's milk, eggs, pancake mixes, crackers that have refined flour, fast foods, most foods that come in crinkly packages, sugar and oil, fish, anything with oil as an added ingredient, etc.

One reason refined foods are dangerous is their lack of fiber. Only about 5% of Americans get as much fiber as is recommended. Fiber plays an important role in diabetes prevention and management. Fiber protects against constipation, high cholesterol, heart disease, high blood sugar, diabetes, certain cancers, and obesity.⁸⁸

In Harvard's Woman's Health Study, eating low fiber, high glycemic index foods more than doubled the risk of getting diabetes.⁸⁹

In another study oat bran bread reduced blood sugar response by 46% and insulin response by 19% compared to refined white bread in the diet.⁹⁰

A patient came in with gestational diabetes (diabetes resulting from the changes that pregnancy does to the body) who did not want to take drugs or insulin for fear of what they might do to her unborn child. She was adamant—no pills, no shots. She was advised to eat ½ cup of oat bran three times a day.⁹¹ This she ate oat bran cookies, oat bran cereal, oat bran bread, oat bran in drinks. Her blood sugar was totally controlled; she delivered a normal healthy baby, and her diabetes was gone.

Fiber slows the rate at which sugar enters the blood stream. Even more fiber than is recommended for the average American is recommended for diabetics; 50 gm or more of daily fiber.⁹²

Another great benefit of the whole plant food diet is whole grains. Replacing refined grains in the diet with whole grains can reduce the risk of diabetes by 70%.⁹³ Increasing whole grains to 3 servings per day can decrease the risk of diabetes by 50%.⁹⁴

One reason refined foods are dangerous is their lack of fiber. Only about 5% of Americans get as much fiber as is recommended. Fiber plays an important role in diabetes prevention and management.

Another benefit of eating whole plant foods is that they actually require chewing. Thorough chewing increases the early insulin response to

eating, decreases blood sugar,⁹⁵ and helps reduce food intake.⁹⁶ Reduced food intake helps with weight control and increases insulin sensitivity.^{97,98}

A healthy breakfast plays a major role in diabetes reduction. People who eat breakfast tend to eat fewer total calories for the entire day; have lower cholesterol levels; and end up with less diabetes.⁹⁹ One study shows a 37%-55% reduction in risk of diabetes in people who eat a regular breakfast compared to those who don't.¹⁰⁰

Speaking of a healthy breakfast, a lot of people do not even know if they are eating breakfast, brunch or lunch—they have no real set schedule. Irregularity of meal times, between meals snacking^{101,102,103} and late bedtimes¹⁰⁴ increases insulin resistance, obesity and diabetes.

Refined food products generally have had many nutrients removed from them that are necessary for life and for the processing of carbohydrates. If a person eats a food that is totally devoid of a nutrient that is necessary for life, the body has to take from its own stores just to survive, thus depleting its own reserves of that necessary nutrient.

Chromium is an example. Diabetics generally have no tissue chromium.¹⁰⁵ Consumption of refined carbohydrates, such as refined sugar, tends to deplete chromium stores. In diabetics, increasing chromium has been shown to decrease fasting glucose levels, improve glucose tolerance, lower insulin levels, decrease total cholesterol and triglycerides, increase HDL-cholesterol levels, and ameliorate the symptoms of hypoglycemia.¹⁰⁶ Whole wheat has eight times the chromium of white flour. Brown rice has four times the chromium of white rice.

Diabetes,^{107,108} coronary heart disease,¹⁰⁹ hypertension, and high triglycerides¹¹⁰ are all associated with low dietary zinc. Whole wheat flour has four times the zinc as white flour. Pumpkin seeds and lentils are also good sources of zinc.

Magnesium levels are significantly lower in diabetics¹¹¹—especially diabetics with complications such as poor glycemic control, retinopathy, obesity, and hypertension.¹¹² The

major dietary sources of magnesium include whole grains, legumes, nuts, and green leafy vegetables.¹¹³

Speaking of vegetables, cabbage consumption reduces blood sugar levels and whole-body inflammation. People who eat cabbage regularly are more likely to get off of their insulin.¹¹⁴ What about picking up a head of cabbage next time you are in the grocery store?

A word of caution; the longer a person has been a diabetic, the longer it may take to respond to dietary changes.¹¹⁵

HERBS FOR DIABETES

Herbal teas take an important role in disease treatment for the person desiring to recover without the use of drugs. Beneficial herbs for the diabetic are as follows. Astragalus helps reduce Beta cell inflammation in the pancreas where insulin is made.^{116,117} Red ginseng^{118,119} and Jiaogulan (*Gynostemma pentaphyllum*) tea¹²⁰ stimulate beta cell production of insulin. Rosemary and Lemon balm inhibit carbohydrate metabolism.¹²¹ Citrus leaves¹²² helps reduce insulin resistance. Bladderwrack^{123,124,125} inhibits carbohydrate metabolism, stimulates insulin production, and protects the pancreas, it also has a protective effect against diabetic nephropathy, and it is a good iodine source. Goldenseal root is antioxidant, anti-inflammatory and has hypoglycemic activities, which contribute to its efficacy in diabetes.¹²⁶ Fenugreek protects and rejuvenates pancreatic β -cells.¹²⁷ Tarragon (*Artemisia dracunculus* L.) enhances insulin release from primary β cells.¹²⁸ Moringa oleifera leaf possesses potent hypoglycemic effects.¹²⁹ Select a few readily available representative herbs, use one teaspoon of the combined herbal mixture per one cup of water and drink one or two cups of the preparation a half hour before each meal.

EXERCISE BENEFITS

Remember earlier we said that exercise makes the cells hungry again, reducing insulin resistance? Exercise lowers blood sugar and insulin, but it also helps to control weight. More than that, a good walk out in the fresh air and beautiful sunshine improves mental outlook, helping to deal with stress that can cause

Diabetes: The Butter with the Sweet

diabetes.¹³⁰ Compared to those who live a sedentary lifestyle, those who are highly active have a 46% lower incidence of diabetes.¹³¹ Of all the times to exercise, diabetics benefit most from exercise, such as walking, right after eating.^{132,133,134} Another beneficial time to be exercising, for blood sugar control, is in the morning before breakfast!¹³⁵ Maybe you have heard it said, “The early bird gets the worm.” Exercise, together with good water intake, are among the few lifestyle changes that have been shown to improve peripheral neuropathy, the pain or numbness in the hands or feet, of diabetics.¹³⁶ It has been said, if you can’t find time for exercise, you will have to find time to be sick. And, more people die for want of exercise than through over-fatigue.

MAKE WEIGHT LOSS A HABIT

The most dangerous fat for the diabetic is the belly or central fat, or what is called visceral fat—that fat which settles in the abdomen around the organs. This fat is always at a higher temperature and releases toxins that increase diabetic complications. One thing the diabetic has in their favor is that losing weight results in the simultaneous reduction of all fat deposits—any reduction includes reduction in abdominal fat.¹³⁷ The goal then is not only to lose a little weight but also to make weight loss a habit. As long as weight is not gained back, the visceral fat will continue to melt away. Continuous weight loss, approaching ideal body weight, can reduce the risk of diabetes by 30-50%.¹³⁸

SUNSHINE, VITAMIN D AND DIABETES

Part of the program for reducing diabetes involves getting adequate sun exposure. This helps maintain vitamin D levels. Studies show that vitamin D deficiency increases the risk of diabetes¹³⁹ and that vitamin D supplementation can actually reduce diabetes risk.¹⁴⁰ Diabetics are at increased risk of osteoporosis. This risk is also reduced by sunshine and vitamin D.

WATER: ELIXIR OF LIFE

Which is sweeter, a raisin or a fresh grape? Usually, a raisin is sweeter. So is it with blood,

drinking more water thins the blood and lowers blood sugar by sheer dilution,¹⁴¹ protects against ketoacidosis (the condition that sends diabetics to the emergency room with altered consciousness),^{142,143} and decreases diabetic neuropathy.¹⁴⁴ Humans need between 8 and 12 eight-ounce glasses of water daily. Diabetics are no exception and benefit greatly from drinking water.^{145,146}

REVERSING DIABETES SUMMARY

- Regular exercise in the open air and sunshine (a little is better than none).
- Eat an unrefined plant-based diet, low in fat, high in fiber.
- Make breakfast a healthy habit.
- Make weight control a habit.
- Drink plenty of water.
- Get adequate sleep.
- Avoid stimulants such as coffee, alcohol, and tobacco.
- Try a few medicinal herbs until recovery is certain.
- Turn stress over to God who alone can handle it.

HAS THIS PROGRAM WORKED?

It has. In the “Reversing Diabetes” program, diabetic patients were studied for 25 days on a special diet, exercise program with adequate sunshine, rest, and pure filtered water. Patients were fed an unrefined plant-based diet, low in fat (10%-15%), high in fiber with no cholesterol.

The average weight loss was 11 pounds. One fourth of diabetics no longer needed insulin or drugs to control blood sugar. Those who still needed insulin saw their requirements cut nearly in half. Blood pressures dropped from an average of 155/81 to 132/77, and 81% had complete relief of peripheral neuropathy.¹⁴⁷

One example from the “Reversing Diabetes” program is John Rowe, R.N., E.R. nurse and a diabetic for eleven years, who was injecting up to 144 units of insulin a day. Within two days of adopting the “Reversing Diabetes” lifestyle, his blood sugar returned to normal without medication. He lost thirty-five pounds in four months. His blood pressure fell to normal, and his vision greatly improved.¹⁴⁸

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And exactly what dietary program are we really talking about? - The original Bible diet! Then God said, "I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food." "And you will eat the plants of the field."¹⁴⁹

Recall that the earliest record of diabetes comes from the pyramids of Egypt during the time that the Israelites were liberated, and that God said, "If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will

put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the LORD that healeth thee."¹⁵⁰ If the Israelites would stick with the original diet from Eden, they could totally avoid the Egyptian's diabetes.

Why die of diabetes? Why not make it a point to exercise regularly and eat only a whole plant-based diet?

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life"

"And put a knife to thy throat, if thou be a man given to appetite."ⁱ

-- King Solomon

ⁱ Proverbs 23:2. King James Version of the Holy Bible.

Chapter 2

IDEAL WEIGHT: ACHIEVE IT NATURALLY

THE SET UP

Baby Brenda did not intend to be a bother. Her mother had thought she wanted children, but her career was also very important to her. Her time with Brenda was sweet but short. Then, exhausted after a long day, she sought peace and quiet alone. Though Brenda cried from time to time, a bottle always seemed sufficient to quell the tears. Now when Brenda feels troubled, food always seems sufficient to ease the pain. It is almost as though mother is nearby.

Obesity is up in food-quieted infants. Babies are often fed to keep them quiet when their real need may not be hunger. This can become a lifelong habit, often tied to emotional eating.¹

Overweight girls are at increased risk of premature puberty. Since 1963 the number of 6- to 19-year-olds carrying excess weight has risen by 275%.² Eighty percent of obese 10- to 14-year-olds, from obese families, end up as obese adults.³ Consequently, childhood diabetes,⁴ osteoarthritis⁵ and premature puberty⁶ are at an all-time high.

Obesity runs in families. Even the family dog is fat.⁷ They say, the apple never falls far from

the tree - you may be genetically “wired” for obesity. However, it is your choices that determine your weight.⁸ It has been said that genetics loads the gun—lifestyle pulls the trigger.⁹

STATISTICS: WHO HAS THE EDGE IN LATEST POLLS?

Every day, in the United States, 67% of adults are overweight or obese, and 19% of adults smoke. Every day, in the United States, smoking is the #1 cause of preventable deaths while obesity is #2 and gaining.¹⁰ The most prominent contributors to mortality in the United States in 1990 were tobacco (an estimated 400,000 deaths), diet and activity patterns (300,000), alcohol (100,000), microbial agents (90,000), toxic agents

(60,000), firearms (35,000), sexual behavior (30,000), motor vehicles (25,000), and illicit use of drugs (20,000).¹¹

Obesity is now at an all-time high. In the US, 67% men and 57% women are overweight or obese. Why? Because of a sedentary lifestyle, poor food choices, obsession with dieting, lack of time, etc.¹²

BMI Chart

Weight lbs →	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215																
Weight kgs →	45.5	47.7	50.0	52.3	54.5	56.9	59.1	61.4	63.6	65.9	68.2	70.5	72.7	75.0	77.3	79.5	81.8	84.1	86.4	88.6	90.9	93.2	95.5	97.7																
Height in /cm ↓	Healthy										Overweight										Obese										Extremely Obese									
5'0" - 152.4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42																
5'1" - 154.9	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																	
5'2" - 157.4	18	19	20	21	22	22	23	24	25	26	27	28	29	30	31	32	33	33	34	35	36	37	38	39																
5'3" - 160.0	17	18	19	20	21	22	22	23	24	25	26	27	28	29	30	31	32	32	33	34	35	36	37	38																
5'4" - 162.5	17	18	18	19	20	21	22	23	24	24	25	26	27	28	29	30	30	31	32	33	34	35	36	37																
5'5" - 165.1	16	17	18	19	20	20	21	22	23	24	25	25	26	27	28	29	30	31	32	33	34	35	35																	
5'6" - 167.0	16	17	17	18	19	20	21	21	22	23	24	25	25	26	27	28	29	29	30	31	32	33	34	34																
5'7" - 170.1	15	16	17	18	18	19	20	21	22	22	23	24	25	25	26	27	28	29	29	30	31	32	33	33																
5'8" - 172.7	15	16	16	17	18	19	19	20	21	22	22	23	24	25	25	26	27	28	28	29	30	31	32	32																
5'9" - 175.2	14	15	16	17	17	18	19	20	20	21	22	22	23	24	25	25	26	27	28	28	29	30	31	31																
5'10" - 177.8	14	15	15	16	17	18	18	19	20	20	21	22	23	23	24	25	25	26	27	28	28	29	30	30																
5'11" - 180.3	14	14	15	16	16	17	18	18	19	20	21	21	22	23	23	24	25	25	26	27	28	28	29	30																
6'0" - 182.8	13	14	14	15	16	17	17	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27	28	29																
6'1" - 185.4	13	13	14	15	15	16	17	17	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27	28																
6'2" - 187.9	12	13	14	14	15	16	16	17	18	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27																
6'3" - 190.5	12	13	13	14	15	15	16	16	17	18	18	19	20	20	21	21	22	23	23	24	25	25	26	26																
6'4" - 193.0	12	12	13	14	14	15	15	16	17	17	18	18	19	20	20	21	22	22	23	23	24	25	25	26																
	Underweight																																							

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Poverty drains nutrition from family diet. Low-energy-dense food cost increased 20% in two years (2004-2006). High-energy-dense food prices actually dropped 2%.¹³ It is relatively inexpensive to get obese.

Looking at yearly maps of the United States from the CDC (Centers for Disease Control) with states color-coded for the levels of obesity, it becomes very clear that we have an epidemic of obesity in full swing. For example, Mississippi, in 1990, reported that 10%-14% of its population were obese; by 1995 that number had risen to 15%-19%; and by 2005, over 30%.

Dieting is up, but weight loss is down. At any one time, more than two-thirds of US adults are trying to lose weight or are avoiding weight gain.¹⁴ Most of them regain the weight within five years.¹⁵

Obesity costs have soared to \$150 billion. Obesity-related health care costs in 2000 were \$117 billion.¹⁶ The U.S. diet industry grosses \$33 billion per year in diet books, diet foods, diet programs and weight-loss gimmicks.¹⁷

Have we, in our obesity trends, become a sign of the end of the world? What does the Bible say? "But as the days of Noe were, so shall also the coming of the Son of man be. For as in the days that were before the flood they were eating and drinking, marrying and giving in marriage, until the day that Noe entered into the ark, And knew not until the flood came, and took them all away; so shall also the coming of the Son of man be."¹⁸

OBESITY: WHAT IS IT?

Obesity is based on Body Mass Index (BMI). The formula for BMI is weight (kg)/(height in cm)² or 703 x pounds/inches². A BMI of 18.5 or less is considered underweight; 18.5 < BMI < 25 ideal weight; 25 < BMI < 30 overweight; 30 > BMI < 35, obese (mild); 35 < BMI < 40, obese (moderate); and 40 < BMI obese (severe). There are charts available that make determining your BMI easier. Another useful way to assess obesity is waist circumference. For men, a waist circumference of greater than 40 inches and for women, a waist circumference of greater than 35 inches indicates obesity.¹⁹ A large waist circumference is more dangerous than a high BMI for many of the diseases we will discuss.

IS IT REALLY WORTH IT?

Why lose weight? You may be wondering, "If everyone is gaining, why fight the current?" There are a number of good reasons to choose weight loss: A clearer mind, a healthier body image, the avoidance of pain and depression, to reduce financial burden (health costs), to be around for your children and grandchildren, and to avoid disability and needing to be cared for by others, just to name a few. Life expectancy for the morbidly obese is reduced by 8 years in women and 20 years for men.²⁰ Shedding a few pounds can diminish the threat.

Men participating in successful weight loss programs can reduce their risk of dying by 41%.²¹ By dropping 20 to 29 pounds, diabetics can reduce their risk of dying by 33%.²² It would be well to make weight loss a way of life.

Continuous weight loss, approaching ideal body weight, can reduce the risk of diabetes by 30-50%.²³ If your health is failing, weight loss just may be the key to recovery. A five percent weight loss in obese individuals can result in improved blood sugar control, blood pressure, cholesterol, and triglycerides.²⁴

THE BAD NEWS

Those tenacious extra pounds can be a little-recognized source of disease. Eleven percent of cancer, 14% of osteoarthritis, 17% of heart disease and hypertension, 30% of gallbladder disease and 57% of diabetes can be attributed to obesity.²⁵

To put it another way, the hidden cost of abundant fat can be calculated in the increased risk of other diseases. The risk of diabetes increases by 244%-600%,²⁶ gallstones by 400%-500%,²⁷ depression by 400%,²⁸ sleep apnea risk increases by 77%.²⁹ Asthma risk goes up 190%,³⁰ reflux up 94%,³¹ deep vein thrombosis (blood clots) up 140%,³² coronary heart disease up 81%,³³ gout up 200%,³⁴ female infertility up 200%,³⁵ male infertility due to low sperm count up 300%,³⁶ premenstrual syndrome (PMS) risk goes up 180%.³⁷

Being very obese can INCREASE THE RISK OF DYING BY 140%³⁸, RISK OF STROKE BY 70%.³⁹ Stool and urine incontinence risk increases 45% and 150% respectively;⁴⁰ and risk of cirrhosis from fatty liver due to obesity goes up 120%.⁴¹

Ideal Weight: Achieve it Naturally

Increasing body weight is a strong risk factor for diabetes. Eighty percent of patients with Type 2 Diabetes are overweight or obese.⁴² To further examine the diabetes risk, it is important to realize that for each 5 pounds of weight gained, the risk of diabetes goes up 10%.⁴³ The risk of getting diabetes sometime during a person's life is 7% for underweight people, 15% for normal weight people, 26% for overweight people, 44% for obese people, and 57% for the very obese.⁴⁴

Increasing body weight is a strong risk factor for diabetes. Eighty percent of patients with Type 2 Diabetes are overweight or obese.

The fat most implicated in diabetes and its complications is what is called central, visceral or organ fat.⁴⁵ This is fat that is inside the body surrounding the abdominal organs. This fat is always kept at the higher body core temperature. This fat is the source of oxidized free radicals of fat and cholesterol.⁴⁶ Diabetics tend to have more of this type of fat.⁴⁷ Visceral obesity also leads to elevated triglycerides and reduced HDL levels, substantially increasing the risk of coronary heart disease.⁴⁸

The link between higher body fat and cancer risk is also related to the fat cells' involvement in hormone production. It is uncommon to have breast cancer in the absence of estrogen. Excess estrogen production in obese women gives them a poorer prognosis with breast cancer.⁴⁹ Obesity increases the risk of other cancers too: ovarian cancer 14%, non-Hodgkin's lymphoma 17%, pancreatic cancer 24%, multiple myeloma 31%, breast cancer in postmenopausal women 40%, leukemia 50%, kidney cancer 53%, colorectal cancer 61%, adenocarcinoma of the esophagus 138%, and endometrial cancer 189%.⁵⁰

Blood pressure also increases with rising obesity. A 13 lb weight gain increases the risk of hypertension by 36%, 24 lbs by 64%, 35 lbs by 132%, 46 lbs by 191%, and 55 lbs or more by 265%. On the other hand, weight loss can decrease the risk. A 14 lb weight loss can reduce the risk by 24% and weight loss of 22 lbs or more can reduce the risk by 53%.⁵¹

Weight gain increases the risk of back pain and arthritis. Back pain increases significantly with weight gain.⁵² Pressure from excess weight flattens the inter-vertebral discs causing them to deteriorate and resist rejuvenation.⁵³ An excessive waist with its increased visceral fat may swell the risk of arthritis more than absolute BMI.⁵⁴ Normal weight people have a risk of arthritis of only 17%; for the very obese the risk climbs to 44%.⁵⁵

Extra-large clothes accompany extra-large skin problems.⁵⁶ If you find yourself buying those extra-large clothes sizes you can be sure you also have a lot more skin than you were born with. Skin diseases increase in the obese from altered skin blood flow and physiology.⁵⁷

Remember Alzheimer's disease? Diabetes and obesity quadruple the risk of developing Alzheimer's.⁵⁸

Aggressive weight loss may ease hypothyroidism. About 10% of obese subjects are hypothyroid. Weight gain has been associated with hypothyroidism while weight loss has normalized it.⁵⁹

Depression stalks the obese. Depression doubles the risk of obesity. Depressed, obese people eat about 20% more calories than their non-obese counterparts.⁶⁰ And it works both ways. Obesity quadruples the risk of depression.⁶¹

Social isolation increases with obesity. Obesity in women is associated with lower individual earnings, few friends outside the family circle, and long-term unemployment.⁶²

Illness related work absenteeism increases in the obese. Obese employees are 80% more likely to experience work absences and are absent 3.7 more days per year than non-obese people.⁶³

The obese population may be living longer with better-controlled risk factors but are, paradoxically experiencing more disability. Obesity increases the risk of serious disability by 175%. Obese individuals have twice the risk of being unable to perform the activities of daily living.⁶⁴

CONQUERING OBESITY NATURALLY

You choose! You are a reflection of your choices. Your life and health habits are yours

alone to make. Be the best you can be. The choice is yours.

Health: healthy weight, not lowest weight. The ultimate goal is health and healthy weight for your entire lifetime. With the right focus you will have increased energy, better self-esteem, more personal control, and a positive attitude. Eat for the long haul; choose a life-long plan.

Are you ready to change? Internal motivation is better than external. What you choose to do for yourself is more lasting and satisfying than what someone else pressures you to do.

Only an unwise person has to learn everything by his or her own experience. Be realistic—make small changes over time. Be adventurous—expand your tastes, try new dishes. Be flexible—balance your food and activity over several days. Be sensible—enjoy food in moderation. Be active – walk the dog, ride a bike, push a stroller.

EXERCISE CAN BE GREAT FUN

Physical activity predicts success. Choose something you enjoy, preferably outdoors in the open air and sunshine. Get at least sixty minutes, combined total, most days, and you will enjoy the benefits: healthy weight, healthy heart, strong bones, great sleep, stress relief, increased energy, and a positive and confident outlook!

Why exercise? Weight will reduce with diet alone, but muscle mass and bone density will disappear too. Exercise maintains muscle mass⁶⁵ and bone density⁶⁶ while fat is lost. It also increases aerobic capacity for better cardiovascular fitness.⁶⁷

As already mentioned, sedentary lifestyle accelerates risk of obesity. In fact, an 8-hour sedentary job increases the risk of obesity by 20%, and of diabetes by 28%.⁶⁸

Get your beauty rest. Children sleeping less than 9 hours are at increased risk of obesity.⁶⁹ Having a regular bedtime before 10:00pm reduces your risk of obesity by 38%.⁷⁰

You can tip the balance in the battle of the bulge. Obesity results from an imbalance between energy intake and energy expenditure. Environmental factors, such as the increased availability of high caloric food or the decreased need for physical activity, contribute to its development.⁷¹ A delicate balance exists within

the human body. Weight depends upon the balance of energy input from diet, against energy expenditure through exercise. The balance is also affected by basal metabolic rate. When the total energy input exceeds expenditure, weight gain occurs. Many people eat as though they were going to be doing hard physical labor when, in fact, they are not. This creates an environment for obesity. You will find success when your eating matches your energy and weight loss needs.⁷²

Weight gain is often the result of biological and cultural mismatches to the modern environment where there are strong signals to eat, weak signals to stop eating, increased availability of high calorie dense food, eating is rewarded, there are no viable alternatives at times, and overeating is considered of high status.

On the other hand, activity is associated with weak signals to continue and strong signals to stop, reduced availability, inactivity is applauded, or made a viable alternative, and given a high social status. This plays into the concept of eating to live, versus living to eat. Many people eat as though they were preparing for a long day of heavy physical labor when in reality their lives are pretty sedentary. If we eat to live, we match our energy intake to our expected energy expenditure, and this helps keep our weight stable. If we live to eat, our energy intake exceeds our energy needs and obesity ensues. The wise man commented on this principle in this way, "Blessed art thou, O land, when thy king is the son of nobles, and thy princes eat in due season, for strength, and not for drunkenness!"⁷³

Do something you like and enjoy. Exercises shown to be beneficial include walking, running, aerobics (both in water and in the gym),⁷⁴ and intermittent exercise – especially on accessible home equipment.⁷⁵

How much do I need to exercise? You may have limitations that will need to be overcome, but we suggest at least sixty minutes daily. The best times are before breakfast,⁷⁶ and after meals. Exercising after meals results in greater energy expenditure,⁷⁷ while decreasing blood sugar and insulin levels in diabetics.⁷⁸ Moderate exercise is as beneficial as intense, and short bouts are as effective as long (meaning you don't have to do all sixty minutes at one time).⁷⁹

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Walking is a little-appreciated health booster. Each hour of brisk walking per day reduces the risk of obesity by 24% and diabetes by 34%.⁸⁰

A ten year exercise study was conducted which revealed that an active lifestyle prevents weight gain and a sedentary lifestyle with little recreational activity increases the risk of weight gain by 200% for men and 300% for women.⁸¹

KNEE PAIN CRIPPLES WEIGHT LOSS: NOT SO ACCORDING TO NEW STUDIES

“But I can’t exercise; I have a knee with arthritis, and it hurts to walk”, you may be saying, like so many others.

In a study of people with knee arthritis, six months of weight loss and exercise actually improved knee pain, disability,⁸² walking gait and the performance of a six-minute walk distance test, and a timed stair-climbing test.⁸³ Samples of knee fluid showed decreased inflammatory markers.⁸⁴ You “rust” out before you wear out. Most arthritis pain will improve with exercise. Weight loss helps too; a 10% weight reduction improves knee function by 28% in patients with osteoarthritis.⁸⁵

Joint pain may be a sign you are rusting out, not wearing out. Exercise has been shown to be beneficial, reducing pain and obesity.

THE WEIGHT OF THE BENEFITS

Exercise yields great dividends in weight loss. Exercise increases muscle strength and bulk, bone mineral density, insulin sensitivity,⁸⁶ the immune system,⁸⁷ self-control around food,^{88,89} HDL “good” cholesterol,⁹⁰ and maintains weight loss over the long term.⁹¹ Exercise decreases visceral or central fat^{92,93} and waist-hip ratio,⁹⁴ the body’s physiological response to stress,⁹⁵ high blood pressure,⁹⁶ cholesterol and triglycerides,⁹⁷ cardiac risk factors,⁹⁸ oxidative stress,⁹⁹ and the risk of gallstones.¹⁰⁰ Of particular importance is the way aerobic fitness curbs cardiac deaths. Being cardio-vascularly fit can reduce the risk of mortality from obesity by 75%.¹⁰¹

Need slow motion? Eat a western diet. The western diet slows people down physically and makes them sedentary, reducing energy expenditure and increasing weight gain.¹⁰²

BRING OUT THE FORK: WE’RE GOING TO TALK DIET NOW!

Top diets boast whole plant foods.¹⁰³ People adopting a whole plant food diet can lose almost three times as much weight in a year as those choosing other diet methods. And people choosing a whole plant food diet as a means of weight loss are four times more likely to stick with their chosen diet.¹⁰⁴

By the way, a word of caution: When you go on a whole plant food diet, and your health problems start to resolve, you may need to have your medications adjusted. This is especially true for diabetic medications and blood pressure medications.

AVOID WEARISOME DIETS

It’s not just a diet; it’s a lifestyle change! Be aware of fad diets. Steer clear of these claims; fast, easy weight loss; breakthrough miracle, banish fat, secret formula, new discovery, cure, balances hormones, enzymatic processes. Is the author credible? Be cautious about diets that advocate magic or miracle foods, rapid weight loss or quick fixes, no exercise, rigid menus, specific food combinations, recommendations based on a single study or studies published without a peer review, and promises that sound too good to be true.

New research shows that using artificially sweetened foods and drinks to manage weight could backfire. Artificial sweeteners confuse the mind’s ability to judge calorie content, making people who use diet drinks or diet foods crave more calories.¹⁰⁵ People who use diet drinks have been shown to eat more calories, especially carbohydrates.¹⁰⁶

Some fad diets are especially worrisome. Colorectal cancer risk increased fourfold with consumption of high-fat, high-protein, and low-carbohydrate diets.¹⁰⁷ By contrast, low-fat, high-carbohydrate diets of whole plant foods increase intake of; fiber, bio-available calcium, vitamins, minerals, cancer preventing antioxidants and phytochemicals which lower

risk for heart disease, cancer, osteoporosis, diabetes, and high blood pressure.

WHOLE PLANT FOODS

You can eat all you want and still lose weight – if you choose only whole plant foods. In one study eating unlimited amounts of fruits and vegetables led to a fourteen-pound weight loss over six months and seventeen pounds over twenty-five months.¹⁰⁸

Whole wheat has eight times the chromium of white flour. So, guess what, it will take eight times as much of a white flour dish to satisfy your bodies nutrient hunger as a whole grain dish.¹⁰⁹ It is any wonder we have overweight people, totally stuffed with caloric rich foods and still feeling hungry?

Fruits and vegetables are the mainstay of successful weight loss. In one 2-year study, individuals on a vegan diet lost 3 ½ times more weight than those on just a low-fat diet.¹¹⁰ Eating more fruit, vegetables, and whole grains improves weight loss and maintenance of weight loss, cholesterol and triglycerides, and blood pressure.¹¹¹

Low-energy-dense foods aid weight loss. Weight loss is three times greater for people who eat low-energy-dense foods than for those who just choose “low-fat” foods.¹¹² Caloric, or energy-density, is the key to satisfying cravings and weight loss. Caloric density is a measure of the number of calories per gram in a serving of food. Studies show that normal-weight persons eat lower-energy-dense foods than obese persons. Persons on a diet high in fruit and vegetables have the lowest energy-density values and the lowest amount of obesity.¹¹³

Energy-density is key to understanding why eating fruits and vegetables can help in a weight management program. Energy-density is the number of calories a food has for its weight. Foods with high calories for their weight, such as oils and fats, are high-energy-dense foods. They usually have between 4 to 9 calories per gram. These include snack foods, cheeses, butters, meats, and gravies. Medium-energy-dense foods have fewer calories per gram of weight, usually between 1.5 to 4 calories per gram. These foods include bagels, whole grain breads, hummus, dried fruits, and vegetarian ravioli. Low-energy-dense foods typically range in

calorie content from 0 to 1.5 calories per gram and include fresh fruits and vegetables, beans, and whole grains. In one study, people given a low-calorie-dense, unrefined diet ate 50% fewer calories. What’s more, they took 33% longer to eat their food, increasing satiety (satisfaction).¹¹⁴

Make a trade agreement that will boost your health index. Reduce the number of daily calories consumed by substituting low-energy-dense fruits, vegetables, whole grains, and legumes for high-energy-density foods.¹¹⁵

Eat your fruits and vegetables. Fat content increases the energy-density of foods.

Water and fiber in foods increase volume and reduce energy-density. In their natural state, fruits and vegetables have high water and fiber content and are low in fat and energy-density.¹¹⁶

Feel satisfied on fewer calories. People tend to eat the same volume regardless of the calorie content.^{117,118} It is volume more than calories that makes people feel full.¹¹⁹ Eating low-energy-dense, high-nutrient dense fruits and vegetables brings satisfaction without the calories.

Energy substitutes can slash weight gain. To lower the energy-density of foods, such as soups, sandwiches, and casseroles, substitute fruits and vegetables for some of the ingredients that have higher energy-density, such as high-fat meats, cheeses, and pasta.¹²⁰

One high-energy-dense calorie source is juice. Juice drinkers consumed calories eleven times faster than whole fruit eaters. Whole fruit contains fiber while juice has none. Sauce eaters consumed calories three times faster than whole fruit eaters.¹²¹ The appetite is satisfied better with whole fruit.¹²²

Canned food is a poor substitute. Frozen or canned fruits and vegetables are good options when fresh produce is unavailable. Choose items without added sugar, syrup, cream sauces, or salt. Salt can make you eat more and go for calorie-laden drinks.¹²³

Vegetables dominate the low-calorie class. Vegetables tend to be lower in calories than fruit. Substituting more vegetables than fruit for foods of higher-energy-density can be helpful in a weight management plan.

Don't get blitzed by hidden calories. Some desserts that include fruit may also have high calorie, fat, and sugar content. Breeding and

Ideal Weight: Achieve it Naturally

frying vegetables or adding high-fat dressings and sauces greatly increase the calorie and fat content of the dish.¹²⁴ You can have variations on the dessert theme. Desserts tend to be very energy-dense.¹²⁵ The stomach actually increases in volume when sweet, sugar laden foods are eaten at the end of a meal.¹²⁶ Fresh fruit makes a good, weight sensitive, dessert substitute. In one study, overweight people were more likely to order dessert if the waitress provided an appetizing description and encouraged them to order it.¹²⁷

You may be wondering, “Should I avoid nuts?” given their high calorie content. And while I would urge moderation, in one study participants who ate nuts two or more times per week had a 30% lower risk of weight gain. Nuts have been found to be cardio-protective¹²⁸ and to reduce diabetes risk.¹²⁹

FIBER: A DIETER’S FRIEND

Fiber contains no calories; is not a nutrient, but is vital for good health. A 14-gram increase in daily fiber intake reduces calorie consumption by 10% and promotes weight loss.¹³⁰ Increased fiber consumption from whole grains cuts the risk of weight gain in half. Refined grain products have the opposite effect.¹³¹ Other benefits of fiber are enhanced blood sugar control, decreased insulin levels,¹³² lower cholesterol,¹³³ reduced calorie assimilation by the body,¹³⁴ and reduced hunger.¹³⁵

Toast cuts blood sugar levels. Toasting bread lowers blood glucose response by 25%, which is a good thing.¹³⁶

CHEW ON THIS

Appetite is reduced by nerve feedback to the brain stimulated by chewing.¹³⁷ The more you chew, the less food it takes to satisfy you.¹³⁸ Choosing foods that require more chewing can help reduce calorie intake.

FOOD ADDITIVES: BETTER LIVING THROUGH CHEMISTRY?

Mono sodium glutamate (MSG) intake doubles the risk of obesity.^{139,140} MSG is used in laboratory animals to induce obesity and diabetes.¹⁴¹ Fructose is another culprit.¹⁴²

Fructose ingestion increases obesity—especially abdominal obesity.¹⁴³ It also increases triglycerides and cholesterol,¹⁴⁴ oxidative stress,¹⁴⁵ diabetes and diabetic complications such as retinopathy.¹⁴⁶

LIQUIDS AND LIQUID MEALS

Ditch the soda if you're trying to lose weight. Sodas decreased the feeling of being satisfied and increased subsequent overeating.¹⁴⁷ One additional soda per day raises the risk of obesity by 60%.¹⁴⁸ The calories of two sodas consumed every day can add 30 lbs in a year.

Dehydration and salt overload are associated with increased obesity.¹⁴⁹ Thirsty people tend to drink soda and eat when what they really need is water.¹⁵⁰ Dehydration increases cancer, diabetes, cardiovascular disease, and hypertension.¹⁵¹

Water is still the best beverage. Historically water is the only liquid man consumed after being weaned. Modern man consumes a variety of liquids that require digestion. The body does not handle liquids that require digestion as well as solid food.¹⁵² Our recommendation is that - only water be consumed between meals. Digestion is better if a meal has not been diluted with any liquid. Water, taken thirty minutes before mealtime has been shown to significantly reduce calorie intake.¹⁵³

Snacking between meals dramatically increases the number of daily calories consumed. Obese individuals consume significantly more sweet, fatty snacks.

SNACKING: IS IT A CULPRIT IN YOUR DIET?

Snacking between meals dramatically increases the number of daily calories consumed. Obese individuals consume significantly more sweet, fatty snacks.¹⁵⁴ Snacking women have a 38% higher risk of obesity and snacking men have an 88% higher risk of obesity.¹⁵⁵

TRIGGER FOODS THAT CAN IGNITE A RAGING APPETITE

The taste of fat increases the amounts of food people eat.¹⁵⁶ Sugar and fat work by weakening food satisfaction signals to the brain and activating hunger signals.^{157 158} Dietary fat intake affects obesity.¹⁵⁹ Obesity rates of countries can be predicted by how much fat their population eats. In one study, cutting fat intake by 10% (from 37% down to 27%) led to a quarter pound loss per week.¹⁶⁰ One source of high fat, low fiber food is fast food. Watching television three hours a week and eating fast food twice a week increases the risk of obesity and diabetes by 160%.¹⁶¹ Another source of high fat, low fiber food is meat. This is why carnivores carry more weight. Meat eaters have been shown to weigh significantly more than vegetarians.¹⁶² High fiber cereal, fruit, and overall fiber intake are associated with lower BMI. Hamburger, beef, fried chicken, eggs, bacon or sausage, and hot dogs are all associated with higher BMI.^{163,164}

“Gotcha” foods that won’t let you go. You need to be aware of some foods that have addictive properties. Addictive foods include chocolate, dairy products (especially cheese), and refined carbohydrates.

Chocolate is just as addictive as drugs. To increase addiction, chocolate stimulates the same opioid receptors in the brain as morphine.¹⁶⁵ Another drawback is the amount of sugar and fat it takes to make chocolate palatable.

The addictive nature of sugar generates phenomenally high levels of obesity.¹⁶⁶ Like cocaine, sugar elevates the addiction hormone dopamine in the brain.¹⁶⁷ The body can get caught in a vicious cycle of sugar consumption. Refined carbohydrates such as sugar, but not just sugar, elevate insulin. Insulin increases abdominal obesity and carbohydrate craving. Abdominal obesity increases insulin resistance requiring the body to produce even more insulin. Higher insulin levels stimulate more carbohydrate craving. And the saga goes on as the weight piles up and diabetes ensues.¹⁶⁸

The addictive world of animal products is a real source of obesity. Morphine-like substances (beta-casomorphins) in dairy products,

especially cheeses, make them very hard to give up.¹⁶⁹

BEER BELLY

Everyone should know the facts about alcohol and obesity.¹⁷⁰ Alcohol intake is associated with abdominal obesity and elevated diabetes risk.¹⁷¹

BIRDS OF A FEATHER FLOCK TOGETHER

Eating with others can be a source of uncontrolled calorie consumption. If eating with others, choose dining companions who share your weight control values.¹⁷²

For those women who like to be aware, the midcycle binge can be a source of uncontrolled calorie consumption. The ovulation phase of the menstrual cycle is associated with significantly more food intake.¹⁷³

PORTION SIZE INFLATION

Can food sneak up on you? Portion sizes sure have. Portion size inflation has definitely occurred between 1977 and 1996; french fry serving size is up 16% or 70 kcal; hamburger sizes are up 25% or 100 kcal; soft drink size is up 50% or 50 kcal; total calories consumed by Americans are up 11%; and the number of calories eaten away from home are up 53%.¹⁷⁴

Size does matter. Here are some tips on portion size management: Place all food, to be eaten at one meal, on the plate at the beginning of the meal. Purposely reduce customary portion sizes, substitute low-energy-dense foods for high-energy-dense foods, and chew the smaller portions for the same amount of time normally taken to eat larger portions.¹⁷⁵

ONE OF EACH PLEASE—VARIETY STIMULATES GLUTTONY (THERE GO THE POTLUCKS!)

Greater variety is associated with greater food consumption and greater body weight.^{176,177} Do not have too great a variety at a meal; three or four foods are plenty.

CALORIC RESTRICTION

Reducing the number of calories you eat in a day, is referred to as caloric restriction. Calorie,

or energy, restriction can restore an immune system impaired by obesity. Obesity impairs the immune system. Caloric restriction has been shown to help restore the immune system.¹⁷⁸ The Okinawan experience has taught us a lot about caloric restriction. The Okinawans eat 40% fewer calories than Americans, have 80% fewer breast and prostate cancers and 50% fewer ovarian and colon cancers.¹⁷⁹ There are some cautions to SEVERE caloric restriction. Some people just eat less of their malnourished diet--the same diet with nutrient deficiencies that leaves them craving food even though they are getting heavier all the time. Side effects of severe calorie restricted diets include; orthostatic hypotension (light-headedness upon standing), fatigue, cold intolerance, dry skin, hair loss, menstrual irregularities, cholelithiasis (gallstones), cholecystitis (inflammation of the gallbladder), and pancreatitis (inflammation of the pancreas).¹⁸⁰

MEAL TIMES

Evening-wear: you tend to wear the food you eat in the evening.¹⁸¹ People who eat in the evening gain more weight.^{182, 183}

Breakfast precedent: start off on the right foot. People who eat high-energy-dense breakfasts eat higher-energy-dense lunches, whereas people who eat low-energy-dense breakfasts eat lower-energy-dense lunches.¹⁸⁴ Skipping breakfast increases insulin resistance and raises fasting cholesterol levels.¹⁸⁵ Skipping breakfast increases student obesity 120%.¹⁸⁶

Punctuality pays off in meal patterns and frequency. Meal regularity significantly lowers the risk of adolescent obesity.¹⁸⁷

Greater variety is associated with greater food consumption and greater body weight. There go the potlucks and all-you-can-eat buffets!

People who eat their meals at the same time every day; consume fewer calories, have better insulin sensitivity, have lower cholesterol levels and maintain a higher fat-burning metabolism.¹⁸⁸ We recommend two (preferable) or three meals a day, eaten at

exactly the same time every day. A two-meal-a-day plan lowers cancer risk. Compared to the two-meal-a-day program, colon cancer risk rises 70% with 3 three-meal-a-day, and 90% for four meals.^{189,190} The risk of colon cancer is increased by snacking. For each time snacking is engaged in throughout the day, the risk of colon cancer goes up 60%.¹⁹¹

"But I'm hungry, I don't want to wait till mealtime." Throw a wet blanket on persistent hunger. Hunger, other than at mealtimes, can often be quenched with a glass of ice-cold water. If you feel that you must eat at night, take a drink of cold water, and in the morning you will feel much better for not having eaten.¹⁹²

EMOTIONS AND THE BODY

Happy, sad, bored, lonely? Bring on the food! Some people are emotional eaters, meaning that they eat more when experiencing certain emotions. When these people are stressed or emotional, they eat more sweet, high-fat foods and consume meals that have higher-energy-density.¹⁹³ These emotions often have their basis in childhood experiences. A ten-year study of 9- to 10-year-olds showed that: parental neglect: increased the risk of adult obesity seven times (700%). Children characterized as "dirty and neglected" had 10 times the risk of adult obesity.¹⁹⁴ Obesity can be triggered by childhood stress.¹⁹⁵ The obese are more likely to be depressed, to report childhood abuse histories, to have non-secure attachment styles, and report eating in response to anger, sadness, loneliness, worry, and being upset.¹⁹⁶ Abuse raises the risk of obesity 23% higher for verbal abuse; 27% higher for physical abuse; and 34% higher for sexual abuse.¹⁹⁷ In some cases, obesity is an individual's way of dealing with fear of intimacy. It is a way of keeping others at a distance.

Obesity – feast or famine? Being insecure about the availability of food is associated with a 30% increase in obesity.¹⁹⁸ Many of us have been programmed, possibly as a result of the great depression of 1929, to save for the future. Fear of want or loss drives a lot of our decisions. The Bible addresses this propensity to trust to what man can do in this way, "And deliver them who through fear of death were all their lifetime

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subject to bondage.”¹⁹⁹ Jesus Christ came to put these fears away and give us peace and rest.

Don't go crazy: weight loss reduces psychological symptoms. One study revealed that weight loss was associated with improvements in psychotic traits, paranoid ideation, irritability, interpersonal sensitivity, emotional stability, nervousness, and sociability.²⁰⁰

Dealing with obesity may involve dealing with stress for many people.²⁰¹ Stress management is more successful if accompanied by improvements in spiritual health.²⁰²

Maybe this is because of Jesus' promise, "Come unto me, all ye that labor and are heavy laden, and I will give you rest."²⁰³ Joining a group with a leader and organized activities reduces stress and improves weight loss.²⁰⁴ Successful stress management has been shown to improve cholesterol, triglycerides, hemoglobin a1c (in diabetics), hostility scores, and weight reduction.²⁰⁵

GREATER LONG-TERM SUCCESS

Studies of people with long-term weight loss success show that they; exercise 30-60 minutes a day regularly, including some weightlifting; plan their meals, maintaining a consistent eating pattern across weekdays and weekends; track calories, fat, and portion sizes; eat low-calorie, low-fat foods; eat breakfast regularly, and self-monitor weight. Studies of people with long-term weight loss success show that they do not make excuses for not exercising like; no time, too tired to exercise, no one to exercise with, or too hard to maintain exercise routine. People with long-term weight loss do not make excuses for not dieting such as eat away from home too often, or diet and health food costs too much. Studies of people with long-term weight loss success also show that they do not use over-the-counter weight loss products.^{206,207} One of the best predictors of success in weight loss is the monitoring of food and activity. Diary keepers score big.

Brain scans shed light on why people overeat. Self-control is a function of the front part of the brain, the frontal lobes. People successful at restraining their appetites and losing weight have been shown on brain scans to have more active frontal lobes.²⁰⁸ We have been given the

power of choice. With exercise, this power is able to help with weight control. "Choose you this day whom ye will serve."²⁰⁹

TV down time; down the chips, down the cola, down the beer.²¹⁰ Television viewing while eating increases food intake by an average of 228 kcal.²¹¹ Television viewing, two or more hours per day, increases the risk of weight gain by 35%.²¹²

POWER TO SUCCEED

Temptations to the indulgence of appetite possess a power that can be overcome only by the help that God can impart. But with every temptation we have the promise of God that there shall be a way of escape. Why, then, are so many overcome by temptation? It is because they do not put their trust in God. They do not avail themselves of the means provided for their safety.²¹³

The standard is Jesus Christ. After fasting for forty days in preparation for ministry he said, "Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God."²¹⁴

One of the principles He taught and lived was to think outside of ones-self. His philosophy as expressed and lived was, "The Son of Man came not to be ministered unto, but to minister, and to give his life a ransom for many."²¹⁵ One way to think of this in respect to obesity is that in this world we are to be producers rather than just consumers. Is the world going to be a better place for our having lived in it?

We must recognize and own our problems. When we see ourselves in contrast to Jesus, we feel shame and come to Him in repentance and confession. We admit that we did it to ourselves—that our habits and cravings have controlled us and that without His power to overcome we are doomed to obesity.

Yield To Victory: Choose Life. Seeing Him as the great pattern of goodness and temperance we yield our whole heart to Him and choose to serve Him—make Him Lord of our life. In choosing to serve God, in giving Him the choices of our will, our whole nature comes under His power.

Take Life! We cannot of ourselves excuse the past that has brought on obesity or change our hearts; but having given ourselves to God, we believe that He, for Christ's sake, does all this for us. By faith we became Christ's, and by faith we are to grow up in Him – by giving and taking. We

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give all; our hearts, our wills, our service. We give ourselves to Him to obey all His requirements – and we take all of Christ, the fullness of all blessing to abide in our hearts, to be our strength, our righteousness, our everlasting helper; to give us the power to obey, and the power to overcome the habits and cravings that leave us obese.

Die to self, appetite, and inactivity. When the craving comes, die to the temptation and choose the power of God to resist. The advice is, “Submit yourselves therefore to God. Resist the devil, and he will flee from you.”²¹⁶

Have a replacement. When the urge comes to violate your good judgment, be ready with an alternate activity or plan. Ask God for power and when you have an urge to eat; take a walk. When you have an urge to snack, drink cool water. When the urge comes to take more food than is wise, take even less. You will need to come up with your own alternatives with God’s help. “When the enemy shall come in like a flood, the Spirit of the LORD shall lift up a standard against him.”²¹⁷

Here is a valuable promise, “There hath no temptation taken you but such as is common to man: but God is faithful, who will not suffer you to be tempted above that ye are able; but will with the temptation also make a way to escape, that ye may be able to bear it.”²¹⁸

In this way you will find true satisfaction. If you are not right with God, “ten women shall bake your bread in one oven, and they shall deliver you your bread again by weight: and ye shall eat, and not be satisfied.”²¹⁹ On the other hand, “The meek shall eat and be satisfied: they shall praise the LORD that seek him: your heart shall live for ever.”²²⁰

Once you are on the track to optimal health – and you WILL be on the track to optimal health – find someone else to help; it’s part of the program. “And if thou draw out thy soul to the hungry, and satisfy the afflicted soul; then shall thy light rise in obscurity, and thy darkness be as the noonday: And the LORD shall guide thee continually, and satisfy thy soul in drought, and make fat thy bones: and thou shalt be like a watered garden, and like a spring of water,

whose waters fail not.”²²¹ We are blessed in blessing others. It is more blessed to give than to receive.

THE BOTTOM LINE

Obesity is at an all-time high, largely because people are eating high calorie foods while engaging in little or no calorie burning physical activity.

The key is to replace high-energy food items with unrefined whole-plant food items, replace all beverages with water, and replace sedentary habits with physical activity.

IN A NUTSHELL:

- Plan your meals; eat modest portions of low-energy-dense/high nutritionally dense whole plant foods. Keep the menu simple.
- Put all the food you are going to eat on your plate at the start of the meal and keep written records of what you eat, etc.
- Eat breakfast every day and keep a strict schedule, skip dinner if you must skip a meal. Fasting one day a week can be helpful.
- Eat only natural food that does not feed addiction or overpower rational decision-making. Eat for “strength and not for drunkenness.”
- Chew your food well – choose food that requires chewing.
- Drink plenty of water between meals: 30 minutes prior or 2 hours after.
- Exercise regularly: walk outdoors in the fresh air and sunshine, engage in some resistance exercises or activities.
- Take regular time for adequate sleep.
- Establish a plan for your known weaknesses and with God’s help make them your strengths.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, “How Can I Apply Healthy Principles in My Daily Life”.

“Perfect health depends upon perfect circulation. A good circulation purifies the blood and secures health, while a poor circulation renders the blood impure and induces congestion of the vital organs.”ⁱ

- E.G. White

ⁱ White, E. G. (1909). Letters and Manuscripts — Volume 24 (1909). Ellen G. White Estate. {Ms 109, 1909, par. 17}.

CHAPTER 3

HYPERTENSION: TAKING THE PRESSURE OFF

NATIONAL WATER SHORTAGE

“My eighty-three-year-old mother called me last week: ‘Brenda!’ her voice sounded alarmed, ‘I just took my blood pressure and I am worried; it is 160/100’”

Brenda was worried, too, but knew something about blood pressure. “Mom, just sit down, drink 3 big glasses of water, and I’ll be over in about 45 minutes and we’ll take your blood pressure again.” Arriving 45 minutes later, Brenda retook mom’s blood pressure; it was now 130/70.

Americans are chronically dehydrated. People who drink plenty of water have lower blood pressures.¹ Many people suffer from high blood pressure, the cause of which is inadequate consumption of water. Constant dehydration forces the body to tighten the blood vessels and speed up the heart to maintain adequate blood flow to the brain and over time hypertension results.² Not all hypertension is the result of not drinking enough water, but more of it arises from this cause than is realized.

Contrast the impact of this “national water shortage” with the National Institute of Health’s (NIH) guidelines for treatment of hypertension.³ For instance, say your water intake has been dismally inadequate and your brain is crying for better blood supply. The body responds with a faster heartbeat and tighter blood vessels to squeeze the blood more effectively up to the top of your head.⁴ The doctor takes your blood pressure and, of course, discovers you have blood pressure that is higher than is considered safe. In line with practice guidelines. The first line treatment is a diuretic – a “water pill” – You go home, the dehydration is worse, compounded, and on a return trip to the doctor you are again discovered to be not only hypertensive, but your heart rate is up.

Guidelines now recommend a beta-blocker. What does a beta-blocker do? Slows your fast heart rate. With that you go home, your heart is now slow, but the brain is still crying out for blood so all the blood vessels in your body get even tighter to squeeze the remaining blood to the top of your head.

Back to the doctor you go for follow up; low-and-behold the pressure is still up. The next recommended pill to fix the “resistant hypertension” is a calcium channel blocker. What does a calcium channel blocker do? It relaxes all the blood vessel in your body. You mean the ones that tightened up to get the blood to the top of my head? Yes. Now I must hand it to the NIH, the first line therapy is really supposed to be lifestyle modifications, but in my estimation the modifications listed and the extent to which they are applied or encouraged lacks enthusiasm. Okay, so, I guess you can see that I am not “real big” on treating diseases you get from poor lifestyle practices with any other thing than correct lifestyle practices.

SAVE THE BRAIN

People with normal blood pressure live longer.^{5,6,7} What is more, their thinking is clearer. Studying the brains of people with high blood pressure, also called hypertension, researchers have discovered an association between hypertension, brain white matter defects, and difficulty thinking and remembering.⁸ People with high blood pressure develop white matter lesions in their brains at 10 times the rate of the normal population.⁹ Controlling blood pressure with medications does not stop brain deterioration. Some blood pressure medications make the brain deteriorate even faster.¹⁰ In order to stop brain deterioration, lifestyle habits responsible for

both hypertension and dementia need to be addressed.

with coronary artery disease (most Americans).³⁵

“SAFE” MAGIC POTIONS?

Some people are quick to look to alternative medicine for a magic potion to fix their lifestyle related diseases, thinking they will find a safer cure in supplements, herbs, or vitamins. Some of these over-the-counter pills contain agents with pharmacological action just like medications, but does it make any sense to take magic potions to treat disease while continuing to practice the lifestyle habits that cause the illness in the first place? It's not that people have not found benefit from some of these pills. Agents with some evidence of benefit include coenzyme Q10, fish oil, garlic, vitamin C, L-Arginine,¹¹ grape seed extract,¹² quercetin,^{13,14} rosemary,¹⁵ cranberry,¹⁶ fennel,¹⁷ mistletoe,^{18,19} saffron,²⁰ hawthorn berry²¹ and valerian.²² But none of these pills change the reasons or causes as to why your blood pressure went up in the first place.

NO SUBSTITUTION

I am not against pills just because they are pills, but some of these pills can have serious drawbacks. For example, people already on blood pressure pills respond more poorly to lifestyle changes.²³ They are somewhat trapped. What's more, Parkinson's disease is a side effect of some blood pressure medications.²⁴ What about Alzheimer's? People with low to normal blood pressure are protected from brain diseases like Alzheimer's.²⁵ Artificial low blood pressure, with medications, does not always avert progression to dementia.²⁶ People whose good lifestyles give them a healthy blood pressure are much more likely to be mentally acute as they get older.²⁷ I recommend making a healthy lifestyle your defense against dementia, not medications.

While medications are generally prescribed to address some disease from which a patient suffers, hypertension is a side effect of many medications. Oral contraceptives rise blood pressure 8 points on average.^{28,29} Antidepressant use doubles the risk for hypertension.³⁰ Anti-inflammatory drugs cause high blood pressure through kidney dysfunction.^{31,32,33} Acetaminophen (aka Tylenol) increases blood pressure³⁴ especially in patients

WHAT IS HYPERTENSION?

What is Hypertension? The National Institute of Health is clear on the classification of blood pressure. Blood pressure is recorded as systolic pressure over diastolic pressure. Systolic is a measure of the highest pressure the heart develops during its beat and diastolic is the lowest pressure when the heart is refilling with blood for another beat. Normal blood pressure goes no higher than 120/80. To go over 120/80, but no higher than 139/89 is to have pre-hypertension. Blood pressure over 139/89 is classified in two stages. Stage 1 hypertension is from 140-159/90-99. Any pressure of 160/100 or more is considered stage 2 hypertension.³ The higher your blood pressure the higher your chances of experiencing other life-threatening complications of hypertension.

People whose good lifestyles give them a healthy blood pressure are much more likely to be mentally acute (sharp/bright) as they get older.

GLOBAL IMPACT

Hypertension affects approximately 50 million people in the United States and 1 billion worldwide.³ Fully 29% of US adults have hypertension, around 68% are taking antihypertensive medication, but only 64% of those taking medication have their blood pressure controlled.³⁶ Nine out of ten 55-year-olds, in the United States, with normal blood pressure will develop hypertension before they die.³

TYPES OF HYPERTENSION

There are two major types of high blood pressure, primary and secondary.³⁷ Primary blood pressure is generally considered to have an unknown cause, but as you continue to learn the facts about hypertension you will discover that most primary hypertension is lifestyle related—it is caused by our habits relating to eating, drinking and exercising. Secondary

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hypertension can be linked to other medical diseases such as thyroid disease, kidney disease, parathyroid disease, metabolic syndrome (diabetes), etc.

High blood pressure is called “the silent killer” because the majority of people with hypertension are unaware of its presence.

THE SILENT KILLER

High blood pressure is called “the silent killer” because the majority of people with hypertension are unaware of its presence. Nevertheless, some people with hypertension do report symptoms, these can include tiredness, sudden hot flashes, headaches, reduced energy, heart beat palpitations, sudden sweating, reduced physical performance, dizziness, shortness of breath, chest pain, sleepiness, blurred vision, tinnitus (ringing in the ears), and/or muscle tension.³⁸

BE ALERT FOR SIGNS OF CARDIOVASCULAR DANGER

Hypertension might not be so bad if it were not for all the other diseases it causes. Of these heart disease tops the list. Achieving normal blood pressure reduces the risk of congestive heart failure by 36%,³⁹ of coronary heart disease by 72%, and of heart attack by 75%!⁴⁰ Because hypertension is so hard on the heart, if you can reduce the blood pressure by just 20 points, you can cut the risk of heart disease in half.³

Researchers have determined that lowering the average blood pressure in the United States by just 5 points would reduce the number of stroke deaths by 23,000 per year.⁴¹ Further, lowering your blood pressure from 140/90 to a more normal 120/75 reduces your risk of stroke by 74%.⁴² Bleeds are a common cause of stroke and can occur when an aneurysm bursts in the brain. If blood pressure is kept within normal limits, brain aneurysms are much less likely to enlarge and rupture.⁴³

Another study reported that normalizing blood pressure can reduce strokes by 35–40%, myocardial infarctions by 20–25% and heart failure by more than 50%.⁴⁴

Controlling blood pressure also reduces the risk of peripheral vascular disease – injury to

blood vessels in your arms and legs that can lead to physical disability.⁴⁵

ADDING INSULT TO INJURY

Hypertension can damage any part of your body because every part of your body is dependent upon blood for life. People with normal blood pressure save themselves much grief.

People with normal blood pressure can avoid the second leading cause (behind diabetes) of kidney failure.⁴⁶

A surprising consequence of high blood pressure is high cancer risk! For example, normal blood pressure decreases the risk of endometrial cancer by 70%.⁴⁷

Do you remember your last blood pressure numbers? Are you having difficulty thinking and remembering? People with hypertension are more apt to get Alzheimer’s in their later years, a disease of the brain that affects the ability to think and remember. People with normal blood pressure have superior blood flow to their brains improving thought and memory.^{48,49} Normal blood pressure protects you from brain deterioration especially in the frontal lobes.⁵⁰ People who do not have hypertension perform better on test of memory, attention, and abstract reasoning.⁵¹ Normal blood pressure can actually reduce the risk of Alzheimer’s by 40%.⁵²

Diabetes and hypertension are often closely related. When combined with low HDL cholesterol, high triglycerides, and central obesity they are given a diagnosis of syndrome X.⁵³ Syndrome X is not a good diagnosis to have, but lifestyle interventions are most effective at treating this disease.

Osteoporosis is a thinning of the bones leading to an increased risk of fractures. People with normal blood pressure have 1/3 the risk of osteoporosis as those with hypertension.⁵⁴

Retinopathy and Macular Degeneration are leading causes of blindness. Keeping blood pressure within normal limits cuts the risk of blindness from retinopathy and/or macular degeneration in half.⁵⁵

Erectile dysfunction; the pressure in performance anxiety! Having trouble pleasing your wife? Thirty-two percent more men with normal blood pressure “get it up” than men with hypertension.⁵⁶

WHERE ARE WE HEADED: OUTLINE

Where we are headed with our hypertension discussion? Blood pressure is a product of the pumping of the heart, the blood vessel size, blood thickness and blood volume. If the heart beats faster, more blood is pumped and the pressure goes up. We call this tachycardia. If the blood vessels tighten up, making the space for the passage of blood narrower, it takes greater pressure to get the same amount of blood through to its destination. We refer to this tightening up effect as vasoconstriction. Blood vessels normally expand with each beat of the heart and then relax. If the blood vessels become hard, their stiffness inhibits the free flow of blood with each beat of the heart and the pressure goes up. Atherosclerosis is an example of this process. If the blood becomes thick and sludgy, more pressure is required to push it through the blood vessels and hypertension commences. When blood gets thick, we say that the viscosity has increased too much. If the blood vessels are being choked by something pressing on them from their sides, the effect is like putting your thumb over the end of a garden hose; this results in increased blood pressure. We call this external compression. Finally, if the volume of blood increases, this increases the amount of blood entering the heart, this in turn increases the amount of blood the heart pumps with each beat increasing the overall blood pressure. We often refer to this phenomenon as fluid retention.

VOLUME OVERLOAD!

Let us start by talking about the problem of volume overload. Volume overload can be the result of obesity, where it takes more blood to feed an increased mass of fat tissue. Salt causes fluid retention effectively producing volume overload. Volume overload results when the kidneys fail, because the kidneys are responsible for dispensing with excess fluid volume. Muscles have many large blood vessels and require lots of blood when exercised. Big muscles left unused become stiff and their blood vessels become stiff resisting blood flow and causing volume overload at the heart. Thus, inactivity leads to hypertension. Blood does not like to be cold (you are not cold-blooded) and if your legs or arms are cold, the blood vessels in these extremities tighten up, sending all of the blood

flooding to the heart, overloading it and causing hypertension.⁵⁷

US SODIUM INTAKE EXCEEDS DIETARY GUIDELINES

It is a well-known fact that dietary salt plays a significant role in the evolution of hypertension. Salt causes your body to hold on to excess fluid, causing volume overload at the heart, and subsequent hypertension. It is estimated that reducing sodium intake in America to 1300mg (about ½ teaspoon of salt) per day would reduce the yearly death rate by 150,000.⁵⁸ Our recommends are that total salt consumption not exceed 1/4 to 1/8 teaspoon per day, or 600mg to 300mg of sodium total.

Salt is a popular ingredient in fast food restaurant menu items. Salt and hypertension are key ingredients for the occurrence of a brain stroke. A national statistic reveals that the more neighborhood fast food restaurants a community has, the higher will be the stroke rate in that given community.⁵⁹

Okay, so test your salt savvy; which has more sodium – Rice Chex cereal or potato chips per one ounce serving each? The Rice Chex cereal, at 249 mg, has nearly twice as much as potato chips at 147 mg. How did you do? Now, compare tortilla chips and canned tomato sauce. The tomato sauce tops the chips at 147 mg / oz, the chips contain 118mg of sodium per ounce. What about Kraft Velveeta processed cheese or a hot dog sandwich? Ounce for ounce the Velveeta has nearly twice as much sodium at 420 mg compared to the hot dog's 221 mg.⁶⁰ Read your labels! Don't get caught off guard. Or, better yet, buy food without labels, like corn on the cob, which has one-tenth the sodium as canned corn.⁶¹ In Japan, soy sauce is a significant source of excess sodium. In Japan, most (63%) dietary sodium comes from soy sauce and is a big cause of hypertension.⁶²

Which has more sodium Rice Chex cereal or potato chips per one ounce serving each? The Rice Chex cereal at 249 mg has nearly twice as much as potato chips at 147 mg.

Let us suppose your sodium intake is within safe limits, but you still seem to be having salt related hypertension. It may be due to other things in your diet that cause you to retain

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sodium. Refined carbohydrates and saturated fats increase salt retention and lead to hypertension.^{63,64}

Psycho-social factors can also affect the body's propensity to hold on to excess sodium. People under stress retain sodium.⁶⁵ Thus, people who don't stress out, retain less salt and have lower blood pressures. We will be revisiting this factor in detail under the fast heart rate discussion section further on in this book. Blood-pressure-raising-sodium is not unique (or limited) to table salt; it also appears in sea salt and in mono sodium glutamate (MSG). It should come as no surprise then that MSG consumption increases the likelihood that a person will get high blood pressure.⁶⁶

ESCALATING OBESITY RAISES PRESSURE CONCERNS

Think twice before shopping for a larger dress; clothing size correlates directly with increases in blood pressure.⁶⁷ According to the World Health Organization, more than one billion people worldwide are overweight and more than 300 million people are obese resulting in high rates of hypertension, kidney disease and cardiovascular disease.⁶⁸ What we eat in America, the (S)tandard (A)merican (D)iet, makes the liver sick with "fatty liver disease" and triples the risk of hypertension.⁶⁹ A "pot belly" is a bad omen for hypertension. Thinner is better, tighten that belly for a drop in pressure! The more abdominal (visceral fat) you sport, the greater your risk of hypertension.⁷⁰ One serving of cheese per day can significantly increase a man's waist circumference, body mass index and blood pressure.⁷¹ Indeed, each inch you can tighten your belt lowers your risk of hypertension by 15%.⁷² To relate it to absolute weight gain in pounds, a 55 lb weight gain over your ideal body weight raises your risk of hypertension by 265%.⁷³ It is estimated that in up to 50% of the adults in the United States, whose hypertension is being managed with pills, the need for drug therapy could be alleviated with modest reductions in body weight.⁷⁴

INEQUALITY AMONG THE PROTEIN GIANTS

While many see protein as essential, excessive intake has been linked to hypertension.⁷⁵ Specifically, animal protein especially decreases kidney function increasing the risk of hypertension.⁷⁶ On the other hand

plant protein has been demonstrated to lower blood pressure. Increased intake of plant protein, fruits and vegetables significantly lowers the risk of hypertension.⁷⁷ As a practical example, two groups of people were compared. The first group used milk, a source of animal protein, and the second group was given soy milk, a source of vegetable protein. Those on the soy milk experienced 18 mmHg lower blood pressures than those on the cow's milk.⁷⁸ What's more a switch to soy can improve kidney function and insulin sensitivity,⁷⁹ and lower serum total cholesterol levels.⁸⁰

VASOCONSTRICTION

Let's now turn our attention to the impact of vasoconstriction on the development of high blood pressure. If the blood vessels tighten up, making the space for the passage of blood narrower, it takes greater pressure to get the same amount of blood through to its destination. What makes the blood vessels tighten up? Psychological stress, cold – especially in the arms and/or legs, and failing to maintain adequate water intake. Then there are the substances which stimulate the blood vessels to constrict such as caffeine from tea, coffee, colas, etc, and tobacco.

PUTTING PRESSURE ON: SUBSTANCE ABUSE

Caffeine makes the heart react as it would if you were in a real life-or-death, stressful, flight-or-fight situation.⁸¹ What actually happens is that caffeine acutely raises blood pressure by raising circulating concentrations of the stress mediators epinephrine and norepinephrine. In addition, caffeine increases arterial stiffness and inhibits the relaxation of blood vessels.⁸² The impact of caffeine consumption on blood pressure is dose dependant – the more caffeine you consume, the more your blood pressure increases.⁸³

Chocolate contains caffeine as well as other similar vasoactive substances such as theobromine.⁸⁴ Some have crafted studies (which lack any disclaimer to industry involvement, funding, or researcher bias) designed to give chocolate apparent positive effects on high blood pressure.⁸⁵ But in studies of real people eating chocolate available from stores it does not lower blood pressure, it only tends to encourage eating between meals and weight gain.⁸⁶

Blue Print for Health and Healing

The nicotine in tobacco is also a vasoconstrictor and pressor—a substance which raises blood pressure. Non-smokers have 12% lower risk of developing hypertension than smokers.⁸⁷

ENVIRONMENTAL HAZARDS

Remember the people who got sick from the FEMA trailers used to house victims of hurricane Katrina that hit Louisiana?⁸⁸ Environmental chemicals such as formaldehyde and acetaldehyde, which are found in building materials and cigarette smoke, increase hypertension, tightening blood vessels and increasing the amount of blood the heart pumps.⁸⁹

Vasoconstriction can be the result of electromagnetic bombardment. For example, 40 minutes on the mobile phone can raise your blood pressure by 10 points.⁹⁰

WEATHER AND CLOTHING

When your arms or legs get cold, the blood vessels in them tighten up to reduce the amount of blood coming to them so that you will not lose too much heat. Poorly clad, chilled extremities force blood back to the heart, doubling its work and raising blood pressure.⁹¹ It is interesting to note that blood pressure increases in the winter, especially in the elderly,⁹² but so does consumption of salt and fat.⁹³

On the brighter side, don't underestimate the benefits of sunshine! Sunshine relaxes blood vessels lowering blood pressure^{94,95} and increases vitamin D, which has also been shown to lower blood pressure.⁹⁶

MOVE THOSE MUSCLES!

Don't take life sitting down! Active people have lower blood pressures; sedentary ones get hypertension.⁹⁷ Inactivity leads to increased vascular resistance to blood flow,⁹⁸ decreased blood flow to large muscles,⁹⁹ and increased blood pressure.¹⁰⁰ Regular use of your muscles keeps them supple and well supplied with blood, this in turn lowers blood pressure.^{101,102}

The benefits of exercise in the treatment of hypertension are often overlooked. Exercise is important for all aspects of health. If you keep wiggling, they won't put you in a box! As a mode of exercise, walking is hard to beat. In fact, walking 10,000 steps or more per day can lower

your blood pressure by 10 points.¹⁰³ That would be about 4 miles. Weight lifting or resistance training can provide additional benefit. Indeed, 20 minutes per day in the gym can lower your blood pressure by as much as 10-12 points.¹⁰⁴

RELAXATION

Feel the need of a massage? A back massage brings relaxation and lowers blood pressure.¹⁰⁵ A nice soothing warm bath is also beneficial.¹⁰⁶

EXTERNAL COMPRESSION

External compression, the choking off of blood flow by something pushing on the blood vessel from its outside, causes hypertension. The effect is like putting your thumb over the end of a garden hose; the result is increased blood pressure. If someone grabs your neck from behind and chokes off your air and carotid arteries, not only will your eyes bulge, but your blood pressure will probably go up. Physical things which produce an external compression of the blood vessels include swelling, or edema, inflammation, sugar coating of the vessel walls called glycation, tight clothing, and obesity.

TIGHT CLOTHING

Tight clothing, like belts and elastic, compress blood vessels and raise blood pressure. Clothing that hangs from your shoulders leaves your waist free of compression and aids in lowering blood pressure. Wearing loose clothes allow for more free blood flow and more normal blood pressure.¹⁰⁷ Instead of wearing a belt to hold up pants, suspenders are helpful to avoid the tightness.

BREATHE CORRECTLY

Deep abdominal breathing, in contrast to shallow chest/neck breathing, brings blood pressure down.^{108,109}

BLOOD VISCOSITY, THICK BLOOD

If the blood becomes thick and sludgy, more pressure is required to carry it through the blood vessels and hypertension commences.¹¹⁰ When blood thickens, we say that the viscosity has increased too much. What happens is that the red blood cells stick together in a series or chain. We call this phenomenon rouleaux.¹¹¹

Hypertension: Taking the Pressure Off

Factors known to influence blood toward increased viscosity and rouleaux include stress, dehydration, consuming refined foods, high blood cholesterol, high fat diet, overeating, and the accumulation of waste products in the intestines.

Refined foods, such as oils and sugars, make red blood cells stick together in clusters or chains called rouleaux that can be seen under a microscope. Higher blood pressure is required to circulate this thickened blood.¹¹²

FATS

Because eating a high amount of fat causes rouleaux, food with saturated fat, (i.e. animal products, butter,¹¹³ margarine, shortening, and/or coconut oil,¹¹⁴ etc.) significantly increases the risk of hypertension. In addition, consumption of these products also raises the blood cholesterol, thickening the blood further, and raising blood pressure.¹¹⁵ Even God has weighed in on the fat question, "Speak unto the children of Israel, saying, Ye shall eat no manner of fat..."¹¹⁶

Do you know how much fat is in the food you eat? Fat in the diet increases blood pressure because it thickens the blood, and makes the blood vessels stiff.

Compared to naturally occurring vegetable fats, lard significantly increases blood pressure and risk of hypertension.¹¹⁷ This problem is worse as one gets older.¹¹⁸ These scientific facts help explain why God said, "And the swine, because it divideth the hoof, yet cheweth not the cud, it is unclean unto you: ye shall not eat of their flesh, nor touch their dead carcase."¹¹⁹ One group of researchers wanted to see what would happen if people were placed on an animal fat free diet for 10 days. It was discovered that ten days on an animal fat free diet significantly reduced blood pressure.¹²⁰ It is interesting to note that a similar experiment was entered upon around 600 B.C. in Babylon.¹²¹ Daniel was a Jewish captive of Babylon. When offered a diet of meat he requested, "Prove thy servants, I beseech thee, ten days; and let them give us pulse (vegetables) to eat, and water to drink."¹²² The outcome was that Daniel and three other colleagues who shared the intervention arm of the study did ten

times better in school than all the other university students.

What about processed vegetable oils? These oils are not free from health risk just because they come from plants. Refined oils, especially canola oil,¹²³ increase hypertension¹²⁴ and the risk of stroke at a younger age.¹²⁵

Another problem with oils is what happens to them when they are subjected to heat. For example, heating oils in a pan causes serious deterioration in their quality turning them toxic so that they contribute to the onset and severity of hypertension.¹²⁶

Do you know how much fat is in the food you eat? Fat in the diet increases blood pressure because it thickens the blood, makes the blood vessels stiff,¹²⁷ and causes endothelial dysfunction.¹²⁸ What is endothelial dysfunction? Nitric oxide is used in the body to relax blood vessels. When the blood vessels respond poorly to nitric oxide relaxation we say it is a result of the inner lining or endothelium of the blood vessel being sick or dysfunctional, hence, endothelial dysfunction.¹²⁹ Foods that decrease vascular sensitivity to nitric oxide relaxation signals include: high fat,¹³⁰ salt,^{131,132} cholesterol,^{133,134} (especially dietary oxidized cholesterol^{135,136}), overeating,^{137,138} sugar,^{139,140} (especially fructose^{141,142}), and glycation of proteins as happens in diabetes.¹⁴³

THE VASO-RELAXING DIET

On the other hand, proper diet has a significant impact on the responsiveness of your blood vessels to nitric oxide relaxation. I call it the vaso-relaxing diet, meaning it MSKRD your blood vessels more responsive to relaxation messages from your body. Dietary changes known to improve vascular responsiveness include: a vegetarian diet,¹⁴⁴ oats (oatmeal),¹⁴⁵ tomatoes,¹⁴⁶ diets rich in antioxidants¹⁴⁷ such as vitamin E,¹⁴⁸ and minerals like zinc¹⁴⁹ and copper.¹⁵⁰

Omega-3 deficiency leads to hypertension.¹⁵¹ Flaxseed and walnuts are good dietary sources of omega-3 fatty acids. Omega-3 fatty acids are very antithrombotic and anti-inflammatory. In contrast, omega-6 fatty acids, which are present in refined vegetable oils and meat, are prothrombotic (causing blood clots) and proinflammatory. Omega-3 fatty acids also aid in the treatment of hyperlipidemia, hypertension, and rheumatoid arthritis.¹⁵²

THE DEADLY MIX: FAT AND SUGAR

When combined, fat and sugar form a deadly mix. The risk of hypertension from combining these two agents is not just additive, it is multiplicative,¹⁵³ meaning just small amounts of these two agents mixed together creates an enormous health hazard.

THE AMERICAN SWEET TOOTH

Speaking of sugar, (and refined carbohydrates, like white flour, white pasta, white rice, and refined breakfast cereals, which turn immediately to sugar in your blood stream), 20 teaspoons of sugar raises your blood pressure by 2 mmHg, 40 teaspoons raises it by 5 mmHg.¹⁵⁴ The average American consumes 47 tsp of sugar each day of their lives.¹⁵⁵ The danger of sugar in the diet is that it ends up in the blood stream. As the blood sugar rises so does the blood pressure.¹⁵⁶

Not all carbohydrates are created equal. Sugar and complex carbohydrates may carry the same theoretical calories per gram, but the impact on the blood sugar, the risk of hypertension and diabetes complications are very different.¹⁵⁷ Complex carbohydrates from an unrefined plant-based diet are much better tolerated, decrease the risk of hypertension, and provide a nutrient dense diet that improves health.¹⁵⁸ So how do sugar and other refined carbohydrates cause hypertension? Refined carbohydrates cause hypertension by increased production of norepinephrine, dopamine, and epinephrine, and by causing blood vessel wall thickening.¹⁵⁹ The secret is to quit consuming sugar; it works, and blood pressure comes down.¹⁶⁰

Sugar is an accumulative poison. Refined carbohydrates create a sticky coating of sugar all over your blood cells, blood vessels and other body tissues. The more refined processed foods you eat, the higher your blood sugar goes and the more this sticky sweet substance coats the tissues of your body. This coating is called glycation and accumulates over time, leading to vascular and heart muscle stiffness, atherosclerotic plaque and hypertension. The more refined food you eat in your lifetime the greater your chance of having high blood pressure as you age.¹⁶¹ People on an unrefined plant-based diet enjoy a cleaner cardiovascular system and may avoid high blood pressure all together as they get older.¹⁶²

Eating refined carbohydrates has a downside of leading to a condition called insulin resistance, where the cells of the body no longer take sugar out of the blood stream in response to normal insulin levels.^{163,164} Examples of refined carbohydrates shown to increase insulin resistance include: white rice,¹⁶⁵ white flour, as found in pastries and white bread,^{166,167} and processed sugar.^{168,169} Of particular concern among refined carbohydrates is fructose, its ability to create insulin resistance and hypertension surpasses table sugar.^{170,171}

Sugar is an accumulative poison. Refined carbohydrates create a sticky coating of sugar all over your blood cells, blood vessels and other body tissues. The more refined processed foods you eat, the higher your blood sugar goes.

Additional causes of insulin resistance include a high fat diet,¹⁷² eating between meals or snacking¹⁷³ and obesity.¹⁷⁴ The results of insulin resistance are high cholesterol values¹⁷⁵ and, of course, hypertension.^{176,177,178} People who never provoke their insulin to overproduction by eating refined carbohydrates also never experience insulin-driven hypertension.¹⁷⁹ Eat only as much refined carbohydrates as you would like to see your blood pressure go high.

Speaking of fructose, drinking one fructose-sweetened soda per day can increase the risk of hypertension by 77%.¹⁸⁰ And, in case you were thinking artificial sweeteners were a good alternative, think again. Artificial sweeteners like aspartame give some people very high blood pressure.¹⁸¹ Stopping these sweeteners can be the secret to lowering some people's blood pressure.¹⁸² On the other hand there is a non-sugar sweetener which has been shown to improve blood pressure, and that is stevia.¹⁸³ It does this by acting as a calcium channel blocker (the mechanism of action of some pharmaceutical blood pressure drugs).¹⁸⁴

HARDENING OF THE ARTERIES

Hardening of the arteries causes resistance to free flow of the blood. Blood vessels normally expand and relax with each beat of the heart. If the blood vessels become hard, their stiffness inhibits the free flow of blood with each beat of

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the heart and the pressure goes up.^{185,186} Atherosclerotic plaque is an example of this process.¹⁸⁷ If a plaque narrows the diameter of a blood vessel, more pressure is required to get the same amount of blood through the smaller opening.

Other conditions leading to this mechanism of blood pressure elevation include; increased body inflammation¹⁸⁸ (also known as oxidative stress), physical inactivity, and endothelial dysfunction. Endothelial dysfunction is a deadening of the blood vessel wall so that it no longer responds to the bodies relaxing signals. Endothelial dysfunction leads to unresponsive arteries and veins. Unresponsive arteries and veins resist free flow of blood to the tissues raising the blood pressure required to move the same volume of blood. Things that cause endothelial dysfunction include high blood sugars with sugar coating of the endothelium, uric acid with deadening of the endothelium, and high fat which also deadens the endothelium so that it will not relax and allow blood to pass freely.

INFLAMMATION AND ENDOTHELIAL DYSFUNCTION

The role of inflammation in the development of hypertension is multifaceted. Besides causing endothelial dysfunction, it thickens blood vessel walls making blood flow more difficult and raising the pressure required for normal circulation. In consequence, blood pressure goes up with increasing inflammation.¹⁸⁹ People with more inflammation have a 40% higher risk of hypertension.¹⁹⁰ Many people realize that there is an association between salt intake and a rise in blood pressure. In fact, even though arterial hypertension is a major cause of disease-related morbidity and mortality worldwide, it is nearly absent in populations that consume natural foods containing little or no salt.¹⁹¹ This is partly due to fluid retention,^{192,193} but it is also due to inflammation.¹⁹⁴ Excessive salt intake causes hypertension and kidney injury, in part, by oxidative stress that inflames the blood vessel walls and kidneys.¹⁹⁵

TOXINS IN THE ENVIRONMENT

Lead¹⁹⁶ and arsenic¹⁹⁷ are environmental poisons that raise whole body inflammation and have been shown to cause hypertension. Lead is

a common contaminant in old paint, dust around old houses and can even be found in supplements such as calcium.¹⁹⁸ Arsenic often contaminates public drinking water¹⁹⁹ and bottled water.²⁰⁰ Arsenic is used in chicken and hog feed as a growth promoter and is present in the meats of these animals. Arsenic is an approved feed supplement that farmers use to control intestinal parasites in chickens.²⁰¹ As a consequence, eggs²⁰² and chicken meat²⁰³ prove to be dietary sources of arsenic. Seafood, because fish swim in polluted waters, has been found to be a significant source of arsenic in those that consume seafood.²⁰⁴ Avoid arsenic and avoid hypertension.

HOW MUCH ANTIOXIDANTS DO I NEED?

The secret to inflammation management is having a good offense. Antioxidants and phytochemicals from plant foods provide this; they lower the inflammation in your body^{205 206} and normalize your blood pressure.²⁰⁷ You may be asking; how much antioxidant do I need? Can I get too much? You may be interested to find out that lifestyle measures are not easily overdosed, they have more marked results in more difficult cases, and they do not cause dangerous side effects. Antioxidants only lower blood pressure in people with hypertension, not in normal healthy people.²⁰⁸

Diet is not the only way to have a positive impact on your antioxidant defense system. Exercise helps reduce the body's inflammation resulting in lower blood pressure.²⁰⁹

Since periodontal disease increases inflammation and hypertension, good oral hygiene can also be a key to good blood pressure control.²¹⁰

BEAUTY REST PRESCRIPTION

One of your bodies' own defenses against elevated inflammation is the hormone produced by the pineal gland in your brain, called melatonin. Melatonin is a natural antioxidant that reduces blood pressure.²¹¹ Late evening artificial lighting impacts sleep, disrupts melatonin production, and raises blood pressure.^{212,213,214} People who take regular hours for adequate sleep in total darkness have a healthier supply of melatonin and lower blood pressures.^{215,216} Consequently, people who subject themselves to the irregularities in schedule afforded by shift work are at higher

risk of hypertension.^{217,218} That extra night's pay may not be worth the risk of high blood pressure. Regular day jobs are friendlier to blood pressure. We recommend a 9:30 p.m. bedtime for adequate melatonin production and healthier blood pressure.

People who go to sleep easily and get plenty of rest experience less hypertension. People who breathe freely at night, without sleep apnea or snoring, have lower blood pressures.²¹⁹

MEAT AND ENDOTHELIAL DYSFUNCTION

So what raises inflammation increasing blood vessel wall thickness and causes endothelial dysfunction? Animal product consumption. Three or more servings of meat, poultry, eggs, fish, and/or seafood per day increases the risk of hypertension by 67%.²²⁰ Of particular concern are pork products. The American Heart Journal notes: "A complete elimination of pork in all forms is a good dietary therapeutic rule in the management of arterial hypertension in all patients." "The elimination of all forms of pork from the diet of all people may be a good practice for the prevention and the control of hypertension, one of the most common and important illnesses of man." "Salted pork is even more hazardous to the health of man."²²¹ Maybe this is why it was not considered a food item in God's book, for Leviticus notes, "And the swine...is unclean to you."²²² Even eggs won't help you lower your blood pressure. Eggs play a significant role in people 40 years old and older in their risk of hypertension.²²³ Animal products lack solution-oriented anti-oxidants, and if they are not a part of the solution, then they are often a part of the problem. This is definitely the case in eating animal products.

ANIMAL PRODUCTS FACE ACID TEST

Acid is no friend of your body's sensitive tissues. Acid increases endothelial dysfunction leading to hypertension.²²⁴ As a consequence, acid forming foods, particularly cheese and animal protein, significantly increase hypertension.²²⁵ Studying acid in the urine to identify acid forming foods, fruit and vegetables actually lower the amount of acid that is formed in the digestion of food. Grains, fish and red meat increase acid formation, but cheese almost triples the amount of acid produced by comparison.²²⁶ One of the offending acids

produced is uric acid. Anything that raises uric acid in the blood raises the risk of hypertension.²²⁷ Foods that raise uric acid include: meat, particularly organ meats,^{228,229} seafood,²³⁰ fructose,^{231,232} often as high fructose corn syrup or agave, beer and alcoholic beverages.²³³ As a consequence, the same diet helpful in lowering the risk of gout from uric acid elevations can simultaneously lower the risk of hypertension.

Foods known to help lower uric acid levels include fruits such as lemons²³⁴ and other citrus, cherries,²³⁵ strawberries,²³⁶ grapes, apples, tomatoes, bananas, and pomegranates; vegetables such as celery, potatoes, beets, and endive; and most tree nuts, especially chestnuts.²³⁷ For that matter, any food with diuretic properties has the potential to relieve high blood pressure that is being caused by high uric acid levels. Foods valued for their enhanced urine production properties (diuretic) include artichoke, celery, eggplant, cauliflower, green beans, grape, apple, peach, pear, melon, and watermelon.²³⁸ When you increase the amount of urine you produce, you potentially increase the amount of uric acid lost in the urine, thus lowering the levels in your blood.

STRONG DRINK

The impact of alcohol on the rise in blood pressure is not limited to its propensity to elevate blood uric acid levels. There is a linear relationship between the amount of alcohol consumed and the rise in blood pressure²³⁸ (the more alcohol you drink the higher your blood pressure goes²³⁹). A two drink a day person can lower their risk of hypertension by one third simply by abstaining.²³⁹ The wise man says; "Wine is a mocker, strong drink is raging: and whosoever is deceived thereby is not wise."^{240,241}

CHOOSING A BLOOD PRESSURE SENSITIVE DIETARY LIFESTYLE

Diet plays a significant role in hypertension, after all, you are what you eat! In a study comparing common diets, it was discovered that non-vegetarians, (consumers of animal products like meat, eggs, and dairy) eat 50% more fat, have 30% higher total cholesterol, have 32% higher blood sugars and are six times more likely to develop hypertension.²⁴² Indeed, in rural populations still practicing their

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traditional largely vegetable based lifestyle, free from the effects of the western diet, hypertension is unheard of and there is no age related rise in blood pressure.²⁴³ Their average blood pressure is around 110/60 mmHg, average cholesterol 129 mg/dl, blood sugars 55 mg/dl and body mass index is 20 (kg/cm²).²⁴⁴

In a study comparing common diets, it was discovered that non-vegetarians (consumers of animal products like meat, eggs and dairy) are six times more likely to develop hypertension.

Really, blood pressure is not supposed to go up with age! In choosing a dietary lifestyle you will be interested to know that people adopting total plant based nutrition only have a 5% incidence of hypertension, those vegetarians including dairy and eggs with their meals, a 10% incidence, fish eating vegetarians a 12% incidence, and meat eaters a 21% incidence.²⁴⁵ Studied from another angle, people on total plant based nutrition have one fourth the risk of developing hypertension as meat eaters.²⁴⁶

In considering adopting a health promoting lifestyle, the vegan (plant-based nutrition) diet has many blood-pressure lowering advantages. In one study hypertensive patients, on blood pressure medications for 8 years, were given a vegan diet for one year. Blood pressures came down and the majority were able to stop or drastically reduce their medications.²⁴⁷ Just eating more fruits and vegetables is helpful, compared to those who do not eat many fruits or vegetables; those who eat largely of fruits and vegetables have a 77% lower risk of hypertension.²⁴⁸ Vegetables lower blood pressure and keep it from creeping up over the years.²⁴⁹

Vegetables known to be helpful in lowering blood pressure include: green leafy because they are high in magnesium and potassium,²⁵⁰ spinach because it is rich in folate,²⁵¹ celery,^{252,253} (eat it or drink it), carrots,²⁵⁴ ginger,²⁵⁵ and broccoli,²⁵⁶ because they relax blood vessels, beets,²⁵⁷ basil,²⁵⁸ garlic^{259,260} (supplement or whole), onions; (eaten raw, but not cooked) significantly reduce hypertension.²⁶¹

Not to be left out, fruit also lowers blood pressure.²⁶² Fruits especially shown to have a positive impact on blood pressure include eggplant,^{263,264} tomatoes,²⁶⁵ pumpkin or squash²⁶⁶ (which are high in potassium and low

in sodium), cranberry (which has ACE inhibitory activity mimicking a popular blood pressure pill),²⁶⁷ an apple a day,²⁶⁸ pomegranates,²⁶⁹ grapefruit²⁷⁰ (which protect arteries, has diuretic activity and improves blood fluidity), and finally olives²⁷¹ (which have calcium channel blocking and nitric oxide mediated vasodilatation benefits).

Deficiency of certain minerals in the diet increases the risk of hypertension. Iron: people eating a nutritious vegetarian diet providing sufficient intake of iron enjoy lower blood pressures. Iron from meat, known as heme-iron, is not helpful in this regard.²⁷² Potassium: lowers blood pressure,²⁷³ but the most common blood pressure pill, a diuretic, lowers potassium.²⁷⁴ Calcium is needed to maintain normal blood pressure.²⁷⁵ Copper deficiency, a common result of eating refined carbohydrates,²⁷⁶ has been shown to cause high cholesterol (hypercholesterolemia), high triglycerides (hypertriglyceridemia), hypertension, and glucose intolerance (diabetes).²⁷⁷ Magnesium deficiency precipitates hypertension.²⁷⁸ Mineral levels are decreased by alcohol, salt, phosphoric acid (sodas), coffee intake, by profuse sweating, by intense prolonged stress, by excessive menstruation and vaginal flux, by diuretics and other drugs by certain parasites (pinworms), by sugar (refined carbohydrates), and by use of tobacco.

On a fresh fruit and vegetable diet, participants lost 8 pounds, lowered their blood pressures by 18 mm Hg, and 80% of those who smoked or drank alcohol abstained spontaneously!

WHAT'S FOR BREAKFAST?

Breakfast eaters experience lower blood pressures than breakfast skippers.²⁷⁹ In planning breakfast, be warned of the "cereal killer". In laboratory animals, most processed breakfast cereals, dry or hot, have a hard time sustaining life and cause hypertension.²⁸⁰ Choose whole plant based unrefined foods for a healthy, blood pressure friendly breakfast. If you cannot, by looking at the breakfast food, determine its identity, such as "O"s or flakes which do not resemble their origin, don't put it in your mouth. It is much better to eat identifiable cereals such

as granola, oatmeal, and other whole grain cereal foods.

The reason why refining foods causes so much hypertension is that fiber and minerals are removed in the process.²⁸¹ Fiber from grains has been shown to reduce the risk of hypertension by 40%.²⁸² Vegetable fiber, 65 gm/day, can reduce your blood pressure by 12-14 points.²⁸³

Beans help lower blood pressure because they are low in sodium, have healthy fiber and contain the blood pressure lowering minerals potassium, magnesium, and calcium.²⁸⁴

Even nuts are beneficial. A daily serving of nuts can reduce the risk of hypertension by 18%.²⁸⁵ The preferred variety is raw with little or no salt. Even "soy nuts", a roasted soybean product, have been shown to positively impact blood pressure.²⁸⁶

One important antioxidant vitamin for addressing blood pressure is vitamin C. When blood levels are maintained from natural dietary sources, blood pressure drops,²⁸⁷ but not when blood levels are attempted through artificial (pill supplementation) sources.²⁸⁸ Diets high in this and other naturally occurring vitamins from fruit and vegetables lower blood pressure.²⁸⁹ One such diet is the Hawaiian diet. This diet is high in complex carbohydrate (77% of calories), low in fat (12% of calories), moderate in protein (11% of calories), and has been shown to have decreases in blood pressure by- as much as 10 points.²⁹⁰

One research group, wanting to maximize dietary impact on blood pressure management, put their patients on a six-month 62% uncooked fresh fruit and vegetable diet. The result was an 8-pound weight loss and an 18 mm Hg blood pressure decrease. In passing, the researchers noted that 80% of those in this study who smoked or drank alcohol abstained spontaneously. They reported increased sensitivity to alcohol, cigarette smoke, chemical odors, and medications. Several also had nausea, vomiting, and malaise after typical restaurant or banquet dinners.²⁹¹ What kind of diet are we talking about? The original diet! "And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." "and thou shalt eat the herb of the field;"²⁹² "Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator. These foods, prepared in as simple and natural a manner as possible, are the most healthful and

nourishing. They impart a strength, a power of endurance, and a vigor of intellect that are not afforded by a more complex and stimulating diet."²⁹³

WHY EAT SO MUCH?

"And put a knife to thy throat, if thou be a man given to appetite."²⁹⁴ Hypertension increases with overeating.^{295,296} Do not overeat! "...eat in due season, for strength, and not for drunkenness!"²⁹⁷ Eating less food (caloric restriction) reduces blood vessel stiffness, improves vascular relaxation and lowers blood pressure.^{298,299}

Taking it a step farther, fasting has been shown to be an effective modality in lowering blood pressure. You can jump start your blood pressure reduction with a water only fast.³⁰⁰ Fasting effectively reduces stubborn hypertension.³⁰¹ Fasting one or two days a week may be more effective than pills.³⁰²

HAVE SOME LEMON IN YOUR WATER!

With dehydration as one of the causes of hypertension,³⁰³ what is the best way to get my water? Adding fresh squeezed lemon to water maximizes its impact on hypertension.³⁰⁴ We recommend that you squeeze the juice of one lemon into your first quart of water for the day and drink it at least 30 minutes before breakfast to lower blood pressure. We recommend that the water be lukewarm, not hot or cold.

TACHYCARDIA: INCREASED HEART RATE

If the heart beats faster, a higher volume of blood is pumped and the blood pressure rises.³⁰⁵ We call this tachycardia. Anything that causes the resting heart rate to increase accelerates the risk of hypertension. In fact, for every 10 beats/min increase in heart rate the risk of hypertension increases by 42%.³⁰⁶ You see, athletes have very low heart rates. People who have not been exercising have a high heart rate, and a high risk of hypertension. Stress also raises the pulse rate.

DOES STRESS RUN IN YOUR BLOOD?

Are you easily startled? This is part of your response to stress and is an early sign you may be headed for hypertension.³⁰⁷ Besides raising the heart rate and tightening the blood vessels,

another way stress causes hypertension and blood clots is that it thickens the blood so that it requires more pressure to pump it through the blood vessels.³⁰⁸ People who never get anxious have a significantly lower incidence of hypertension.³⁰⁹ "Take therefore no thought for the morrow: for the morrow shall take thought for the things of itself. Sufficient unto the day is the evil thereof."³¹⁰

Another way to look at it is that people who handle stressful life events more effectively have greater success maintaining healthy blood pressure.³¹¹ This may have something to do with personality. The easy-going type B personalities go easier on blood pressure than their type A counterparts.³¹² Easy-going, laid-back, calm, relaxed responses to life's challenges predict normal blood pressure.³¹³ People with cool tempers experience calmer blood pressures³¹⁴ and fewer heart attacks.³¹⁵ "He that is slow to anger is better than the mighty; and he that ruleth his spirit than he that taketh a city."³¹⁶ What's more, happier more cheerful people have lower blood pressures.³¹⁷

Having trouble coping? Stress management training, including hostility reduction and anger management have been shown to be effective at lowering blood pressure.³¹⁸

Does keeping an animal help blood pressure? Yes, loving pets have a blood pressure lowering effect for people with hypertension.

Of course, stress is how you perceive your risks, not the risks themselves. People who experience events as negative have a higher risk of hypertension.³¹⁹ The question then is; how can I avoid, or get over stress? How do I change my perceptions of risk away from the negative toward the positive? The first step is being aware when stress is playing a role in your life. Does your pulse rise? Are you physically tense? Do you experience headaches or anxiety? Are you nervous? Does fatigue dog your steps? Do you have high blood pressure? Being in touch with your emotions is key because stress is an emotional experience.

When you discover that you have stress, your next step is to realize or remember what thoughts surround or accompany your stress. Then, evaluate the validity of those thoughts. Are they rational? Are they negative or are they positive? Once you have flushed out the

thoughts underlying your stressful feelings the next step is to determine what these thoughts tell you about what you believe. Beliefs underlie thoughts, thoughts underlie feelings and feelings drive actions or behaviors like hypertension. Take a closer look at your secretly held beliefs, especially the ones underlying stressful feelings. Most often you will discover beliefs that set you up for unreasonable fear, worry, or anger. You need to challenge these beliefs and replace them with rational ones. "And ye shall know the truth, and the truth shall make you free."³²⁰

Beliefs that you will find most helpful for achieving good health are ones obtained from the Bible where we learn that "There is no fear in love; but perfect love casteth out fear: because fear hath torment. He that feareth is not made perfect in love."³²¹

One common stress provoking fear is one of financial failure. But when we have turned our lives over to God, we can expect His care. "And he said unto his disciples, Therefore I say unto you, Take no thought for your life, what ye shall eat; neither for the body, what ye shall put on. The life is more than meat, and the body is more than raiment. Consider the ravens: for they neither sow nor reap; which neither have storehouse nor barn; and God feedeth them: how much more are ye better than the fowls? And which of you with taking thought can add to his stature one cubit? If ye then be not able to do that thing which is least, why take ye thought for the rest? Consider the lilies how they grow: they toil not, they spin not; and yet I say unto you, that Solomon in all his glory was not arrayed like one of these. If then God so clothe the grass, which is to day in the field, and tomorrow is cast into the oven; how much more will he clothe you, O ye of little faith? And seek not ye what ye shall eat, or what ye shall drink, neither be ye of doubtful mind. For all these things do the nations of the world seek after and your Father knoweth that ye have need of these things. But rather, seek ye the kingdom of God; and all these things shall be added unto you."³²²

People who put the past behind them, not ruminating about past anger-provoking events are at lower risk for hypertension and its complications.³²³ "Brethren, I count not myself to have apprehended: but this one thing I do, forgetting those things which are behind, and reaching forth unto those things which are before, I press toward the mark for the prize of the high calling of God in Christ Jesus."³²⁴

STRESSFUL LIFE EVENTS

One way to increase your stress is to subject your mind to the impressions being made on television. Two (2) hours a day of television watching increases the risk of hypertension by 40%.³²⁵ As I am sure you are well aware, if you think about it, the main character of the plot is either in trouble, getting into trouble, or getting out of trouble, and life just is not that bad.

Difficulty paying medical expenses is associated with increased hypertension.³²⁶ It is also the number one reason for bankruptcy in the United States.³²⁷

WORK PLEASURE

The rewards of gainful, meaningful employment bear mentioning. People happy with their jobs and their income are more likely to experience happy, healthy blood pressure.^{328,329} People who enjoy their jobs and are not overworked or depressed have lower blood pressures.³³⁰ Having purpose in life helps moderate blood pressure.³³¹

SOCIAL PLEASURE

Looking at the social aspects of blood pressure control, people with close supportive friends have lower blood pressures.³³² Indeed, sharing a negative life experience with an ambivalent friend raises blood pressure and heart rate. Alternatively sharing the same event with a caring, supportive friend lowers blood pressure and heart rate. Similarly, blood pressure levels are lowest when people are with family and highest when among strangers.³³³

PET POWER

Does keeping an animal help blood pressure? Yes, loving pets have a blood pressure lowering effect for people with hypertension.³³⁴

MUSIC MAGIC

Do you enjoy listening to music? Music can help blood pressure.³³⁵ Blood pressures respond positively to classical music, but not jazz or pop.³³⁶

EMERGING URBAN DANGER

Environment plays a significant role in stress. Moving to the city? Expect a 23-point rise in your systolic blood pressure and a 9-point rise in your diastolic blood pressure.³³⁷ There are hazards in just commuting to a city. Traffic related air pollution and noise significantly increase the risk of hypertension.³³⁸ People living in small rural towns have half the risk of hypertension as people living in large, industrialized cities.³³⁹

RURAL RELIEF

Quietness, solitude and silence soothe the nerves and lower your blood pressure.^{340,341} The stillness is remedial, "Be still, and know that I am God."³⁴² People living where the din of busy roads never reaches their ears have a 37% lower risk of hypertension.³⁴³ Outdoor walks, enjoying trees, flowers, and other wonders of God's great nature, lower blood pressure and stress.³⁴⁴ Even bringing the outdoors into the home through houseplants has been shown to improve blood pressure.^{345,346}

LIFE'S PLEASURE: HELPING OTHERS

If you have extra time and want to do something beneficial for your blood pressure, volunteering is a wonderful aid in keeping blood pressures normal.³⁴⁷ Find someone else who could use your help and give of yourself to the needs of the world. "It is more blessed to give than to receive."³⁴⁸

FREEDOM FROM GUILT AND RESENTMENT

Guilt and resentment cause hypertension. Freedom from guilt³⁴⁹ and resentment³⁵⁰ lowers blood pressure. Okay, how do I do that? Easier said than done! Well, it is not really something you can do on your own. You are going to need help. Only God can accomplish this, with your cooperation. Are you ready?

Guilt comes from sin. "Sin is the transgression of the law."³⁵¹ It is being out of harmony with the loving God of nature and the universe, of this you must first be conscious. You may already have a sense that something is not right, that you could use some more peace in your life.

How do I know if I have guilt? One of two ways: 1. Compare your life to the standard of God's holy law³⁵² and see if there is a disparity

between what you are and what it enjoins, "for by the law is the knowledge of sin."³⁵³ Go to the law, read the first commandment, and ask God to reveal to you if you are in harmony with it. Then proceed to the following commandments and ask the same question. 2. Compare your life with that of Jesus Christ, "Who did no sin."³⁵⁴ meaning that His life was an example of what it is like to be at complete peace with God and keep His law free of guilt. Read His biographies at the beginning of the New Testament (Mathew, Mark, Luke, John) of the Bible and ask God to reveal to you the differences between what you are studying and what your life could have been like if you had been like Jesus. This is another way of comparing your life to what the law enjoins and discovering where you may have sinned.

If, after trying this, you find yourself believing that you are problem free, it may only indicate that you have undertaken this comparison too superficially and need to spend a little more time with it. A thorough investigation will reveal that, "all have sinned, and come short of the glory of God."³⁵⁵ And, "If we say that we have no sin, we deceive ourselves, and the truth is not in us."³⁵⁶

God's Holy Spirit will help you and your conscience will be awakened to see the evil of sin, its power and guilt. Sin separates you from God and peace and brings you into bondage. It brings feelings of guilt that result in physical symptoms like hypertension. The more you struggle on your own to escape, "the more you realize your helplessness. Your motives are impure; your heart is unclean. You see that your life has been filled with selfishness and sin. You long to be forgiven, to be cleansed, and to be set free. Harmony with God, likeness to Him – what can you do to obtain it?"³⁵⁷

Guilt and resentment cause hypertension. Freedom from guilt and resentment lowers blood pressure.

"It is peace that you need – Heaven's forgiveness, peace, and love in the soul. Money cannot buy it, intellect cannot procure it, wisdom cannot attain to it; you can never hope, by your own efforts to secure it. But God offers it to you as a gift, "without money and without price." Isaiah 55:1. It is yours if you will but reach out your hand and grasp it. The Lord says, "Though your sins be as scarlet, they shall be as white as snow; though they be red like crimson,

they shall be as wool." Isaiah 1:18. "A new heart also will I give you, and a new spirit will I put within you. Ezekiel 36:26."³⁵⁷

Confess your sins, and in heart put them away. Say, "Dear God, I have sinned and have suffered the results of a sense of guilt and have the disease of high blood pressure. Please forgive me and give me a new heart to know you and live free from offence toward you and others." Resolve to give yourself to God. "Now go to Him and ask that He will wash away your sins and give you a new heart. Then believe that He does this because He has promised. This is the lesson which Jesus taught while He was on earth, that the gift which God promises us, we must believe we do receive, and it is ours. Jesus healed the people of their diseases when they had faith in His power; He helped them in the things which they could see, thus inspiring them with confidence in Him concerning things which they could not see--leading them to believe in His power to forgive sins. This He plainly stated in the healing of the man sick with palsy: 'That ye may know that the Son of man hath power on earth to forgive sins, (then saith He to the sick of the palsy,) Arise, take up thy bed, and go unto thine house.' Matthew 9:6. So also John the evangelist says, speaking of the miracles of Christ, 'These are written, that ye might believe that Jesus is the Christ, the Son of God; and that believing ye might have life through His name.' John 20:31."³⁶⁰

To maintain peace and freedom from blood-pressure-raising guilt, "Fight the good fight of faith,"³⁵⁸ believe that God has taken care of your past sins, daily read His word to learn new things that will help keep blood-pressure-raising guilt away, and "press toward the mark for the prize of the high calling of God in Christ Jesus."³⁵⁹ "To them who by patient continuance in well doing seek for glory and honor, and immortality, eternal life:"³⁶⁰ Rest in the assurance of eternal life and a good afterlife.

Resentment: resentment arises out of misunderstanding between people. It comes from not forgiving someone else. It is a form of anger. Resentment grows if not checked. Do not allow the wound to fester and break out in poisoned words, which taint the minds of those who hear. Do not allow bitter thoughts to continue to fill your mind. "Thou shalt not avenge, nor bear any grudge against the children of thy people, but thou shalt love thy neighbour as thyself: I am the LORD."³⁶¹

Go to your brother, and in humility and sincerity talk with him about the matter. "Moreover, if thy brother shall trespass against thee, go and tell him his fault between thee and him alone: if he shall hear thee, thou hast gained thy brother. But if he will not hear thee, then take with thee one or two more, that in the mouth of two or three witnesses every word may be established. And if he shall neglect to hear them, tell it unto the church: but if he neglect to hear the church, let him be unto thee as an heathen man and a publican."³⁶² At this point you have done your part, no matter what the outcome, choose to let God have the feelings of resentment and bitterness, and fill your mind with glad saying like from the Bible books of Psalms or Proverbs.

PATIENCE AND FORGIVENESS LOWER BLOOD PRESSURE

People who cultivate the characteristic of patience enjoy much more normal blood pressures.³⁶³ This reminds me of a very important passage in the last book of the Bible, "Here is the patience of the saints: here are they that keep the commandments of God, and the faith of Jesus."³⁶⁴

A spirit of forgiveness has been shown to bring blood pressure down.³⁶⁵ "Forgiving one another, even as God for Christ's sake hath forgiven you."³⁶⁶

RELIGION, BIBLE STUDY, AND PRAYER LOWER BLOOD PRESSURE

In stressful situations, prayer has been shown to lower blood pressure.³⁶⁷ Further, people who attend religious services,³⁶⁸ and pray or study the Bible frequently, have a 40% lower risk of hypertension.³⁶⁹ People who substituted religious media (TV or Radio) for personal experience and social contact with other believers suffered elevated blood pressures.³⁷²

Most people find wars and natural disasters like hurricanes and earthquakes stressful. In the wake of earthquakes and other stress-raising natural disasters more people come down with high blood pressure.³⁷⁰ I would advise you to avoid this source of stress, but I would be misleading you if I asserted that these situations were going to become less frequent. "For nation shall rise against nation, and kingdom against kingdom: and there shall be earthquakes in diverse places, and there shall be famines and

troubles: these are the beginnings of sorrows."³⁷¹ In other words, you have not seen anything yet. And as we get closer to the second coming of Jesus Christ these things will become more and more common. Stress management needs to be God derived to meet such impending devastation.

DOES LOVE LAST FOREVER?

We have already discussed the impact of major stressful life events on the development of high blood pressure. One such major stressful life event is the loss of a loved one. A study out of the University of Michigan, Ann Arbor, revealed that older adults who lost a loved one to death, but who believe in a good afterlife were much less likely to develop hypertension.³⁷² This raises an important question; do we have reason to believe in a good afterlife? If not, we are all headed for high blood pressure. If God is just waiting, as many religions teach, to roast sinners in the fires of hell for eternity, stage II hypertension here we come! But what is the truth about the afterlife?

Jesus was right up front in telling us, that after He left this earth, He would be preparing to have us join Him. "Let not your heart be troubled: ye believe in God, believe also in me. In my Father's house are many mansions: if it were not so, I would have told you. I go to prepare a place for you. And if I go and prepare a place for you, I will come again, and receive you unto myself; that where I am, there ye may be also."³⁷³ When are we going to join Him? When do we get this reward? "For the Son of man shall come in the glory of his Father with his angels; and then he shall reward every man according to his works."³⁷⁴ He will be rewarding everyone at His second coming.

How will He know who to give the good rewards to and who to exclude? "I charge thee therefore before God, and the Lord Jesus Christ, who shall judge the quick and the dead at his appearing and his kingdom;" "Henceforth there is laid up for me a crown of righteousness, which the Lord, the righteous judge, shall give me at that day: and not to me only, but unto all them also that love his appearing."³⁷⁵ God makes a decision on that in a court setting called the judgment.³⁷⁶ Clearly no judgment has been made or reward given at this point in history, it does not occur until His second coming. Even Paul waits for that day to receive his "crown of righteousness". So, all, dead or alive, good or

evil, are still waiting for the judgment and their reward.

What about those who have already died? Jesus said, "Marvel not at this: for the hour is coming, in the which all that are in the graves shall hear his voice, And shall come forth; they that have done good, unto the resurrection of life; and they that have done evil, unto the resurrection of damnation."³⁷⁷ Jesus has yet to raise the dead so that they can receive their reward. No one is currently burning in hell or enjoying heaven.

What are the dead doing right now? Can I talk to one of them? Will any of them remember me? What says the Scriptures concerning these things? The beloved David declares that man is not conscious in death. "His breath goeth forth, he returneth to his earth; in that very day his thoughts perish."³⁷⁸ "In death there is no remembrance of thee; in the grave who shall give thee thanks?" "The dead praise not the Lord, neither any that go down into silence."³⁷⁹ Solomon bears the same testimony: "The living know that they shall die; but the dead know not anything." "Their love, and their hatred, and their envy, is now perished; neither have they any more a portion forever in anything that is done under the sun." "There is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest."³⁸⁰

When will this resurrection take place? "For this we say unto you by the word of the Lord, that we which are alive (and) remain unto the coming of the Lord shall not prevent them which are asleep. For the Lord himself shall descend from heaven with a shout, with the voice of the archangel, and with the trump of God: and the dead in Christ shall rise first: Then we which are alive (and) remain shall be caught up together with them in the clouds, to meet the Lord in the air: and so shall we ever be with the Lord. Wherefore comfort one another with these words."³⁸¹ That is really comforting and helps produce good blood pressure.

Even the Old Testament character Job was aware of this future resurrection: "If a man die, shall he live again? All the days of my appointed time will I wait, till my change come. Thou shalt call, and I will answer thee: thou wilt have a desire to the work of thine hands."³⁸²

What change was Job anticipating at the resurrection? Paul answers this for us, "In a moment, in the twinkling of an eye, at the last trump: for the trumpet shall sound, and the dead shall be raised incorruptible, and we shall

be changed. For this corruptible must put on incorruption, and this mortal must put on immortality. So, when this corruptible shall have put on incorruption, and this mortal shall have put on immortality, then shall be brought to pass the saying that is written, Death is swallowed up in victory. O death, where is thy sting? O grave, where is thy victory? The sting of death is sin; and the strength of sin is the law. But thanks be to God, which giveth us the victory through our Lord Jesus Christ. Therefore, my beloved brethren, be ye steadfast, unmoveable, always abounding in the work of the Lord, forasmuch as ye know that your labor is not in vain in the Lord."³⁸³ If you are faithful to God, you have the promise of a new body at Jesus' return, free from diseases such as hypertension.

The outcome of the judgment at the second coming of Jesus is that the righteous go to heaven and the wicked to hell. For some people the resurrection is the beginning of a happy afterlife, these are the ones we discussed earlier who believe in a good afterlife and experience lower blood pressure now. "And many of them that sleep in the dust of the earth shall awake, some to everlasting life, and some to shame and everlasting contempt."³⁸⁴

If you are faithful to God, you have the promise of a new body at Jesus' return, free from diseases such as hypertension.

And what is the punishment of those who choose to reject God's offer of forgiveness and mercy? Is hell forever? Contemplating hell is daunting, and the thought of being condemned to go there could certainly raise blood pressure. Why should there even be a hell? "Then shall he say also unto them on the left hand, depart from me, ye cursed, into everlasting fire, prepared for the devil and his angels."³⁸⁵ Hell was never intended for you or me. It is for the devil and his angels who oppose God. But, if we join the devil in sin, in fighting the righteous law of God, then we are choosing to join the devil in his plight. Really, God would rather we repent and choose His way of life: "The Lord is...longsuffering to us-ward, not willing that any should perish, but that all should come to repentance."³⁸⁶

Do the wicked suffer in the fires of hell through all eternity? "For, behold, the day cometh, that shall burn as an oven; and all the

proud, yea, and all that do wickedly, shall be stubble: and the day that cometh shall burn them up, saith the LORD of hosts, that it shall leave them neither root nor branch. And ye shall tread down the wicked; for they shall be ashes under the soles of your feet in the day that I shall do this, saith the LORD of hosts.”³⁸⁷ So really, although it is a fearful ordeal, it is self-limited, it comes to an end, all that is left is ashes. Matthew speaks of this, “Whose fan is in his hand, and he will thoroughly purge his floor, and gather his wheat into the garner; but he will burn up the chaff with unquenchable fire.”³⁸⁸ Burned Up!

Has this ever happened before? It has: “Even as Sodom and Gomorrah, and the cities about them in like manner, giving themselves over to fornication, and going after strange flesh, are set forth for an example, suffering the vengeance of eternal fire.”³⁸⁹ These cities were very rebellious against God and His Law so God destroyed them with eternal fire as an example of hell. Are they still burning? Of course not, but they did burn to ashes, to be trodden under foot, as the wicked will be.

Okay, but what if my loved ones choose a life which leads them to hell, won't this be on my mind through all eternity? No, “And God shall wipe away all tears from their eyes”³⁹⁰ “For, behold, I create new heavens and a new earth: and the former shall not be remembered, nor come into mind.”³⁹¹

Will God bring a complete end to all sorrow, pain, the high blood pressure? “What do ye imagine against the LORD? he will make an utter end: affliction shall not rise up the second time.”³⁹²

While those who do not embrace God's ways and law are “as though they had not been.”³⁹³, the righteous will be enjoy being with Jesus and eating from the Tree of Life whose leaves are for healing, “In the midst of the street of it, and on either side of the river, was there the tree of life, which bare twelve manner of fruits, and yielded her fruit every month: and the leaves of the tree were for the healing of the nations.”³⁹⁴ Perhaps for healing even of hypertension. We know that there will be no disease in heaven. “And God shall wipe away all tears from their eyes; and there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain: for the former things are passed away.”³⁹⁵ What a wonderful day that will be! Don't you look forward to that—Total freedom from death,

sorrow, crying and pain? Are you ready to be healed?

REVIEW AND RECAP

Review: Blood pressure is a product of the pumping of the heart, the size of the blood vessel through which the blood must flow, the thickness of the blood, and the volume of blood to be pumped.

A fast heart rate pumps more blood than normal and increases blood pressure. We call this tachycardia. Common causes of tachycardia are stress, having poor cardiovascular fitness (being out of shape), caffeine, tobacco and dehydration.

If the blood vessels tighten up or constrict, making the blood vessel size smaller, higher blood pressure is needed to get the required amount of blood to its destination. We refer to this tightening up effect as vasoconstriction. Vasoconstriction is caused by psychological and physical stress, thermal stress from cold-exposure, caffeine, tobacco, and dehydration.

Blood vessels normally expand and relax with each heartbeat. If the blood vessels become hard, their stiffness resists the free flow of blood and up goes the blood pressure. Atherosclerosis is an example of this process, so are sugar glycation, endothelial dysfunction, and stiffness of the blood vessels running through muscles from a sedentary lifestyle.

If the blood becomes thick and sludgy, more pressure is required to carry it through the blood vessels and hypertension results. When blood gets thick, we say that the viscosity has increased too much. Examples of the blood-thickening threats include dehydration, overeating, psychological stress, a diet too rich in fat and refined carbohydrates, and high blood cholesterol or triglycerides.

If the blood vessels are being choked by something pressing on them from their sides, the effect is like putting your thumb over the end of a garden hose, the result is increased blood pressure. We call this external compression. Things that press on the blood vessels include tissue swelling, atherosclerotic plaque, sugar coating called glycation (usually from diabetes), inflammation, and especially tight clothing like belts and elastic bands.

Finally, if the volume of blood increases, this increases the amount of blood entering the heart, which in turn increases the amount of blood leaving the heart and with each beat this

Hypertension: Taking the Pressure Off

increases the overall blood pressure. We often refer to this phenomenon as fluid retention. Lifestyle habits causing volume overload include eating too much salt, obesity, a sedentary lifestyle, poorly clad chilled extremities, and kidney failure.

SUMMARY: LETTING HYPERTENSION GO!

- Keep well hydrated with pure vitalizing water; add a little fresh lemon juice, too.
- Take regular time for enjoyable exercise in the great outdoors, far from traffic, pollution, cities and stressful crowds.
- Get plenty of warm sunshine and invigorating fresh air.
- Eat a delicious unrefined whole-plant-based diet; high in fiber, minerals, vitamins, and antioxidants, low in salt, with no refined

carbohydrates, processed fats, or hypertension-causing animal products.

- Avoid the pitfalls of tobacco, caffeine, alcohol, drugs, fried foods, fructose, sodium, MSG, and overeating.
- Make weight control a habit.
- Guard your sleep and evaluate its quality for effectiveness.
- Let God know you need Him to release you from stress, guilt, fear, and hypertension. Rely on Him for guidance as you come more into line with His original plan for diet and lifestyle.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

“I saw that we should pray as Solomon did— ‘Feed me with food convenient for me’ (Proverbs 30:8)— and as we make the prayer, act it out. Get food that is plain and that is essential to health, free from grease. Such food will be convenient for us.”ⁱ

- E.G. White

ⁱ White, E. G. (1980). Selected Messages Book 3. Washington, D.C.: Review and Herald Publishing Association. p. 274.

CHAPTER 4

THE CHOLESTEROL STORY: ARE YOU FIGHTING HEART DISEASE?

WHY HIGH CHOLESTEROL?

Believe it or not, cholesterol is your body's soap! Your body runs on water, you are about 70% water, and when you eat fat or oil, it takes lots of soap for those dietary fats (saturated fats, trans fats, refined fats, high fat diet) to become soluble in the water environment of your body.¹ If you are accustomed to washing dishes at home by hand, I am sure you find some fats harder to "wash" off your plates than others. Just realize that the fats that are the hardest to wash off your dishes are also the fats that will take the most cholesterol "soap" to dissolve in your body. Cholesterol dissolves the fats or oils you eat into the water environment of your blood. Hard fats, like animal shortening, hydrogenated vegetable oils and oils that have been browned by heating, are more difficult for the body to dissolve. These fats cause the liver to make more cholesterol "soap". This ultimately results in increased blood stream cholesterol.^{2,3,4} The more fat of any kind you eat, the more cholesterol it will take for your body to process it. For each additional 1% of fat you include in your diet, your total cholesterol will go up 1½ points.⁵

ENTEROHEPATIC CIRCULATION: THE LIVER SOAP CYCLE

The source of cholesterol "soap" is the liver, and the soap bottle or reservoir is the gallbladder. The cholesterol soap mixture is called bile. This bile is squirted into the small intestine when the need for soap is detected, i.e., fat in the digestive tract. This "soap" then tries to make the fat compatible with absorption into your water-based blood stream. The cholesterol component of the "soap" is re-absorbed in the small intestine and returned to the liver for processing. There are several things

that can reduce "soap"/cholesterol in the system. Eat less fat, so less "soap" is called for. Eat more fiber, which will soak up some of the "soap" and carry it out in your stools so less "soap" is reabsorbed and returned to the blood stream and liver. Eat more plants that are high in sterols. These plant sterols compete with "soap" for re-absorption, thus reducing "soap" re-absorption.

CHOLESTEROL IN MANY FORMS

Cholesterol is cholesterol, but its packaging tells you its role. LDL or low-density lipoprotein is the packaging marked for export from the liver to the tissues. HDL or high-density lipoprotein is the clean-up crew that takes cholesterol from the tissues back to the liver. LDL trucks it out into circulation and HDL retrieves it, removing it from the blood and tissues. As you might imagine, low HDL is predictive of mortality from heart disease—without sufficient clean-up crews working, junk piles up.⁶

Recently there has been discussion about the size of LDL and the impact of that size on health. Larger LDL particle size is associated with greater longevity.⁷ Small, dense, LDL particles have been shown to be associated with an increased risk of cardiovascular events.⁸ While all this size discussion makes for more laboratory testing, positive lifestyle approaches to heart disease risk factors can improve LDL particle size, which will reduce heart attack risks.^{9,10,11,12}

THE FATS WE EAT

Trans-fat, a by-product of hydrogenation of vegetable oils,¹³ increases the risk of high cholesterol by 65%.¹⁴ In one study, heart attack victims had 13% more trans-fat in their cell

walls.¹⁵ Trans-fat lowers the “good” HDL-cholesterol more than saturated fat and decreases antioxidant activity in the body, and makes patients more susceptible to atherosclerosis and heart attacks. Additionally, trans-fat increases the harmful LDL cholesterol.¹⁶ You may not be aware of where the trans-fat in your diet is coming from. Sources of trans-fat in the American diet by percentage include cakes, cookies, crackers, pies, and bread 40%; animal products 21%; margarine 17%; fried potatoes (like French fries and hash browns) 8%; potato chips, corn chips, popcorn 5%; household shortening 4%; other (breakfast cereals, candy, etc.) 5%.¹⁷ Avoiding trans-fat may take some investigation on your part.

The saturated fat found in milk, cheese, egg yolks, meat and sausage has an even more deleterious effect on cholesterol and coronary heart disease than trans-fat.¹⁸ A diet high in saturated fat can raise total cholesterol by 23%.¹⁹ When cholesterol is a part of the diet, the total blood cholesterol will be worse if the other fats in the diet are saturated than if they are unsaturated.²⁰ For example, because of its high fat and cholesterol content, 40gm of butter per day will raise your cholesterol by 20 points.²¹ Palm oils differ little from other saturated fats in raising blood stream cholesterol.^{22,23} Compared to the harder fats, monounsaturated oils tend to lower cholesterol.²⁴ Polyunsaturated fats tend to favorably affect cholesterol, but be less resistant to oxidation.²⁵

Compared to vegetarians, animal product users (meat, eggs and dairy) eat 50% more fat, have 30% higher total cholesterol, have 42% higher LDL cholesterol, have 38% higher triglycerides.

Another factor, which is often overlooked, is the form of the fat or oil consumed. Refined oils absorbed early in the small intestine are esterified with cholesterol and enter the lymphatics to be deposited in the heart. Oils residing naturally in whole foods are digested and absorbed later in the small intestine as phospholipids and enter the portal circulation where they are conducted directly to the liver. Thus, they have less of an impact on total blood cholesterol.²⁶

ANIMAL PRODUCT CONSUMPTION AND CHOLESTEROL

People who consume animal products every day experience higher cholesterol, and have on average, a total cholesterol of 255 mg/dL. Those who limit their consumption of animal products to once weekly have a total cholesterol of around 205 mg/dL.²⁷ Compared to vegetarians, animal product users (meat, eggs and dairy) eat 50% more fat, have: 30% higher total cholesterol, have 42% higher LDL cholesterol, have 38% higher triglycerides, have 32% higher blood sugars, and are five times more likely to have high blood pressure.²⁸ People who drink cow's milk or eat dairy products such as yoghurt and cheese everyday have 7 mg/dL higher total cholesterol and 5 mg/dL higher LDL cholesterol.²⁹ A diet with animal protein and low fiber intake has been shown to significantly increase cholesterol levels.³⁰ Casein, the protein in milk, makes your liver produce more cholesterol.^{31,32} People on a unrefined, high fiber, high carbohydrate diet have significantly lower LDL cholesterol than those on a refined carbohydrate diet or a low carbohydrate, high protein diet.³³ On the other hand, substituting 30 to 50 grams of soy protein for animal protein in the daily diet produces a 13% reduction in LDL, 10% reduction in triglycerides, 9% reduction in cholesterol, and a 2.4% increase in HDL.³⁴ This nutritional advice has also been shown to be helpful in cases considered to have a “genetic” predisposition to high cholesterol.³⁵

REFINED FOODS FOR REFINED PEOPLE?

Refined (processed) foods tend to make your blood sugar rise precipitously, making it go very high at a very rapid rate. We categorize foods by their effect on the blood sugar according to the “glycemic index”.³⁶ Glycemic load quantifies the amount of a high glycemic food you eat. High glycemic index or load foods make your blood sugar rise higher and faster than low glycemic index or load foods. Most refined foods are high glycemic load foods. High glycemic load diets drive LDL cholesterol up and HDL down.^{37,38} On the other hand, reducing the glycemic load, by eating more whole plant foods, has the effect to reduce LDL levels.³⁹ We recommend a high complex carbohydrate diet, a diet without refined/processed foods.

The Cholesterol Story: Are You Fighting Heart Disease?

DISEASE AND ELEVATED CHOLESTEROL

The more cholesterol you harbor in your blood stream, the higher will be your risk of dying of a heart attack.^{40,41,42,43} In fact, one high blood cholesterol measurement in your lifetime can mean a higher risk of coronary heart disease the rest of your life!⁴⁴ The more cholesterol you carry in your blood the sicker your heart becomes.⁴⁵ When your cholesterol goes up, cells lining the blood vessels, called macrophages, fill up with fat and contribute to plaque formation.⁴⁶ When you lower the fat (cholesterol and triglycerides) in your blood it virtually halts the progression of lesions in your blood vessels.⁴⁷ People with genetically low LDL live 5-12 years longer and almost never have heart attacks.^{48,49} The more fat and cholesterol you tolerate in your blood stream the shorter your life will be.^{50,51} Here are some numbers that illustrate increase in risk: Cholesterol above 280 mg/dL increases likelihood of angina 5 ½ times.⁵² Cholesterol above 240 mg/dL increases the risk of death from heart attack by 350%.⁵³ On the positive side, each 2 mg/dl drop in cholesterol reduces the risk of heart attack by 1%.⁵⁴ One of the reasons for this rise in heart disease and fatal heart attacks with increased blood cholesterol, besides the obvious increase in atherosclerosis, is that when your cholesterol goes up it impairs the heart's ability to form collateral blood vessels which could help you survive a heart attack.⁵⁵

Triglycerides also play a role. Elevated triglycerides are associated with increased risk of heart attack and death.^{56,57} Triglycerides greater than 200 mg/dL significantly increase the risk of stroke or transient ischemic attack.^{58,59}

Cholesterol levels are not lowered when you replace beef, lamb, or pork in the diet with chicken or fish. Why? Because poultry's proportion of cholesterol is similar to that of red meat.

Caldwell Esselstyn, Jr., MD, of the Cleveland Clinic has shown on angiography that blockages in coronary arteries can be reversed by changes in diet. "The optimal diet", according to him, "consists of grains, legumes, vegetables, and fruit, with 10%-15% of its calories coming from fat." He goes on to say that "This diet minimizes

the likelihood of stroke, obesity, hypertension, type 2 diabetes, and cancers of the breast, prostate, colon, rectum, uterus, and ovary."⁶⁰ Did Medicare ever promise anything like that? This sounds like a real insurance program!

What about cancer and cholesterol? Elevated cholesterol and triglycerides significantly increase breast cancer risk.⁶¹ The risk of breast cancer rises 88% when one eats foods with cholesterol, 125% for high intake of animal protein, 143% for high saturated fat intake, and 169% if you eat more calories than you need!⁶² Pancreatic cancer is the fourth leading cause of cancer death with a five-year relative survival rate of 4%, making it one of the most fatal cancers. Eating cholesterol increases the risk of pancreatic cancer 50%. Eggs, a rich source of cholesterol, increase the risk by 60%.⁶³

Other disease risks escalate with cholesterol. Elevated cholesterol and triglycerides together with low HDL significantly increase the risk of autoimmune inflammatory arthritis like rheumatoid arthritis.⁶⁴ High cholesterol is a significant risk factor for macular degeneration and resultant blindness.^{65,66,67,68} A cholesterol of 240 mg/dL increases the risk of macular degeneration by 80%.⁶⁹ A cholesterol level of 220 mg/dL or more increases the risk of migraine by 280%.⁷⁰ Having elevated cholesterol levels increases the risk of high blood pressure 90%.⁷¹ Even hypothyroidism can result from elevated cholesterol levels.^{72,73}

The brain and nerves are not happy when cholesterol increases. Hypertension and hypercholesterolemia work together to increase brain dysfunction.⁷⁴ When rabbits, confirmed herbivores, consume cholesterol, they develop Alzheimer's disease-like lesions in their brains.⁷⁵ Patients with elevated LDL Cholesterol have a 106% higher risk of cognitive impairment.⁷⁶ Obesity and high triglycerides produce cognitive impairment.⁷⁷ Elevated triglycerides predict increased peripheral neuropathy in diabetics.⁷⁸ Elevated cholesterol levels are significantly associated with major depression.^{79,80} Lowering cholesterol levels through lifestyle changes, has been shown to decrease depression, hostility, and severity of psychological symptoms.⁸¹

DIETARY CHOLESTEROL: THE CHOLESTEROL ENTERING OUR MOUTHS

When you eat cholesterol, eventually some of it will end up in your blood stream. It has been said, "we are what we eat." However, cholesterol is the soap, so, while eating

cholesterol does not raise the soap level dramatically like eating fats does, dietary cholesterol still results in increased blood stream cholesterol.⁸² Eating 100 mg of cholesterol per day can increase total cholesterol concentrations by 2.2 mg/dL.⁸³ Most people eat far more than 100 mg of cholesterol per day.

What foods have cholesterol? Nearly all animal foods have some cholesterol in them, some have more than others. Plant based foods do not have cholesterol. This is because it takes a liver to produce cholesterol and plants do not have livers! Fruits and vegetables, nuts and seeds, beans and grains do not contain cholesterol. One cup of 2% Milk has 18 mg of cholesterol. One half cup of ice cream has 29 mg, most of which is oxidized. One tablespoon of butter would have 31 mg, and 3 ounces of clams 57 mg. In a 3-ounce serving, chicken breast has 73 mg, pork 76 mg, sirloin beef 80 mg, oyster 84 mg, shrimp 165 mg, one large egg 213 mg, beef liver 410 mg, and beef brains, which often end up as animal shortening, 1697 mg.⁸⁴ Your body does not need a dietary source of cholesterol, it makes its own, fresh.

Cholesterol levels are not lowered when you replace beef, lamb, or pork in the diet with chicken or fish. Why? Because poultry's proportion of cholesterol is similar to that of red meat.⁸⁵

DIETARY CHOLESTEROL AND DISEASE

Dietary cholesterol together with elevated blood cholesterol dramatically increase oxidized cholesterol. Oxidized cholesterol results in increased whole body inflammation, atherosclerosis and plaque formation.^{86,87} The more cholesterol you eat, the more calcified plaque you can expect in your coronary arteries.⁸⁸ When you make cholesterol a part of your diet, it increases inflammation in: the lungs leading to asthma;^{89,90} the liver leading to non-alcoholic fatty liver diseases and cirrhosis;^{91,92,93} and the prostate leading to pain, enlargement and cancer.^{94,95} Cholesterol in the diet can bring about permanent microscopic damage to the kidneys causing them to lose 6 times more protein in the urine than acceptable levels.^{96,97,98} "But I was eating the extra animal products to increase my protein intake...." When you stop eating cholesterol, blood vessel inflammation actually does subside and coronary artery plaques become more resistant to rupture.⁹⁹

Need osteoporosis? A high-cholesterol diet stimulates bone resorption causing osteoporosis.¹⁰⁰

Dietary cholesterol seriously decreases mental performance.^{101,102} Six hours after consuming a high fat meal the brain oxygen falls below 70%. What's more, it does not return to normal for 3 whole days—which means some people have never had fully functioning brains!¹⁰³

OXIDIZED CHOLESTEROL IN THE BLOOD

"Why me?" a gentleman in his late 50s asked me. "My total cholesterol has always been around 140 and my HDL is usually very good." He had had a heart attack and cardiac bypass surgery and was now wondering what he could do to avoid a repeat. As I got to know the gentleman better it became very apparent that the source of his cholesterol included foods high in oxidized cholesterol such as ice cream, pizza, and processed foods, while his diet was not high in fruit and vegetables. For the same cholesterol level, people who eat fewer fruits and vegetables have a higher risk of a fatal heart attack.¹⁰⁴ This is because of the effects of oxidized cholesterol. Oxidized cholesterol can be stabilized by the antioxidants found in fresh fruits and vegetables.

"Why me?" a gentleman in his late 50s asked me. "My total cholesterol has always been around 140 and I had a massive heart attack and cardiac bypass surgery."

My uncle died of heart disease at age 39. He was an anesthesiologist at the University of Texas. He left a wife and two teenage sons behind. His nightly supper: ice cream. Within 24 hours of eating oxidized cholesterol, rabbits and monkeys develop vascular lesions which, if not repaired, would lead to atherosclerosis and heart attacks.^{105,106,107,108} Common sources of oxidized cholesterol include custard mixes such as ice cream, pancake mixes, because dried eggs are included,¹⁰⁹ Parmesan cheese, and any food where cholesterol, or oils for that matter, come in contact with air and/or oxygen.^{84 110} Serum oxidized cholesterol markedly accelerates atherosclerosis.^{111,112,113} Arterial injury caused by oxidized cholesterol leads to arterial wall cholesterol accumulation and plaque enlargement.¹¹⁴

The Cholesterol Story: Are You Fighting Heart Disease?

Cholesterol oxidized by the body is negligible compared to oxidized cholesterol obtained from the diet.^{115,116} Oxidized dietary cholesterol increases blood stream cholesterol and is the predominant source of tissue oxidized cholesterol.^{117,125} Oxidized cholesterol favors platelet clot and plaque formation.^{118,119} The more LDL is oxidized, the more cholesterol it transports to the tissues. The more HDL is oxidized, the less cholesterol it removes from the tissues.^{120,121} Oxidized cholesterol markedly delays the clearance of chylomicrons, which transport cholesterol from the intestine to the liver, from the blood.¹²² The more fast foods, cheese puffs, potato chips, and hydrogenated fat you eat, the worse your cholesterol will be, both in oxidation and in quantity.¹²³ Cheese contains high levels of oxidized cholesterol.^{124,125} Compared to vegetable oils, butter and cheese are very atherogenic, causing heart disease.¹²⁶ Frying, grilling, even just cooking foods with high cholesterol content, such as meat, egg yolk and full fat dairy products, creates massive cholesterol oxidation.^{127,128} As prepared consumer foods are becoming increasingly popular, the consumption of higher levels of oxidized cholesterol in foods is inevitable. Processes, such as pre-cooking, freeze-drying, dehydration, and irradiation, have all result in increased production of oxidized cholesterol. Factors known to oxidize cholesterol in foods include: heat, light, radiation, oxygen, moisture, low pH, pro-oxidizing agents, and storage of food at room temperature.¹²⁹ Cigarette smoke increases LDL cholesterol oxidation and lipid peroxidation.¹³⁰

THE DISEASES OF OXIDIZED CHOLESTEROL

Oxidized lipids are associated with earlier and more severe atherosclerosis especially in the presence of dietary cholesterol.^{131,132} Atherosclerosis is not limited to the heart, it can occur anywhere there are blood vessels, like the penis. Every 1 mg/dL increase in total cholesterol increases the risk of erectile dysfunction by about 1%.^{133,134,135,136} The brain suffers, too, because lipid oxidation increases Alzheimer's disease risk.¹³⁷

A high cholesterol diet depresses natural killer cells activity by 75%, making cholesterol a dangerous food if you want your immune system to fight off viruses responsible for pandemic flu, cancer, or autoimmune diseases.¹³⁸ In fact, oxidized cholesterol

increases the risk of skin cancer, colon cancer,^{139,140} ulcerative colitis leading to cancer, breast disease leading to cancer, and prostate hyperplasia leading to cancer.¹⁴¹

The blood is usually anti-inflammatory; Relatively brief periods (days) of elevated cholesterol can result in the blood becoming pro-inflammatory increasing the risk of autoimmune diseases like Multiple Sclerosis.^{142,143}

Gallstones are increased by oxidized cholesterol.^{144,145}

DRUG PITFALLS

Caffeine, 200 mg intake of per day, (about 2 cups of coffee) can increase total cholesterol by 11 mg/dL.^{146,147}

Daily caffeine consumption also increases LDL,¹⁴⁸ increases triglycerides,¹⁴⁹ increases the risk of heart attack,¹⁵⁰ and decreases HDL.¹⁵¹

"Pack a day" smokers can expect: 18 mg/dL triglycerides increase per pack, 3.5 mg/dL HDL decrease per pack.^{152,153} Second hand smoke also lowers HDL similarly.¹⁵⁴

Triglycerides can be elevated by even small amounts of alcohol; one drink per day increases triglycerides by 10 mg/dL.¹⁵²

Use of oral contraceptives has been shown to increase LDL by 47% and VLDL by 57%.^{155,156}

Cholesterol drugs (statins): are they safe? Some of the most noted problems with the statins are muscle pains, rhabdomyolysis (a disintegration of the muscles) and liver toxicity.^{157,158} Not all brain failure is due to aging or high cholesterol, statins have been found to play a role as well. Statins have been found to cause cognitive impairment¹⁵⁹ and memory loss.^{160,161} Statins also seriously decrease coenzyme Q10,^{162,163,164} a powerful anti-oxidant involved in prevention of heart disease.¹⁶⁵ This may also be why statins can worsen congestive heart failure.¹⁶⁶ Statins are such powerful suppressors of the immune system¹⁶⁷ that they are being tested and considered for use in organ transplant immunosuppressive chemotherapy^{168,169} and for autoimmune diseases.^{170,171,172} Most things that suppress the immune system leave way for the development of cancer:

"In some randomized trials, notwithstanding their short duration, statins have been found to increase cancer incidence especially in the elderly and women. In these situations, the

decrease in cardiovascular mortality can be matched by an equal increase in cancer mortality, leaving all-cause mortality unchanged.”¹⁷³

Dietary/lifestyle interventions (diet high in plant sterols, soy protein, fiber, and almonds) have been shown to lower cholesterol by 28%.¹⁷⁴ Compared to lifestyle interventions, statin drug therapy offers no cholesterol lowering advantage.

LIFESTYLE CAUSED THE PROBLEM, WHY NOT TRUST LIFESTYLE TO FIX IT?

Choosing a high complex carbohydrate, whole plant food diet over the typical American diet has been shown in studies to lowered total cholesterol by 30 mg/dL and LDL cholesterol by 26 mg/dL.^{175,176} One such diet is the Hawaii Diet. Based on their traditional foods, it is high in complex carbohydrate (77% of calories), low in fat (12% of calories), moderate in protein (11% of calories), and it lowers cholesterol by 50 points.¹⁷⁷ Incidentally, just replacing white rice with whole grains and beans in coronary artery disease patients increases fiber intake by 25%, vitamin E intake by 41%, other antioxidants by 11%-40%; and reduces: lipid peroxidation and oxidative stress by 28%, homocysteine concentrations by 28% and blood sugars by 24%.¹⁷⁸

Restriction of fat intake, especially saturated fat and dietary cholesterol, has been shown to reduced total cholesterol by 20 mg/dl, triglycerides by 40 mg/dl, and increase HDL-cholesterol by 5 mg/dL.¹⁷⁹ Patients with lower blood antioxidants levels have more atherosclerosis.¹⁸⁰ Lifestyle modifications have been shown to increase antioxidant levels and reduce oxidative stress in coronary artery disease patients.¹⁸¹

There are plant nutrients that can block the re-absorption of “soap” (cholesterol) from the small intestine. These nutrients in plants are called sterols, or, phytosterols, since they come from plants.¹⁸² Two grams of phytosterols can lower LDL cholesterol by 10%.^{183,184,185} Foods highest in these phytosterols include: Nuts such as brazil, pecan, pine, pistachio, cashew,¹⁸⁶ macadamia,¹⁸⁷ walnuts, almonds, and hazelnuts;¹⁸⁸ Seeds—sesame seeds are very high in phytosterols;¹⁸⁹ Beans, such as soybeans and peas; Whole grains like Amaranth;¹⁹⁰ Fruit such as navel oranges, tangerines, and mangos; and vegetables such as, cauliflower, broccoli,

and romaine lettuce.¹⁹¹ Refining and/or processing foods decrease their phytosterol content making hypercholesterolemia more likely.¹⁹²

GOOD OILS AND GOOD STEROLS

Avocados are an excellent source of monounsaturated fat and have been shown to significantly lower total cholesterol, LDL and triglycerides.^{193,194} Walnuts lower total cholesterol and LDL while fish raise total cholesterol and LDL.¹⁹⁵ Daily consumption of 80 gm of walnuts for two months can reduce LDL levels by 16%.¹⁹⁶ Raw almonds, 100mg of per day, can reduce total cholesterol by 20 mg/dL.¹⁹⁷ Pistachios improve HDL lipid ratios.¹⁹⁸ Sunflower seeds are high in natural occurring unsaturated oils and have been found to lower cholesterol levels.^{199,200,201}

Avocados are an excellent source of monounsaturated fat and have been shown to significantly lower total cholesterol, LDL and triglycerides. Walnuts lower total cholesterol and LDL while fish raise total cholesterol and LDL.

Does something seem “fishy” about salmon oil capsules for cholesterol problems? Salmon oil capsules are less effective than olive oil in preventing lipid peroxidation, hypercholesterolemia and arteriosclerosis.^{202,203} Daily fish oil supplementation can raise your total cholesterol by 9.1% and LDL by 4.8%.^{204,205} Olive oil, a source of omega-3s and phytosterols, increases HDL-cholesterol levels, while decreasing LDL-cholesterol levels, LDL susceptibility to oxidation and lipid peroxidation.²⁰⁶ I recommend getting your olive oil by eating the actual olive not the factory produced oil.

Flax, a rich source of omega-3 monounsaturated oil, helps lower cholesterol.²⁰⁷ Omega-3s, 1.5 mg per day, have been shown to lower triglycerides by 37%.²⁰⁸ Maybe you have been trying to lower your cholesterol through the use of omega-3 oils but seem to be making no progress. If your still eating cholesterol, omega-3s won't lower your LDL.²⁰⁹

Replacing cheese with vegetable fat can lower: Total cholesterol by 23 mg/dL, and LDL by

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17 mg/dL. Replacing cheese with nuts can lower: Total cholesterol by 41 mg/dL, and LDL by 33 mg/dL.²¹⁰ Eating whole plant foods is the most effective way of lowering cholesterol.

ABSORBENTS

Cholesterol can be adsorbed from the intestine by certain foods and substances. These adsorbents carry cholesterol out in the stool so that it does not get re-absorbed into the body. Charcoal is one of these. As a supplement, it has been shown to significantly lower cholesterol.^{211,212} Eight grams three times per day can lower total cholesterol by 25% and LDL by 41%, while raising HDL by 8%.^{213,214}

Fiber absorbs cholesterol in the intestine preventing its re-entry into the body. Each additional gram of water-soluble fiber in the diet lowers total cholesterol by 1.1 mg/dL.²¹⁵ For each gram of a particular fiber, total cholesterol decreases by; 1.0 mg/dL for guar gum, 1.1 mg/dL for psyllium (e.g., Metamucil), 1.5 mg/dL for oat bran, and 2.7 mg/dL for fruit pectin.²¹⁶ Each addition of 10 g of fiber to the diet reduces the risk of dying of a heart attack by 17%.²¹⁷

There are many good sources of fiber. Grains are high in fiber that absorb cholesterol. Oats and oat bran contain fiber and phytochemicals that adsorb bile salts and cholesterol from the intestines carrying them out in the feces. Twelve weeks of 14 g/d oat bran can lower LDL by 2.5% and triglycerides by 6.6%.²¹⁸ Barley contains approximately 10% dietary fiber²¹⁹ that can significantly reduce cholesterol and triglycerides.^{220,221} Rice bran not only lowers cholesterol, it also has some antioxidants that reduce oxidized cholesterol.²²² Regular buckwheat consumption reduces cholesterol.^{223,224} One caveat, while whole wheat products may be considered a valuable source of fiber, for some reason a diet high in wheat products has been shown to raise total cholesterol by about 10 mg/dL.²²⁵

There are other good plant sources of cholesterol lowering fiber. Prunes lower total and LDL cholesterol,^{226,227} decrease oxidative stress, fight inflammation and have been discovered to decrease atherosclerotic plaque in blood vessels.^{228,229} Grapefruit, especially red grapefruit, contain bioactive compounds which lower cholesterol.²³⁰ Four weeks of grapefruit pectin can lower LDL cholesterol by 11%.²³¹ Grapefruit pectin also lowers the risk of arteriosclerosis by 50%.²³² Beet fiber, 30 g/day can lower cholesterol by 10%.²³³ Psyllium (e.g.,

Metamucil), 5.1 g twice daily, can lower total cholesterol 8.9% and LDL-cholesterol 13.0%.²³⁴

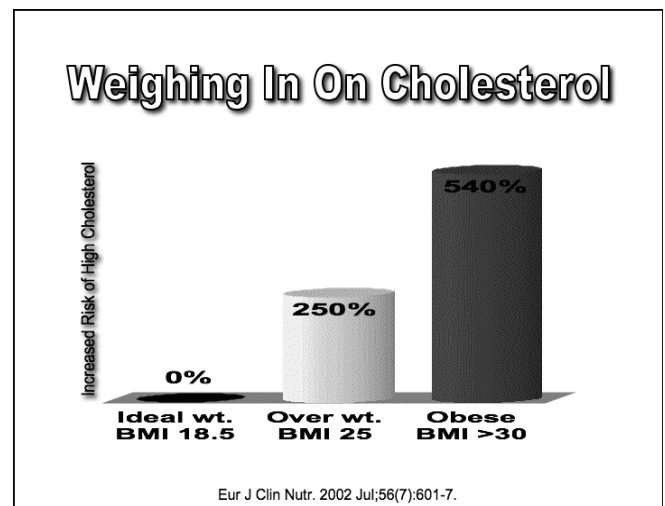
The combined effects of plant sterols, vegetable proteins, and fiber have been shown to reduce LDL by 29.0% and the ratio of LDL to HDL by 26.5%. Near maximal reductions have been seen in two weeks.²³⁵ What if I don't get results in two weeks? Maybe you are cheating? One high fat food item eaten during those 2 weeks will reset the liver's soap factory back to maximal production! This is a lifestyle change commitment, not a short-term quick-fix diet.

BEANS (BESIDES SOY MENTIONED EARLIER)

Beans, 120 g per day, can lower cholesterol and triglyceride concentrations by 10.4%.²³⁶ Four cans of garbanzos per week can reduce total cholesterol by 8 points and LDL by 7%.²³⁷

VEGETABLES

Vegetables have lots of fiber and antioxidants such as carotenoids, polyphenols, and vitamin C. This explains their protective effects against cardiovascular diseases. Carrots have been shown to lower cholesterol, triglycerides, reduce cholesterol re-adsorption in the bowel, and improve blood stream antioxidant status.²³⁸ Garlic counteracts atherosclerosis and lipid oxidation.²³⁹ Regular garlic consumption can reduce total cholesterol by 7%,^{240,241} and reduce blood lipid peroxidation.²⁴² Red onions are more effective than garlic at lowering blood lipids.²⁴³ Daily onion consumption can reduce plasma triglyceride levels by as much as 15%.²⁴⁴ Turmeric is an effective antioxidant in



combating lipid peroxidation.²⁴⁵ Studies show that alfalfa sprouts reduce cholesterol levels

both in the blood and in the liver where it is produced and stored.^{246,247} Celery consumption has been found to significantly reduce total cholesterol, LDL, and triglycerides.^{248,249,250}

FRUIT

Low dietary vitamin C intake has been shown to result in increased blood cholesterol levels^{251,252} and increased risk of heart disease.²⁵³ On the other hand, increased dietary vitamin C intake has been shown to lower blood cholesterol levels.^{254,255} Foods high in vitamin C include strawberries, bell peppers, chives, red cabbage, broccoli, pineapple, oranges, lemons, kale, cauliflower, peas, etc. (Notice no fish, coffee or tea are on the list. If you're eating foods that are totally deficient in a vital nutrient, your body must draw from its own reserves just to survive and in time you will totally deplete your own hard-earned supplies!)

There are many helpful fruits we could mention in addition to the ones already talked about. Pomegranates help combat lipid peroxidation and cholesterol oxidation.²⁵⁶ Apples contain quercetin,²⁵⁷ a phytochemical, that helps combat heart disease by reducing the effects of oxidized cholesterol on blood vessels.²⁵⁸

SUGAR/REFINED CARBOHYDRATES AND CHOLESTEROL

Increased blood sugar, combined with increased blood cholesterol, multiply the risk of atherosclerosis.²⁵⁹ Elevated blood sugars (as seen in diabetics) lead to elevated triglycerides.²⁶⁰ A rise in blood insulin is followed by a rise in cholesterol production and this increases the risk of coronary artery disease.^{261,262} Elevated insulin also lowers HDL.²⁶³ Elevated HbA1c levels correlate with elevated cholesterol and triglycerides.^{264,265} Eliminating all foods with refined sugars from your diet can reduce triglycerides by 20%.^{266,267}

Fructose, a sugar often obtained from corn, is a very dangerous chemical. Dietary fructose specifically increases: LDL by 14%, oxidized LDL cholesterol by 13%, total cholesterol by 10% and visceral fat by 9%.^{268,269} Soda pop is often sweetened with this chemical. Soda consumption, one or more cans per day, increases risk of: metabolic syndrome 45% (diabetes is included in this syndrome), low HDL by 32%, central obesity 30% and high triglycerides 25%.²⁷⁰

Honey does not carry the health risks of sugar, high fructose corn syrup and highly refined, high glycemic index foods. Compared to these, honey can reduce; total cholesterol by 3%, LDL 6%, triglycerides 11%, blood sugar 4%, inflammation 3%, and increased HDL by 3%.²⁷¹

Carbohydrates fried with oil create Advanced Glycation End Products (AGEs), toxins which activate the body's inflammatory mediators.²⁷² Advanced Glycation End Products, are chemical combinations of sugars with fats or proteins, and they accelerate atherosclerosis via enhancement of oxidative stress.^{273,274} Some foods have far more of these dangerous chemicals, for example, a slice of 100% whole wheat bread has 536 units of AGEs, whereas one glazed doughnut can have as much as 425 to 740 units of AGEs.²⁷⁵ Going on a low calorie diet for two months will markedly reduce dangerous Advanced Glycation End Products.²⁷⁶

LIFESTYLE IMPROVEMENTS

People who eat breakfast regularly have significantly lower cholesterol levels.²⁷⁷

Scheduled regularity improves cholesterol, lowers total and LDL cholesterol, and raises HDL.²⁷⁸ Irregularity, such as shift work, raises cholesterol.²⁷⁹ What's more, shift workers are 174% more likely to have elevated triglycerides and 81% more likely to have abdominal obesity than workers on a routine schedule.²⁸⁰

When you snack, food stays in your stomach much longer. The longer it takes to empty your stomach the more cholesterol will be adsorbed.²⁸¹ Eating between meals (snacking) also reduces HDL cholesterol.²⁸²

Cholesterol rise after a meal is more prolonged after an evening meal than meals taken during the day.^{283,284}

Pure water is a key to controlling the body's oxidative stress and inflammation. Distilled water lowers the risks associated with high cholesterol levels while tap water raises the risks.^{285,286} Dehydration causes relative elevation in the blood lipids such as total HDL and LDL cholesterol.²⁸⁷

Obesity is a risk factor for increased blood cholesterol levels. A body mass index (BMI) of 25, categorized as overweight, increases the risk of hypercholesterolemia by 250%, being obese (BMI of 30) increases that risk to 540%.²⁸⁸ Waist

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circumference is also a negative indicator of health, triglycerides go up and HDL goes down with increasing waist circumference.²⁸⁹

Vitamin D is a potent inhibitor of damage caused by lipid peroxidation.²⁹⁰ Vitamin D is synthesized from cholesterol during sun exposure. Twice weekly sunbathing can significantly improve LDL/HDL ratios lowering heart disease risks.²⁹¹ Because gardeners get more sun and fresh air, they have higher vitamin D levels, and enjoy lower cholesterol levels.²⁹²

Athletes have significantly lower total cholesterol and significantly higher HDL cholesterol.²⁹³ In fact, the more vigorous you exercise the lower your risk of hypertension, hypercholesterolemia, and diabetes.²⁹⁴ Endurance training significantly: lowers total cholesterol, triglycerides, and LDL cholesterol at the same time it increases HDL cholesterol.²⁹⁵ Resistance training or weight lifting reduces triglycerides by about 18%.²⁹⁶ Exercise therapy, at a heart rate of around 135 bpm for 30 minutes 3 times/week, can decrease triglycerides by 20 mg/dL and increase HDL by 10 mg/dL.²⁹⁷ Choosing the stairs over an elevator 5 times a day can lower LDL cholesterol by 8%.²⁹⁸ Walking for exercise, 30 minutes a day, significantly lowers triglycerides and total cholesterol and increases HDL cholesterol.²⁹⁹ Walking 6,000 or more steps per day has been shown to lower triglycerides 10 mg/dL and raise HDL 3 mg/dL.

Eating less food, “caloric restriction” by 25% lowers triglycerides 31 mg/dL. Together with exercise, caloric restriction has been shown to lower LDL 16 mg/dL.^{300,301,302}

Too little sleep raises total cholesterol and LDL cholesterol.^{303,304,305} Longer sleep duration is related to higher total cholesterol level and a higher total/HDL cholesterol ratio.³⁰⁶ Both

under sleep and over sleep increase triglycerides and lower HDL cholesterol.³⁰⁷

People showing other clinical signs of stress have a 180% higher risk of elevated cholesterol.^{308,309,310} On the other hand, laughter may boost HDL by as much as 23%.³¹¹

Religious observance has a lowering effect on total cholesterol, triglycerides and LDL while elevating HDL.^{312,313} This may be a testimony to its impact on stress. Jesus said, “Come to me, all you who are weary and burdened, and I will give you rest.”³¹⁴ “You cannot eat your way into heaven, but you can eat your way out of heaven.”—Ed Reid. A mind bogged down with excess fat or cholesterol is in no position to interact with our loving Creator.

SUMMARY

- Avoid foods that require lots of “soap” to digest (i.e. fats).
- Avoid animal protein because it stimulates your liver to produce cholesterol.
- Eliminate all oxidized cholesterol from your diet.
- Maximize your whole plant food, fiber, and pure water intake in your diet and lifestyle.
- Exercise regularly.
- Turn your stress over to God

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, “How Can I Apply Healthy Principles in My Daily Life”.

“There should not be a great variety at any one meal, for this encourages overeating and causes indigestion. It is not well to eat fruit and vegetables at the same meal. If the digestion is feeble, the use of both will often cause distress and inability to put forth mental effort. It is better to have the fruit at one meal and the vegetables at another.”ⁱ

– E. G. White

ⁱ White, E. G. (1905). The Ministry of Healing. Mountain View, CA: Pacific Press Publishing Association. p. 299.

CHAPTER 5

HEARTBURN, INDIGESTION, REFLUX: IS THERE A CURE?

I avoid spicy food when I have a sore throat because it intensifies my pain. But why? Raw, swollen, inflamed tissues are more sensitive to irritation. And there you have it. For any two people experiencing the same amount of food regurgitation from the stomach to the esophagus, the one with sickly inflamed tissues will report the greatest symptoms and will go on to the greater complications of gastroesophageal reflux disease (abbreviated GERD, Gastro refers to your stomach, the esophagus is the tube connecting your mouth to your stomach, and reflux is the return of food and drink back up the esophagus from the stomach usually with acid in it which burns the esophagus and causes pain).

In the rest of this discussion, I will refer to heartburn, indigestion, and reflux collectively as GERD.

WHAT ARE THE SIGNS AND SYMPTOMS OF GERD?

The top 10 common symptoms for GERD are as follows:

- Reflux (the return of food and drink back up the esophagus).
- Acid regurgitation (excessive acid or sour taste in the food coming back up the esophagus).
- Postprandial fullness (bloating in the stomach area after a very large meal).
- Heartburn (pain in the chest).
- Swallow obstruction or pain (feeling that you can't get the food to go down).
- Epigastria burning sensation (Burning pain in the stomach area).
- Paraesthesia pharynges (sore or full filling throat).

- Post sternal pain (pain behind the breastbone).
- Chronic laryngopharyngitis (hoarseness, sore voice box and sore throat).
- Chronic cough (a never-ending cough).¹

HOW COMMON IS GERD?

Prevalence of Gastro Oesophageal Reflux Disease is as follows:

- 18.1%–27.8% in North America.
- 8.8%–25.9% in Europe.
- 2.5%–7.8% in East Asia.
- 8.7%–33.1% in the Middle East.
- 11.6% in Australia.
- 23.0% in South America.²

So, if you are experiencing GERD, you are not the only one, others have been through this, it has been extensively studied, and knowing the causes goes a long way toward directing one's efforts at relieving and healing the problem.

WHAT CAUSES GERD?

Let's look at the different mechanisms involved in digestive pain that is associated with disorders of the esophagus and stomach. We'll look at the system as a whole and at individual parts.

THE LOWER ESOPHAGEAL SPHINCTER

The first thing that can happen involves a poorly closing valve at the lower end of the esophagus, immediately on top of the stomach. This is referred to as the lower esophageal sphincter. Anything that compromises its ability to close tightly can lead to acid laden stomach contents regurgitating up into the esophagus

causing pain, acid tissue burn, open sores, ulceration, or even pre-cancerous conditions. There is a long list of things that are proven to compromise lower esophageal sphincter function. These include:

- High fat foods.³
- Whole Milk.^{4,5}
- Soups.⁶
- Chocolate.⁷
- Coffee.⁸
- Tea.⁹
- Nicotine.¹⁰
- Alcoholic beverages.¹¹
- Peppermint.¹²
- Colonic Fermentation (when you eat foods that tend to rot in the colon).¹³
- Soda Drinks.¹⁴

THE ACID BURN

Then next consideration in painful reflux disease (GERD) is the lifestyle habits that increase the acidity of the stomach or that acid's access to the esophagus.

Anything that increases the acidity of the stomach contents makes them that much more likely to cause pain and damage when they regurgitate up into the esophagus.

The list of things that increase the acid burn include many things. Any Autoimmune inflammatory disease or process, as we discussed in the beginning of our paper, weakens the tissues, making them more vulnerable to acid damage.^{15,16,17} This includes allergies, such as having a milk allergy.¹⁸

Some foods, by their very nature, increase inflammation and stomach acidity. Research has shown that certain spices do this and include red and black pepper,¹⁹ fennel, cardamom, cumin, coriander,²⁰ and Curry.²¹

Some foods are naturally high in acid content and pose a problem for many people, citrus²² and soft drinks²³ for example.

If you are having GERD symptoms and are on other medications, it would be possible that some of these are the cause of your heartburn.^{24,25}

Salt²⁶ and sugar as well as refined carbohydrates^{27,28,29} can increase the acid burn.

If you have a choice between canned and fresh foods, fresh foods are the better choice for avoiding GERD.³⁰

I don't know if you count calories but be aware that foods high in calories and low in fiber or bulk are well known to increase acid reflux.³¹ We call these foods high caloric density foods.

Not only do high fat foods relax the lower esophageal sphincter, but they also increase the stomach acid,³² mostly because they are hard to digest.

Fast foods³³ are poor nutrition for the most part and increase the acid burn.

If you are going to eat something, you might as well chew it well, this will help in your fight against an acid stomach.^{34,35}

Regular meals are helpful, on the other hand snacking is not in your best interest.^{36,37} Eating of an evening meal increases acid production.³⁸

Certain stimulants are known to increase the acid burn. These include tea, coffee, caffeine,³⁹ and alcohol.⁴⁰

The more concentrated the acid in your stomach the worse the burn, on the other hand diluting out the acid with good hydration of the tissues is beneficial, so avoid dehydration.⁴¹ Drink your water at least one-half hour before meals or two hours after meals to avoid GERD.

You may be thinking you are doing yourself a favour by taking calcium based "anti-acids" but in reality they only produce what we call the acid rebound, resulting in more acid in the long run and more reflux.^{42,43}

You are what you eat. Eating good food favours strong, healthy, resilient tissues resistant to acid damage. On the other hand, malnutrition⁴⁴ is dangerous, it weakens the lining of the stomach and esophagus and compromises their mucosal integrity.⁴⁵

Perfect health depends on perfect circulation, this means good blood supply. Poor blood supply^{46,47} compromises the lining of the stomach and esophagus, making them unable to properly repair tissue damage.

Lower Esophageal Sphincter dysfunction

- Milk
- Oils, fatty or fried foods
- Creamed foods or soups
- Chocolate
- Caffeine
- Tobacco
- Alcohol
- Peppermint/Spearmint

When Volume Explodes

- Stacking between meals
- Eating too frequently(<5hr)
- Overeating
- Poor chewing
- Cold food
- Hot food
- Liquid food
- Liquid with meal
- Liquid right after meals
- Animal protein
- Carbonated beverages

Slow To Empty

- Fat
- Fluid
- Snacking
- Meat

Tips

- Small meals
- Small bites well chewed
- Lots of high fiber fresh fruits and vegetables
- No liquid with meals
- No liquid meals (soup, smoothies)
- Drink 8-10 glasses of water: 30 minutes before meals or 2 hours after
- Regularity in meal schedule
- Five hours between meals
- Two meals a day (skip supper)
- Short walk immediately after meals
- Don't eat within 3-4 hours of going to bed
- Wear warm clothes that cover arms and legs well and have no tight bands around the waist.

The Acid Burn!

- Pepper, Spices
- Stress at mealtimes
- Vinegar
- Tomato
- Citrus
- Animal protein
- Caffeine
- Milk
- Fat content
- Alcohol
- Antacids
- Baking powder/soda
- Mixing fruit and vegetables
- Large variety of food
- Supplements swallowed whole sitting in stomach
- Worry
- Impaired mucosal defense
- Dehydration

Back Fill: Slow Transit

- Refined foods
- Too little fiber
- High fat
- Obesity
- Tight clothing
- Sedentary lifestyle
- Gluten
- Dairy
- Meat
- Chocolate
- Cold extremities
- Gas

Helpers / Healers

- Charcoal capsules/tablets/powder
- Broccoli sprouts
- Carrots
- Pears
- Bananas
- Pomegranates
- Aloe Vera Juice
- Cabbage and its juice
- Potatoes and its juice



When you overeat, making your stomach into a tightly filled balloon, it stretches the esophagus lining into the stomach where it does not belong, exposing it to the acid of the stomach. This creates the same pain and tissue compromise as regurgitation.¹

Now if you worry² too much, and your stress levels rise,³ this also increases the vulnerability of the digestive tissues to damage and the stomach's production of acid.

OVER FILLING THE STOMACH

If the stomach could be quickly emptied after meals, the chance that it would reflux would be greatly reduced. On the other hand, keeping the stomach exceedingly full only increases the likelihood of GERD. If you do not want your stomach to remain full for a long time, eat less. Overeating⁴ only produces distension, slow digestion, and reflux. Think of it like a front loader washing machine. If you pack the machine totally full, it cannot agitate the clothes and the laundry cannot get clean. Filling the stomach only partially full leaves room to mix the foods with digestive juices and complete its digestion in a reasonable amount of time. "And put a knife to thy throat, if thou be a man given to appetite."⁵

The digestion is severely slowed and compromised by eating between meals or snacking.⁶ Meals should be at least 5 hours apart. Eating too frequently (<5hr between meals)⁷ causes stacking of the meals, stomach overfilling and overflow, i.e., reflux. If your toilet overflows you figure you must have put too much in it. The same is true of reflux. If things keep on coming up (refluxing), stop putting so much down, and give the food time to move on in between meals.

Foods eaten to quickly overcrowd the stomach and can result in reflux.⁸

Studies now show that foods eaten without proper chewing in the mouth take longer to digest in the stomach.⁹ Your stomach does not have teeth. It can only add acid and agitate the food.

Some people take on more than just food at a meal, they add liquid as well. This liquid is more likely to regurgitate up into the esophagus. It also makes the stomach take longer to move the food on to the small intestines because before it can get on with the process of digestion it must absorb the liquid. This is true of drinks with meals and of liquid foods, like soup, smoothies, porridges and juices.¹⁰

EMPTYING THE STOMACH

The stomach can be quickly cleared of food only as the food is of good quality and well chewed. Certain foods and lifestyle practices delay the emptying of the stomach these include:

- High fat^{11,12} or fried foods.¹³
- High caloric density foods.¹⁴
- Chilled/refrigerated cold food or very hot food.¹⁵
- Nicotine or tobacco.¹⁶
- Alcohol.¹⁷
- Liquid taken with your meals.¹⁸
- Supplement tablets can delay stomach emptying.¹⁹
- Snacking between meals or meals too close together.²⁰
- Laying down after a meal.²¹
- Eating in the evening leaving less than 3 hours before going to bed.²²
- Autoimmune inflammatory gastritis.²³
- Intense exercise after eating.²⁴
- Mental stress.²⁵

SLOW INTESTINAL TRANSIT

If there is no room beyond the stomach in the digestive system, food cannot be transferred out of the stomach and reflux is more likely to result. Some foods and lifestyle habits produce a condition we refer to as slow transit, it could also be referred to it as back fill.²⁶ It could be compared to a traffic jam or even rush hour traffic.

Things that slow intestinal transit are many. Refined foods, like white flour²⁷ cause this problem because they are low in fiber.²⁸

Because low-fiber food is in the colon so much longer, bacteria tend to multiply,²⁹ This results in bacterial overgrowth. When bacteria over-grow they produce many toxins³⁰ and inflammation.³¹

Slow-transit foods are usually high in fat and low in fiber, and include meat, fast foods, pastries, especially donuts, fried foods, and greasy foods³².

Foods eaten late at night tend to pass more sluggishly through the digestive system thus they have the same effect of fostering bacterial overgrowth³³.

Fiber plays a significant role in the time food stays in your system³⁴. Whole grains,³⁵ dried fruit³⁶ and fresh vegetables are good sources of dietary fiber. What is people's favourite high fiber dried fruit eaten to help improve stool consistency and shortened transit time? Prunes, right? Have you heard it said, "With friends like prunes, who needs enemas"?

High fat foods have been shown to slow intestinal transit.³⁷

Juice, probably because of the removal of fiber, slows transit.³⁸

Mental health can also affect transit times, depression tends to slow transit and make digestion sluggish³⁹.

The back pressure exerted by tight clothing, such as a belt,⁴⁰ can significantly slow the rate at which food makes it out of your intestines.

Exercise tends to quicken bowel movement whereas a sedentary lifestyle has been shown to slow transit time.^{41,42}

Dietary Gluten^{43,44} and dairy products⁴⁵ cause a sluggish colon and slow transit times.

Of all the diets studied, that cause multiple health issues, the western diet, of meat, high fat foods, cheese and refined grains tops the list. And it contributes to slowed transit of food through the entire digestive system.^{46,47}

Nothing slows transit time quite like constipation⁴⁸ for which increased water and fiber intake are often the antidote.

Gas or flatulence block the way for food to pass on down the digestive tract and slow transit times.⁴⁹

If your posture is poor and you are always doubled over, the effect is like that of the tight belt, it creates intestinal backpressure, which slows transit time.⁵⁰

So, keep the food moving for reduction in risk of reflux at the other end.

EPIDEMIOLOGICAL ASSOCIATIONS

Some foods and lifestyle factors have been found to increase the likelihood of reflux, dyspepsia, or heart burn, but the actual mechanism may not yet be well understood. These include:

- Milk, lettuce, brewer's yeast, pork, coffee, rice, asparagus, and tuna, followed by eggs, tomato, grain, shrimps.⁵¹
- Animal protein/meat.^{52,53}
- Vinegar.^{54,55}
- Late supper.⁵⁶
- Low dietary magnesium intake.⁵⁷

Blue Print for Health and Healing

- Low Dietary Vitamin C.⁵⁸
- Obesity.⁵⁹
- Medical drugs.⁶⁰
- Psychological stress.⁶¹
- Improper chest breathing.⁶²
- Cheese causes gastritis.⁶³

BARRETT'S ESOPHAGUS

When the esophagus receives repeated acid burns and becomes raw and inflamed, cancer becomes a big risk. This condition of the esophagus has been given the name Barrett's esophagus. Some foods and lifestyle factors have been identified as high risk or causal in Barrett's esophagus and cancer. These include:

- Sugar.^{64,65}
- Smoking, abdominal obesity, and a Western diet.⁶⁶
- Inflammatory diet.⁶⁷
- Late evening meal.⁶⁸
- Low fiber diet.⁶⁹
- Pizza.⁷⁰
- Wearing a belt.⁷¹
- Meat and saturated fat.⁷²
- Dark green vegetable deficiency.⁷³
- Low dietary vitamin A.⁷⁴
- Low Dietary Vitamin C.⁷⁵
- Diet low in fresh fruits and vegetables.⁷⁶
- High animal-fat intake.⁷⁷
- Smoking.⁷⁸
- Selenium deficiency.⁷⁹
- Diet rich in cereal but poor in fresh fruit and vegetables.⁸⁰
- Processed meat consumption.⁸¹

HOW IS GERD GENERALLY TREATED?

GERD is usually treated by a medical doctor with a medication, which in most cases is continued indefinitely. Ninety-five percent of

patients are prescribed a drug of which 83% are proton pump inhibitors or PPIs, medications designed to reduce the stomach's ability to produce acid.⁸² Between 1995 and 2006 there was a 1318% (over 12 times) increase in proton pump inhibitors prescribed in Australia for people with GERD.⁸³ Proton Pump Inhibitor examples include omeprazole (e.g., Losec, Prilosec), esomeprazole (e.g., Nexium), rabeprazole (e.g., Pariet, Aciphex), pantoprazole (e.g., Somac, Protonix) and lansoprazole (e.g., Zoton FasTabs, Prevacid). These drugs are not without their undesirable side effects. Side effects can include:

- Neutropenia (an unexplained decrease in the immune system's white cells that are involved in battling disease).⁸⁴
- Pneumonia (infection of the lungs).⁸⁵
- Vitamin B12 deficiency.^{86,87}
- Vitamin C and Iron deficiency.⁸⁸
- Osteoporosis (a thinning and weakening of the bones leading to broken bones).^{89,90}
- Hip Fracture (broken hip).⁹¹
- Spine, forearm or wrist, and other fractures (broken bones).⁹²
- Dementia (when the brain quits functioning, and the memory is bad).⁹³
- Depression (a downcast mood).⁹⁴
- Chronic kidney disease (when the kidneys quit working).^{95,96}
- Hypomagnesaemia (low magnesium, a very important mineral for your body).⁹⁷
- Hypoparathyroidism (low parathyroid function).⁹⁸
- Tachycardia (fast heart rate).⁹⁹
- Stomach infection with *S. aureus*, *E. coli*, *Candida albicans* (bad infections, hard to treat).¹⁰⁰

Heartburn, Indigestion, Reflux Remedies: Is There A Cure?

- Slowed esophageal motility (when the esophagus has a hard time moving the food through to the stomach).¹⁰¹

The next most common drug prescribed for GERD is called an H2 antagonist. H2 antagonists are medications that block the action of histamine, (which usually increases inflammation), at its receptor site in the cells of the stomach. This decreases the production of stomach acid. H2 antagonist examples include famotidine (e.g., *Pamacid*, *Pepzan*, *Pepcid*), nizatidine (e.g., *Tazac*, *Tacidine*, *Nizac*, *Axid*), cimetidine (e.g., *Magicul*, *Tagamet*) and ranitidine (e.g., *Zantac*, *Rani 2*). These drugs are not without their undesirable side effects. Side effects can include:

- Neurotoxicity (damage to the nerve cells in your body or brain).¹⁰²
- Overgrowth of *Listeria monocytogenes* (a dangerous bacteria).¹⁰³
- Restless leg syndrome, and movement disorders (out of control muscle activity).¹⁰⁴
- Bradycardia (very slow heart pumping rate).¹⁰⁵
- Liver disease¹⁰⁶
- Changes in the autonomic control of the heart (the heart goes out of control).¹⁰⁷

A popular, over-the-counter GERD treatment is calcium carbonate. Calcium carbonate brand name examples include: *Dicarbosil*, *Rolaids*, *Titralac*, *Tums*. Calcium carbonate is not without its undesirable side effects. Side effects can include:

- "Acid rebound." (when, not long after you take the pill, the acid actually increases not decreases).¹⁰⁸

- In some people it actually increases, not decreases, reflux.¹⁰⁹

NATURAL TIPS TO RELIEVE GERD

If you are suffering with GERD, you may find the following tips beneficial.

- Maintain regularity in your meal schedule; eat at the exact same times every day.¹¹⁰
- Eat small meals.
- Take small bites and chew them well.
- Eat lots of high fiber fresh fruits and vegetables.^{111,112}
- Don't drink any liquid with your meals.
- Don't make or eat liquid meals (soup, smoothies).
- Drink 8-10 glasses of water a day: drink the water at least 30 minutes before meals or 2 hours after meals.
- Leave at least five hours between your meals.
- Eat only two meals a day (skip supper)¹¹³ and don't snack. If you do eat supper eat only fresh fruit.
- Take a short walk immediately after meals.¹¹⁴
- Don't eat within 3-4 hours of going to bed.
- Wear warm clothes that cover arms and legs well and have no tight bands around the waist.
- Eat mainly low-fat, low-calorie foods.¹¹⁵

NATURAL THINGS TO HELP AND HEAL

If you are currently in pain and looking for things that could help relieve that pain or even contribute to healing, the following could be of assistance to you.

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- Charcoal capsules, tablets, or powder^{116,117}
- Fruit, beans, and vegetables¹¹⁸
- Cabbage and its juice
- Carrots
- Broccoli, kale, radish, cucumber¹¹⁹
- Broccoli sprouts
- Pears
- Bananas and kiwi¹²⁰
- Aloe Vera Juice
- Carob
- Dandelion tea
- Fresh Comfrey¹²¹

SCHEDULE OF THE DAY

So, let's take time and make this practical. What would a GERD sensitive lifestyle and diet look like? Now, I run the risk of having some sensitive soul with an allergy or food-dislike getting bent out of shape over these recommendations, so this discussion will need to be seen as advisory and not compulsory or set in stone. What would a day possibly look like for someone trying to synthesize the forgoing information into a practical schedule? God made us to run on a schedule. Well, here goes:

5:00am. Get out of bed. Drink one quart of warm water. Take a 15-minute walk outdoors.

6:30am. Drink one cup of dandelion and/or comfrey tea.

7:00am. Eat a breakfast of mostly fresh fruits (bananas, pears, kiwi, any fresh fruit) Making a fruit salad and topping it with a nut cream is nice. (Nut cream recipe: put in a blender put 2/3 cup of water, one tablespoon of one kind of seed (e.g., pumpkin seeds, sunflower seeds, flax seed, chia, hemp, sesame, etc), two

tablespoons of one kind of nut (pecans, walnuts, almonds, brazil nuts, hazel nuts, etc., avoid peanuts and cashews.), blend till creamy smooth and pour over the chopped fruit salad.

Here is a really good oatmeal recipe for GERD: 2 cups water, ½ cup whole rolled oats (not quick or instant oats), ¼ cup oat bran, ¼ cup ground flax or chia, ¼ teaspoon salt. Bring water to a boil, add ingredients, simmer for a minimum of 45 minutes. Serve with your fruit salad and nut cream.

After Breakfast take a 15-minute walk outdoors.

10:00 am. Drink another quart of water with one teaspoon of activated charcoal in it.

Take a short walk if possible.

12:30pm. Drink another cup of dandelion and/or

comfrey tea.

1:00pm. Lunch: eat at the exact same time every day.

Keep in mind the forgoing dietary research for GERD. Concentrate on good vegetables, raw or steamed and less on prepared or complex foods. Avoid mixing fruits and vegetables at the same meal.

Chew your food well and do not overeat. See our website for some recipes: www.NorthernLightsHealthEducation.com

After lunch take a 15-minute walk outdoors.

3:30pm. Drink one quart of water, no need to rush.

Take a short walk if possible.

6:00pm. It would be best to skip supper, but many cannot and with the proper precautions a good result can still be obtained. For supper eat only fresh fruit, chew it well and take a walk afterwards.

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9:00pm. Go to bed at 9:00pm (even if you are not used to it, you can do it until it becomes a good habit.)

CHANGING THE TIDE

Not all diet and lifestyle changes are easy, especially when they go against favourite practices. I hope your favourite food is not on the list of causes of GERD. Habits can be changed, and better health can be the result. For some, food, or their belly, can become more important to them than life itself. “For many walk, of whom I have told you often, and now tell you even weeping, that they are the

enemies of the cross of Christ: Whose end is destruction, whose God is their belly, and whose glory is in their shame, who mind earthly things.”¹²² On the other hand we are promised power to make positive changes. “I can do all things through Christ which strengtheneth me.”¹²³ So be true to yourself, stick with the program and reap the results.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, “How Can I Apply Healthy Principles in My Daily Life”.

“You are a gormand when at the table. This is one great cause of your forgetfulness and loss of memory. You say things which I know you have said, and then turn square about, and say that you said something entirely different. I knew this, but passed it over as the sure result of overeating. Of what use would it be to speak about it? It would not cure the evil.”ⁱ

-- E. G. White

ⁱ White, E. G. (1938). Counsels on Diet and Foods. Washington, D.C.: Review and Herald Publishing Association. p. 138.

CHAPTER 6

KEEPING YOUR MIND SHARP! ALZHEIMER'S, MEMORY LOSS AND DEMENTIA.

Her absence initially sounded no alarm; everyone thought she was with someone else. But as twilight fell, and Mrs. Parker did not show up, fears mounted. Six weeks of intensive searching and national news coverage failed to locate the missing retiree. What had happened? Plagued with the failing memory and disorientation of advancing Alzheimer's, Mrs. Parker had wondered off, not to be discovered till 6 months later, 13 miles (20 km) from home where she had been overcome with exposure.

What is dementia? It is a progressive decline in brain function, brain failure if you please, loss of memory, intellect, rationality, social skills, and physical functioning. It is an illness that can happen to anybody, but it is more common as one gets older. Statistically it is more common after age 65, at which age as many as one in ten people come down with it. By 85 years of age fully one in three individuals will meet the criteria.¹ Sixty percent of people have personal fear of developing Alzheimer's.²

Don't wait till you have all the signs of Alzheimer's before deciding to do something positive for your future mental health.

The most common types of dementia are Alzheimer's disease, vascular dementia, dementia with Lewy bodies, frontotemporal Lobar Degeneration, Huntington's disease, alcohol related dementia (Korsakoff's syndrome) and Creutzfeldt-Jacob disease (mad cow disease in humans).³ For our purposes, to keep things simple, and to focus largely on the predominant form, Alzheimer's, I will refer collectively to these diseases with the words Alzheimer's and/or dementia.

Who gets dementia? In Australia, dementia is the second leading cause of death, superseded only by heart disease.⁴ For women it is the leading cause of death, surpassing even breast cancer, lung cancer, heart disease and stroke.

What happens to a person's brain in Alzheimer's Disease? Two distinctive findings in the brains of patients with Alzheimer's disease confirm the diagnosis and contribute to its disease process. The first is the appearance and accumulation of a degenerate protein named amyloid into formations called plaques found between the brain cells. The second is the appearance of twisted mats of fibers within the brain cells themselves called neurofibrillary tangles which are made up of a protein called tau.⁵ So when we talk of lifestyle practices that increase Amyloid or neurofibrillary tangles, you know we are talking about things that increase Alzheimer's or dementia.

Alzheimer's disease typically progresses slowly in three general stages — mild (early-stage), moderate (middle-stage), and severe (late-stage).⁶ Alzheimer's disease typically progresses slowly. Different people progress at different rates. Most die within 4-8 years of its onset.⁷

How could a person determine if they were coming down with dementia or Alzheimer's? There are ten well accepted signs to consider:⁸

1. Memory loss that disrupts daily life.
2. Challenges in planning or solving problems.
3. Difficulty completing familiar tasks at home, at work or at leisure.
4. Confusion with time or place.
5. Trouble understanding visual images and spatial relationships.

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6. New problems with words in speaking or writing.
7. Misplacing things and losing the ability to retrace steps.
8. Decreased or poor judgment.
9. Withdrawal from work or social activities.
10. Changes in mood and personality.

At this point, how many feel like they are doomed to dementia? As you reviewed this list, did you find yourself feeling uncomfortable as some of the signs struck close to home? Don't wait till you have all the signs of Alzheimer's before deciding to do something positive for your future mental health. Would you like to know what causes dementia and what you can do to avoid or even reverse it?

So, what causes Alzheimer's and dementia? Topping the list of lifestyle practices you need to avoid if you want to keep your mind sharp and avoid Alzheimer's is overeating. And why overeating? Overeating decreases your brain's blood flow⁹ and oxygen while increasing its inflammation¹⁰ and its Alzheimer's β -amyloid protein.¹¹

On the other hand, Okinawans, as a group of people, are less likely to get Dementia. Any idea why? One very important reason is that they eat, on average 40% fewer calories.¹² Indeed, caloric restriction and intermittent fasting has been shown to significantly reduce your risk of Alzheimer's.¹³ And why is eating less so helpful? One way it helps is that it increases your key antioxidant defense enzymes.¹⁴ Additionally it increases your brain-derived neurotrophic factor (BDNF), a molecule which helps your brain to grow and stay young. Caloric restriction also stimulates the growth of new neurons from stem cells.¹⁵

One practical way to practice caloric restriction is to eat only two meals a day, well-spaced apart, instead of three.¹⁶ This means no snacking. Don't eat between meals; the pleasure of doing so will eventually be forgotten. If you maintain a regular meal schedule^{17,18} of two or three daily meals with no snacking between, it has an anti-aging effect on your brain.

With overeating having such a detrimental effect on brain health, would it be of any surprise to you to discover that obesity is a huge risk factor for dementia? Indeed, being overweight increases your risk of Alzheimer's by 60%.¹⁹ Obesity, when combined, as it often is, with diabetes, quadruples the risk of Dementia.²⁰

Can you think of some ways in which you could make eating fewer calories palatable and

satisfying while maintaining the health of your brain?

Not that we want you to stop eating all together, that is not the goal. That said, some foods are beneficial for your brain while others are not. Meat is particularly hazardous to long term mental abilities due to its negative impact on brain inflammation.^{21,22,23} This holds true also of a diet overly rich in fats, as fatty foods, fried foods, and cooking oils. For this reason, fried foods, especially fried meats, are best left off the Alzheimer's prevention diet. This holds true for high or "full" fat dairy products as well.²⁴

Not all fats are created equal. Some fats pose a greater danger than others. Saturated fats and trans-fats in your diet accelerate cognitive deterioration and are associated with cognitive decline among older persons.²⁵

Inflammation is a danger to one's brain. One mechanism by which diet contributes to decline in mental functioning is its contribution to inflammation in the brain.²⁶ Inflammation is increased by fermented foods because fermentation generates aflatoxins, and aflatoxins weaken your memory.²⁷ Examples of fermented foods include: cheese, vinegar, alcohol, soy sauce, chocolate, coffee, vanilla, brown rice syrup, etc. Eating fresh food is much preferable to old, aged, spoiled foods.

Sugar is hazardous to brain longevity. Any food that would give a diabetic high blood sugar, such as refined carbohydrates and sugar, will increase your risk of dementia.^{28,29} Sugar clogs the system and decreases your memory function.³⁰ Add milk and it gets even worse. Higher intakes of dairy desserts and ice-cream cause even more rapid cognitive decline.³¹

What happens if you feed normally vegetarian animals dietary cholesterol? For rabbits, this spells Alzheimer's changes in their brains, no carnivore rabbits!³² Meat eaters suffer three times the risk of dementia as vegetarians. And why is that? A recent study links up to 13% of all "Alzheimer's" victims as really having Creutzfeldt-Jakob disease or mad cow disease. Which brings up the unthinkable: that Alzheimer's, Creutzfeldt-Jacob, and Mad Cow Disease might just be caused by eating contaminated meat or dairy.³³

At this point, let me pause to let you take a moment to think back over your life and all the food you have eaten, and consider; have your dietary choices been nurturing to brain health or have they tended toward brain degeneration? What can you do at this point to improve your long-term chances of avoiding Alzheimer's?

Believe it or not, brain health is closely connected with colon health. Why? Microbes in your digestive tract affect the health of your brain through molecules they release into your blood circulation. The diet you choose profoundly affects the bacteria that can survive in your gut. The brain suffers when the wrong diet favours the harmful bacteria.³⁴ The western diet supports an intestinal bacterial population (or "microbiome," as it has come to be called) that increases the risk of dementia.³⁵

Mono Sodium Glutamate (MSG) increases Alzheimer's degenerative changes in your brain. Where do you find MSG?

Gut bacteria are not the only microbes that impact your mental status. There are many microorganisms – some good and some not so good – that are capable of having a telling influence on the long-term wellbeing of your brain. Dangerous microorganisms are frequently associated with degeneration, decay, fermentation, spoilage, the rotting process, aging and infections. For example, if your home has experienced water damage, molds and mycotoxins will be present which will in turn compromise your mental functioning.³⁶ By the same token, letting the same organisms responsible for the deterioration of your living quarters live in your food can have the same dangerous effect. At this point the important question to be asked is, do any of my foods contain mycotoxins, such as aflatoxin? A little research will reveal what commonly eaten foods have fermentation as part of their processing. Some common ones include wine, vinegar, cheese, yogurt, sauerkraut, soy sauce, brown rice syrup, miso, Tempe, coffee, black tea, vanilla, yeast, mushrooms, salami, etc. Fermentation is not a way to make your food better, but to introduce into it the toxic waste products of microorganisms.^{37,38} Some foods, because of their storage or harvesting conditions are more likely to contain aflatoxins, one such example is peanuts and peanut butter.³⁹

Mono Sodium Glutamate (MSG) increases Alzheimer's degenerative changes in your brain. How do you give laboratory rats Alzheimer's so that you can study them? One common technique is to put MSG in their food.⁴⁰ How do you give people Alzheimer's? MSG increases both amyloid⁴¹ and tau⁴² Alzheimer's proteins in the brain leading to plaque formation and

neurofibrillary tangles. Read your labels! Where do you find MSG? It is hidden under a lot of names in foods, and a lot of ingredients harbour high levels of it: Soy sauce,⁴³ hydrolysed vegetable protein, sodium caseinate, textured protein, autolyzed yeast, yeast extract, natural flavours #621, gelatin, seasonings, carrageenan, just to name a few. If your food is processed, fermented, or has food additives in it there is a high likelihood it contains hidden MSG.

Pickles with their vinegar and high nitrates increase your risk of dementia.⁴⁴

Certain food combinations challenge our health and increase the risk for brain deterioration, for example large varieties at any one meal, especially if they contain a mixture of fruits and vegetables at the same sitting. Complex meals with a high variety of food items or dishes confuse your stomach, slow your digestion, and increase brain inflammation, laying the groundwork for dementia.⁴⁵

Avoid caffeine brain!⁴⁶ Caffeine decreases mental performance.^{47,48} It really does not improve alertness, but merely returns the addict to baseline.⁴⁹ What's more, it disturbs sleep⁵⁰ and reduces the Alzheimer's preventing⁵¹ hormone melatonin.⁵²

Smoking is not helpful either, it increases your risk of Alzheimer's by 60%.⁵³

Drinking a glass of red wine, a day for your heart?⁵⁴ Alcohol causes loss of important neurons and increases Alzheimer's changes in your brain. In Alzheimer disease, the tau protein is aggregated into bundles of filaments referred to as neurofibrillary tangles. Drinking alcohol is associated with increased tau neurofibrillary tangle accumulation.⁵⁵

Striking closer to home, both hypersexuality⁵⁶ and masturbation⁵⁷ increase your risk of Alzheimer's by depleting of the dementia-preventing mineral zinc.^{58,59}

Neurotoxic herbicides, like glyphosate (brand name RoundUp and others), cause oxidative damage to your brain and increase the likelihood of dementia.^{60,61,62} Glyphosate can certainly be in any agricultural products, but especially be careful of grains, beans, cotton, contaminated air, fruits and vegetables, and your drinking water. Danger of Alzheimer's is not limited to herbicides; exposure to pesticide residues increase your risk of dementia by 34%.⁶³ Pesticides are commonly found in commercially grown foods, drinking water, contaminated air, and dust. "Beef is the most dangerous food for herbicide contamination and ranks third in insecticide contamination."⁶⁴

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Chemicals toxic to your brain, like formaldehyde, are often found in household building materials, synthetic clothing, and many medications.^{65,66}

Arsenic in your diet compromises your brain's function and significantly increases your risk of Alzheimer's.⁶⁷ Sources of exposure to arsenic include chicken,⁶⁸ eggs,⁶⁹ food grown in chicken litter,⁷⁰ fish, sea food,⁷¹ yogurt,⁷² bottled water,⁷³ some rice, sugars, and sweeteners.⁷⁴

Due to media coverage, popular opinion, and the press, it is no secret that aluminum plays a significant role in the development of Alzheimer's dementia. Indeed, laboratory animals fed aluminum, accumulate aluminum in their brains and experience cognitive deterioration.⁷⁵ Aluminum can cause accumulation of Alzheimer's neurofibrillary tangles in your brain.⁷⁶ Sources of aluminum for humans include cheese,⁷⁷ baking powder: pancake and waffle mixes, biscuits, cakes, cookware, tea, drinking water, vaccinations, geoeengineering,⁷⁸ antacids, chocolate, non-dairy creamers, salt, and toothpaste.^{79,80}

I think I have shared most of the bad news first, and now I will share some good news. There is hope! Your brain runs and thrives on good nutrients.

As if aluminum were not bad enough by its self, combine it with fluoride and the result is even more dramatic.⁸¹ Indeed, fluoride and aluminum are also used to produce Alzheimer's in laboratory animals.⁸² Common sources of fluoride include: tea,⁸³ toothpaste, drinking water,⁸⁴ salt,⁸⁵ non-stick cookware,⁸⁶ pesticides, fertilizers⁸⁷ and medications.⁸⁸

Heavy metals can also play a role in Alzheimer's. Mercury and bromide levels are higher in Alzheimer's patients.⁸⁹ Mercury can be from: processed foods,⁹⁰ dental fillings,⁹¹ vaccines,^{92,93} fish,⁹⁴ medications,⁹⁵ mushrooms⁹⁶ and Corn sweeteners.⁹⁷ Bromine can be from: fire retardants,⁹⁸ food preservatives, fumigants,⁹⁹ pesticides,¹⁰⁰ fish,¹⁰¹ dough conditioners in bread,¹⁰² plastics,¹⁰³ Soft drinks,¹⁰⁴ vegetable oils, and swimming pool treatments.¹⁰⁵ One of the reasons bromine and fluoride increase the likelihood of getting Alzheimer's is their competitiveness with iodine. Iodine deficiency plays a role in Alzheimer's and Parkinson's diseases.¹⁰⁶ Supplementing with iodine can have its benefits if you are deficient.

Many of the drug medications people take increase the risk of dementia. For example, statins (cholesterol lowering medications), diuretics (used for high blood pressure and edema),¹⁰⁷ proton pump inhibitors (drugs for heartburn and reflux disease),¹⁰⁸ and anti-inflammatory drugs (pain relievers for arthritis and other pains),¹⁰⁹ anticholinergic drugs (antipsychotics for mental disorders),¹¹⁰ etc., all significantly increase the risk for dementia or make its symptoms worse. Being put to sleep for surgery can cause brain fog and increase your risk of dementia.¹¹¹

I think I have shared most of the bad news first, and now I will share some good news. There is hope. Your brain runs and thrives on good nutrients. To protect your brain from deterioration, you need to eat more nutrient dense fresh fruits and vegetables.¹¹² It is simple, just increase the percentage and variety of fruits and vegetables in your diet.¹¹³ The increased consumption of fruit and vegetables is associated with a reduced risk of cognitive impairment and dementia.¹¹⁴ Variety more than total quantity of fruits and vegetables helps protect cognitive function.¹¹⁵

"But I don't like eating salads and veggies." you may be thinking, "Can I just juice them or blend them into smoothies and just quickly drink them?" With such glamorous article titles as, "Juice your way to fabulous health?" appearing in print, you may be thinking that this is the way to get your best nutrition, but not so according to scientific research. People who drink juice every day have lower brain volumes and poorer memories.¹¹⁶

And why are fresh fruits and vegetables so helpful? It is because they are richer in vitamins. Vitamins give life to your brain, and you can just eat them in your food. Vitamin A protects against dementia and can be obtained from sweet potato, carrots, kale, spinach.¹¹⁷ B vitamins, protect against Alzheimer's disease and are found in grains, seeds, beans, nuts, greens. The earliest and perhaps best example of an interaction between nutrition and dementia is related to thiamine (vitamin B1). Throughout the last century, research showed that thiamine deficiency is associated with neurological problems, including cognitive deficits and encephalopathy.¹¹⁸ Evidence supports the role for riboflavin (vitamin B2) in slowing the progression of cognitive decline.¹¹⁹ Higher intake of B vitamins: niacin (B3), pyridoxine (B6), folate (B9), and cobalamin (B12) throughout young adulthood was associated with better cognitive

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function in midlife.¹²⁰ Vitamin C, lowers the risk of dementia and can be obtained from capsicum (bell peppers), kiwi, red cabbage, and citrus.¹²¹ Vitamin D deficiency doubles the risk of Alzheimer's. The best source is actually not from the diet but from sunlight. If your serum 25(OH)D level is below 10 ng/mL you are more than twice as likely to develop Alzheimer's disease than if it is greater than 20 ng/mL.¹²² Vitamin E helps maintain better brain nutrition. Good sources include sunflower seeds, almonds, and flax.¹²³ Vitamin K deficiency is associated with Alzheimer's. Best foods sources of Vitamin K are dark green leafy vegetables, onions, and peppers.¹²⁴ If you are on a plant-based diet your intake of antioxidants is significantly greater than that of meat eaters. For example, your intake of vitamin C is 305% higher than the recommended, vitamin A intake is 247% higher, and vitamin E 313% higher.¹²⁵ There are a lot of delicious foods in the plant kingdom high in nutrients designed to be of benefit to your brain.

Vegetables are highly nutritious. Cruciferous and green leafy vegetables can slow cognitive decline and lower your risk of dementia as you get older.¹²⁶ Cruciferous vegetable intake has been demonstrated to slow the progress of cognitive decline.¹²⁷ Consumption of as little as one serving per day of green leafy vegetables can slow cognitive decline as you age. According to one study, daily green leafy veggie consumption keeps your brain an equivalent of 11 years younger.¹²⁸

Fruit is highly nutrient dense. Compared to eating less than one piece of fruit per day, consuming 2 to 3 pieces daily can reduce Alzheimer's mortality by 40% and eating more than 3 pieces per day have been shown to reduce it by 60%.¹²⁹

Berries are particularly nutrient dense and high in antioxidants making them very desirable for both reversing and preventing dementia.¹³⁰ Blueberries help counteract the brain-damaging effects of a high fat diet.¹³¹ Cranberries can prevent the toxic effects of amyloid in Alzheimer's disease.¹³² Red raspberries exhibit health-promoting properties which have critical metabolic, oxidative, and anti-inflammatory links to preventing Alzheimer's disease.¹³³ Mulberries can be a natural cognitive enhancer and neuroprotectant.¹³⁴ Strawberries (best eaten organic to avoid chemicals) have been shown to reverse age-related losses in motor and cognitive performance.¹³⁵ Blackberries improve age related deterioration of motor and cognitive performance.¹³⁶ Goji berries protect against

neuronal injury and loss caused by β -amyloid peptide, and glutamate excitotoxicity.¹³⁷ Grapes help maintain brain metabolism and cognitive function in patients with mild decline in thinking ability.¹³⁸ Tomatoes, with their lycopene, help to protect against Alzheimer's-induced cognitive dysfunction.¹³⁹ Higher serum levels of lycopene are associated with a lower risk of Alzheimer's mortality in adults.¹⁴⁰ Eat all the berries you can get your hands on!

Other fruits are also helpful. Pomegranate consumption has been shown to significantly improve memory and brain function.¹⁴¹ Apples have been shown to return brain function to younger levels.¹⁴² Plums have been shown to improve working memory, mitigating against age-related declines in brain function.¹⁴³ Citrus has been shown to be a valuable weapon against Alzheimer's dementia.¹⁴⁴ Peppers (capsicum, which is a fruit not a vegetable) have been shown to inhibit the formation of Alzheimer's amyloid in the brain.¹⁴⁵ Many fruits are helpful even though they have not all have been specifically studied; fruit of any kind can be beneficial, get as much as you can.

Olives are high in antioxidants that prevent neurodegenerative diseases and are associated with reduced risk of mild cognitive impairment and Alzheimer's disease.^{146,147} Olives have been shown to prevent neurofibrillary tangles from tau fibrillization.¹⁴⁸

Vegetables are highly nutritious. Cruciferous and green leafy vegetables can slow cognitive decline and lower your risk of dementia as you get older.

Whole grains, in distinction to refined processed grains, have antioxidant activity and minerals which protect your brain against Alzheimer's.¹⁴⁹

Higher consumption of whole legumes (beans) decreases cognitive decline as you get older.¹⁵⁰

Raw nut consumption helps dementia because it reduces blood pressure, improves blood sugar regulation, improves vascular function, reduces inflammation, and also improves cognitive performance.¹⁵¹ Eating nuts can delay cognitive decline in old age.^{152,153} Walnuts are of particular interest because they have been demonstrated to improve scores on brain function tests.¹⁵⁴ Polyphenolic compounds found in walnuts not only reduce the oxidant and inflammatory load on brain cells but also improve intraneuronal signaling, increase neurogenesis,

and help the brain deal with neurofibrillary tangles.¹⁵⁵ Hazelnuts improve memory, reduce anxiety-related behavior, and have an ameliorating effect on the toxic nature of amyloid.¹⁵⁶ Brazil nuts with their relatively high selenium content help with cognitive impairment.^{157,158} Almonds, along with some of the other nuts, provide macronutrients, micronutrients, and phytochemicals that affect several pathways in Alzheimer's pathogenesis such as amyloid and tau protein dysfunction, and oxidative stress; additionally they lower cholesterol, reduce inflammation, and promote neurogenesis.¹⁵⁹

Seeds, like nuts, have many nutrients which can positively impact brain performance. Flax seed (linseed) has been shown to improve mental performance.¹⁶⁰ Sesame seeds protect against Alzheimer's amyloid toxicity.¹⁶¹ Sunflower seeds are anti-Alzheimer's because they are high in healthy phospholipids.¹⁶²

Do you have some areas of food choices where you could make more positive selections to better prevent and lower your risk of Alzheimer's?

Did you know that herbs can help you fight Alzheimer's disease? "He causeth the grass to grow for the cattle, and herb for the service of man: that he may bring forth food out of the earth;"¹⁶³ Red clover: (*Trifolium pratense*) protects neurons from glutamate (MSG) damage.¹⁶⁴ Gotu Kola: nullifies aluminum toxicity¹⁶⁵ and decreases amyloid levels.¹⁶⁶ Panax ginseng: significantly improves frontal lobe function in Alzheimer's.¹⁶⁷ Ginkgo biloba: helps mild to moderate Alzheimer's dementia.¹⁶⁸ *Huperzia serrata*: produces cognitive enhancement and improves memory.¹⁶⁹ *Salvia officinalis*, (Sage) improves cognitive function in Alzheimer's.¹⁷⁰ Horsetail: contains silica which reduces dementia and Alzheimer's.¹⁷¹ Turmeric, inhibits amyloid- β plaque formation, binds copper, lowers cholesterol, and is an antioxidant.¹⁷² Brahmi (*Bacopa monnieri*) reduces neuroinflammation, inhibitions Amyloid- β aggregation and improves cognitive function and learning.^{173,174} Ashwagandha (*Withania somnifera*) has the potential to reverse behavioral deficits, plaque pathology, and accumulation of β -amyloid peptides (A β) in the brain.¹⁷⁵ So pick a few of these herbs and make yourself a nice cup of unforgettable tea.

Essential oil from Japanese Hinoki Cypress trees can prevent neuronal cell death in Alzheimer's.¹⁷⁶

Have you drunk your water today? Good hydration improves your memory and intelligence reducing your risk of Dementia.¹⁷⁷ Start the day off with a liter (quart) of water. Men need 3.7 liters (quarts) a day and women need 2.7 liters (quarts) a day.¹⁷⁸ Hydrotherapy can also prevent and treat dementia.¹⁷⁹ A cool morning sponge bath stimulates your nerves. Hot and cold showers are invigorating to your brain's circulation. A hot foot bath can improve mental status. Hot and cold treatments to the head can improve your brain blood supply and oxygenation. Sauna bathing can reduce your risk of Alzheimer's.¹⁸⁰

Every hour you spend per day in media entertainment (TV, YouTube, video games, computer time, mobile device, smart phone) increases your risk of Alzheimer's by 30%.

The risk of dementia increases with either too little or with too much sleep. Regularity in bedtime improves your memory. Best time for sleep: 9pm to 5am. Sleeping pills increase your risk of dementia 66%.¹⁸¹ It is during good sleep that plaques are removed from your brain.^{182,183} Especially deleterious is the consumption of a large evening meal. It compromises sleep which increase Alzheimer's.^{184,185} It also increases the bodies core temperature at night which also increases Alzheimer's.^{186,187} If any food is eaten at all in the evening, the meal should be at the same time every day, be at least 3 hours before bedtime, be at least 5 hours after lunch and should consist only of fruit and possibly a small serving of some whole grain product. Avoid vegetables, animal products, fats and hard to digest foods in the evening. Reading late in the evening or watching TV also disrupts sleep increasing the risk of Alzheimer's.¹⁸⁸ Good sleep is associated with good melatonin levels. Alzheimer's risk rises when your melatonin levels fall. Melatonin levels fall with late bedtimes, after 9:30pm, artificial lighting after sundown, blue/white light in the evening (like from TV, computers or mobile phones, night lights, illuminated clocks), irregular eating and sleeping schedules, and shift work.^{189,190}

Indeed, media entertainment in general has a negative impact on healthy cognitive function. Every hour you spend per day in media entertainment (TV, YouTube, video games, computer time, mobile device, smart phone) increases your risk of Alzheimer's by 30%.^{191,192}

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With the electronic age and media entertainment also comes the hazard of electromagnetic fields. Electromagnetic Fields (EMF) increase your risk of Alzheimer's.¹⁹³ Electromagnetic fields can come from mobile phones and cordless phones (especially DECT), Wi-Fi and computers, smart meters, radio towers, electronic devices, and high-power lines.^{194,195}

There is some entertainment that can be beneficial. Listening to, singing,¹⁹⁶ or playing¹⁹⁷ good music can improve your memory, mood and thinking. Putting things you need to memorize to music is also an effective way to improve memory in Alzheimer's.¹⁹⁸

Music is often associated with reflection or meditation. Meditation relieves stress, increases brain blood flow and your brain volume, and it reduces your risk of cognitive decline.^{199,200} "O how love I thy law! it is my meditation all the day."²⁰¹

Regular physical activity sharpens the brain, improves memory and thinking skills, and helps prevent Alzheimer's.²⁰² In fact, exercise can be more effective than diet control in preventing amyloid deposition and memory deficits.²⁰³ Moderate intensity aerobic exercise can improve cognitive function in patients with mild Alzheimer's disease. Those who are more active can improve their brain function by 32-39%.²⁰⁴ Best exercise times are before breakfast and after each meal. The best exercise you can engage in is walking. Walking improves brain function,²⁰⁵ increases memory,²⁰⁶ and reduces risk of dementia.²⁰⁷ The best place to exercise is out in nature, away from the busyness of the city with its noise and pollution. Pure air is beneficial while air pollution increases Alzheimer's brain changes.²⁰⁸ Improved ventilation with outdoor air improves mental performance.^{209,210} A healthy life style, with daily outdoor activity, reduces your risk of dementia.²¹¹ Physical exercise in a natural outdoor environment lowers your risk of Alzheimer's by its positive effects on blood pressure and inflammation.^{212,213,214} The natural environment also includes sunshine. Countries with lower average sunlight have higher Alzheimer's death rates.²¹⁵ Morning sunlight helps depression. Afternoon sunlight increases vitamin D.²¹⁶

Combined physical and mental exercise improves your mental performance more compared to physical exercise alone.^{217,218}

Having a purpose and doing things purposefully with your whole heart protects your neurons.²¹⁹ In fact, a person with purpose is 2.4

times more likely to remain free of Alzheimer's.²²⁰ Daydreaming has negative effects increasing your risk of Alzheimer's. "Whatsoever thy hand findeth to do, do it with thy might; for there is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest."²²¹

The name of the game is purposeful physical activity that engages the intellect as well as your muscles. What activities are available to you that could stimulate both your brain and your body?

Make friends! Having 5-6 close friends decreases your risk of cognitive decline by 250%. People with more friends were found to have better cognitive function and lower rates of Alzheimer's.

Have you heard it said, "Use it or lose it?" This is definitely true of your brain and risk of Alzheimer's. If you engage in more active thinking over your lifetime, your chances of having amyloid deposit in your brain are greatly diminished.²²² Do things that keep your brain active: keep your own accounts, form your own opinions, make long-term plans, learn new skills, and improve old ones, take up a new hobby. Keep learning your whole life; it prevents dementia.^{223,224} Learning stimulates growth of brain networks which bypass damaged areas in your brain.²²⁵ Maintaining a high level of mental activity reduces your risk of dementia by 66%.²²⁶ Stimulating mental activities might include: reading, discussing, studying, word games, etc. Bible Study is the best mind builder. It is good to fill your leisure time with mind-engaging meaningful activities.²²⁷ An idle mind is a brain in decline.

Independent thinking and acting maintains better brain function.²²⁸ Relying on others is nice, but as much as possible, do all your own thinking, planning, and analyzing.

Memory exercises pay off in helping to maintain and revitalize your memory.^{229,230} Help your memory by use of object lessons, blackboards, maps, figures, symbols, mnemonics, and pictures.

What strategies have you formulated to stimulate and maintain your memory abilities as you get older?

A joyful heart is good medicine, and a positive attitude predicts fewer memory problems.²³¹ Happiness improves your memory.²³² As your happiness fluctuates from day to day so does your memory.²³³ "A merry heart doeth good like

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a medicine: but a broken spirit drieth the bones.”²³⁴

Psychological stress predicts the progression to dementia.²³⁵ Psychological distress and depression, anxiety and apathy can be present in mild cognitive impairment and can predict progression to dementia. Chronic stress is a risk factor for Alzheimer’s.²³⁶ If you are a person who is prone to stress, then you have a greater chance of coming down with Alzheimer’s.²³⁷ Guilt brings the ultimate stress. Depression,²³⁸ anxiety,²³⁹ dread, loneliness,²⁴⁰ and poor self-esteem²⁴¹ can all give you Alzheimer’s. Take life one day at a time.

Stress is about your emotions. What we are talking about here is having good emotional health to escape Alzheimer’s. The fruits of the Spirit are a good list of positive emotions worth cultivating in prevention of dementia. “But the fruit of the Spirit is love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control.”²⁴²

Christianity has been shown to reduce your risk of Alzheimer’s by 50%.²⁴³ Regular church attendance reduces the incidence of dementia.²⁴⁴ Your brain benefits from the personal and group Bible study, prayer, meditation, and memorisation available in the setting of a church. Christianity offers stress reduction, mental quietude and acquiescence—complete confidence in God to work out all difficulties satisfactorily. Bible study, comparing text with text, is a real workout for your brain’s association cortex. And true Christianity leads you to live to help others. Selflessness in volunteering has been shown to preserve your intellectual capacity.²⁴⁵ Volunteers had 78% less intellectual decline over a one-year period compared to non-volunteers.

Make friends! Having 5-6 close friends decreases your risk of cognitive decline by 250%.²⁴⁶ People with more friends were found to have better cognitive function and lower rates of Alzheimer’s.²⁴⁷

What we are talking about here is social health as a benefit to long term cognitive functioning. One way to improve your social health is to practice the one another texts. Love one another (John 13:34,35). Accept one another (Romans 15:7). Pray for one another (James 5:17). Honor one another (Romans 12:10). Encourage one another (1Thesalonians 5:11). Carry one another’s burdens (Galatians 6:2). Serve one another (Galatians 5:13). These all have practical potential to increase brain activity and stave off dementia.

Given the high impact of stress and negative emotions on brain health, I want to ask an important question. Do you have inner peace?

“In the heart of Christ, where reigned perfect harmony with God, there was perfect peace. He was never elated by applause, nor dejected by censure or disappointment. Amid the greatest opposition and the most cruel treatment, He was still of good courage. But many who profess to be His followers have an anxious, troubled heart, because they are afraid to trust themselves with God. They do not make a complete surrender to Him; for they shrink from the consequences that such a surrender may involve. Unless they do make this surrender, they cannot find peace.”

“It is the love of self that brings unrest. When we are born from above, the same mind will be in us that was in Jesus, the mind that led Him to humble Himself that we might be saved. Then we shall not be seeking the highest place. We shall desire to sit at the feet of Jesus and learn of Him. We shall understand that the value of our work does not consist in making a show and noise in the world, and in being active and zealous in our own strength. The value of our work is in proportion to the impartation of the Holy Spirit. Trust in God brings holier qualities of mind, so that in patience we may possess our souls.”

“The yoke is placed upon the oxen to aid them in drawing the load, to lighten the burden. So with the yoke of Christ. When our will is swallowed up in the will of God, and we use His gifts to bless others, we shall find life’s burden light. He who walks in the way of God’s commandments is walking in company with Christ, and in His love the heart is at rest. When Moses prayed, ‘Show me now Thy way, that I may know Thee,’ the Lord answered him, ‘My presence shall go with thee, and I will give thee rest.’ And through the prophets the message was given, ‘Thus saith the Lord, Stand ye in the ways, and see, and ask for the old paths, where is the good way, and walk therein, and ye shall find rest for your souls.’ Exodus 33:13, 14; Jeremiah 6:16. And He says, ‘O that thou hadst hearkened to My commandments! then had thy peace been

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as a river, and thy righteousness as the waves of the sea.' Isaiah 48:18."

"Those who take Christ at His word, and surrender their souls to His keeping, their lives to His ordering, will find peace and quietude. Nothing of the world can make them sad when Jesus makes them glad by His presence. In perfect acquiescence there is perfect rest. The Lord says, 'Thou wilt keep him in perfect peace, whose mind is stayed on Thee: because he trusteth in Thee.' Isaiah 26:3. Our lives may seem a tangle; but as we commit ourselves to the wise Master Worker, He will bring out the pattern of life and character that will be to His own glory. And that character which expresses the glory—character—of Christ will be received into the Paradise of God. A renovated race shall walk with Him in white, for they are worthy."

"As through Jesus we enter into rest, heaven begins here. We respond to His invitation, Come, learn of Me, and in thus coming we begin the life eternal. Heaven is a ceaseless approaching to God through Christ. The longer we are in the heaven of bliss, the more and still more of glory will be opened to us; and the more we know of God, the more intense will be our happiness. As we walk with Jesus in this life, we may be filled with His love, satisfied with His presence. All that human nature can bear, we may receive here. But what is this compared with the hereafter? There 'are they before the throne of God, and serve Him day and night in His temple: and He that sitteth on the throne shall dwell among them. They shall hunger no more, neither thirst anymore; neither shall the sun light on them, nor any heat. For the Lamb which is in the midst of the throne shall feed them and shall lead

them unto living fountains of waters: and God shall wipe away all tears from their eyes.' Revelation 7:15-17."²⁴⁸

SUMMARY

Alzheimer's, dementia, and memory failure are increasing alarmingly and are at an all-time high. Why? Your brain is under attack from poor lifestyle habits, environmental insults, and psychological stress. Your solution is to eat well, live well, and think well.

Recommendations:

- Eat plenty of fresh fruits and vegetables, whole grains, legumes, nuts and seeds, but don't overeat.
- Limit or avoid animal products, fatty foods (including oils), fermented foods, processed foods and chemicalized foods.
- Eat only at scheduled mealtimes and eat very little if anything in the evening.
- Take time daily for vigorous exercise in the great outdoors in the fresh air, sunshine and in as natural an environment as possible. Useful purposeful labor is the very best.
- Drink plenty of fresh pure water.
- Avoid heavy metals, chemicals, pesticides, MSG, and herbicides.
- Keep your mind active and challenged every day.
- Make friends and build social networks.
- Take steps to manage stress effectively.
- Take advantage of the help God can give you in living to the fullest free from stress and worry.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

*“A merry heart doeth good
like a medicine: but a
broken spirit drieth the
bones.”ⁱ*

- King Solomon

ⁱ Proverbs 17:22. King James Version of the Holy Bible.

CHAPTER 7

OSTEOPOROSIS: NOTHING TO CRACK UP ABOUT

WHAT IS OSTEOPOROSIS?

The National Institutes of Health defines it as, “Skeletal disorder characterized by compromised bone strength, leading to an increased risk of fracture.”¹

What does all that mean? Well, your bones get thin and start to break. Bone structure is much like the architecture of an old steel beam bridge, with girders crisscrossing for strength and stability. When you start across such a bridge, how many of the girders would you be willing to have missing or rusted through and still feel assured of safe passage? So it is with the bones. In the bones the “girders” are called trabecula. Osteoporosis is, “Osteo” meaning bone and “porosis” meaning opening or passage, literally holes in the bone. Osteoporosis is holes where trabecula once existed. This leaves the bone weak and susceptible to fractures.

EPIDEMIOLOGY OF OSTEOPOROSIS

Osteoporosis afflicts about 10 million Americans: 80% of victims are women. Another 34 million Americans have osteopenia, a milder thinning of the bones that will lead to osteoporosis if nothing is done to stop the dangerous process. Over 1.5 million osteoporotic fractures occur each year, 300,000

hip fractures, 700,000 vertebral fractures, 250,000 wrist fractures just to mention a few.^{2,3}

FRACTURES

Wrist fractures increase with the onset of menarche. Hip fractures increase in the years following retirement when people become less active and quit engaging in weight bearing activities. Osteoporotic spine fractures increase with menopause and further increase with inactivity upon retirement.⁴

Wrist fractures are quite disabling. Besides being in a cast from 4 to 6 weeks, having surgery or needing rehabilitation,⁵ people with wrist fractures are at high risk of developing painful arthritis in the years following injury.⁶

Spine fractures resulting from osteoporosis reduce the quality of life.^{7,8} Spine fractures result in a hunchback appearance which medically we call kyphosis.⁹ Kyphosis results in an overall loss of height. Spinal fractures are often painful.¹⁰ As the posture becomes more stooped and the contents of the stomach and lungs become compressed, the abdomen starts to protrude, gastrointestinal reflux symptoms develop, and breathing becomes difficult.¹¹ If all this is not bad enough, depression can set in.¹²

Of all fractures resulting from osteoporosis, none are more devastating than hip fractures. Thirty-five percent of post-menopausal white women have osteoporosis of the hip, spine, or

wrist. Is osteoporosis improving in our nation? By the year 2020 it is estimated that nearly 50% of Americans over age 50 will have osteoporosis of the hip.¹³ The cost of hip fracture care is prohibitive. In 2002 the costs were about \$18 billion.¹⁴ It is projected that by 2050, with the increase in osteoporosis and consequent fractures, that we could be spending \$131.5 billion a year on hip fractures.¹⁵ The bad news does not end there, up to 1/3 of hip fracture patients die within the first year following injury.¹⁶ Now this is not necessarily because of something that happened with the fracture, but the health of the bones tends to be a reflection of the health of the entire body.¹⁷ These people die of blood clots, heart failure and heart attacks, or pneumonia, etc.

Of all fractures resulting from osteoporosis, none are more devastating than hip fractures.

HOW OSTEOPOROSIS IS DIAGNOSES

Bone density is measured by a test we call the DEXA scan. DEXA stands for dual-energy x-ray absorptiometry. A DEXA is reported in standard deviations from the mean, how far a person's score differs from the normal. Osteoporosis, by definition, is two- and one-half standard deviations below the mean (≤ -2.5 t score). For each standard deviation of bone loss there is a 40% increase in mortality from hip fracture.^{18,19} One fourth of hip fracture patients become disabled in the following year.²⁰ Two thirds never regain their former level of activity and independence²¹ and one-fifth require long term nursing home care; accounting for about 140,000 nursing home admissions per year.²²

And do not underestimate the emotional impact of a fracture:

- Sixty-eight percent worry that another fracture would put them in the nursing home.
- Seventy-three percent are concerned that they will have to reduce activities with family and friends.
- Eighty-nine percent live in fear of breaking another bone.

The bottom line is that you want to avoid osteoporosis at all costs.

WHY OSTEOPOROSIS?

"Disease is an effort of nature to free the system from conditions that result from a violation of the laws of health."²³ Let us look at some of the known causes of osteoporosis.

The first item that I will put on the list of things that cause osteoporosis may come as a surprise. Sugar! Sixteen teaspoons of sugar a day increases urinary calcium loss by 124%.²⁴ And most Americans get about twice that amount. Add Chocolate and the urine calcium increases to 147%.²⁵

Salt (sodium chloride) causes fluid retention and increases kidney filtration of calcium. Sodium and calcium compete in the kidneys and calcium is sacrificed. Salt substitutes using potassium instead of sodium are actually helpful for preventing osteoporosis.²⁶

Do not underestimate the emotional impact of a fracture.

Everyone talks about vitamin D and osteoporosis, and well they should. Vitamin D deficiency is rampant due to everyone hiding from the sun.²⁷ There are other nutrients whose deficiencies increase osteoporosis. These

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include vitamins K, B12, B6 and folic acid, magnesium, copper, and boron.²⁸

Menopause has a profound effect on the bones. Bone turnover is increased by up to 55% in women with estrogen deficiency.²⁹

Believe it or not, bones make electricity when stressed. It is this electricity that helps the body determine how much calcium to lay down in a given bone to meet the physical demands placed on it. When a bone is unused it is not maintained by the body with as much calcium and becomes osteoporotic. Osteoporosis of inactivity affects men and women equally. Decline in the physical activity level with age is an important risk factor for hip fracture.³⁰

An apple a day may keep the doctor away, but a cup of caffeine certainly will not.

Caffeine increases the urinary excretion of calcium for at least 3 hours.³¹ What is more, caffeine decreases bone-preserving testosterone.³²

Drinking alcohol, particularly during adolescence and young adulthood, can dramatically compromise bone quality, increasing the risk of osteoporosis later in life. I'm not sure I know how to break this news, but some research indicates that the effects of alcohol on bone cannot be reversed, even if alcohol consumption is terminated.³³ In the process of bone remodelling, alcohol tends to poison the little cells that make new bone, leaving the trabecula thin and weak.³⁴

Tobacco use decreases bone mass and quality, making it more susceptible to fractures.³⁵ Tobacco actually acts like a hormone and affects the hormonal system's action on calcium metabolism.³⁶

What do people do when their stomach is "acid"? Many reach for a "Tum®"—a calcium anti-acid pill. When the body becomes "acid" it reaches for a calcium product as well; your bones. It is calcium from your bones that is used

to buffer acid from your diet. A diet that makes your blood more acid significantly increases urinary loss of calcium from the bones.³⁷ Examples of acid forming foods include grains,³⁸ potatoes, and animal products—especially cheese.³⁹

Animal protein, in contrast to vegetable protein, has a lot more sulphur and phosphorus which are made into sulfuric acid and phosphoric acid when digested. This elevated acid must be buffered by calcium from the bones, which leads to osteoporosis.^{40,41,42}

Another source of acid comes from sodas, especially the brown ones with phosphoric acid in their ingredients.⁴³ Drinking such soda makes the whole body more acidic and increases calcium excretion in the urine.⁴⁴

Psychological stress is a major obstacle in the fight to maintain bone mass. Chronic stress raises the stress hormones and inflames the body, both of which deplete calcium from the bones.⁴⁵ Elevated stress has been shown to increase osteoporosis.⁴⁶

One particularly well-studied form of stress is depression.^{47,48} Risk of hip fracture increases with depression. Older people with depression are particularly at increased risk of loss of bone mineral density,⁴⁹ and are more apt to fall and break bones.⁵⁰ Even the Bible makes reference to this association, "A merry heart doeth good like a medicine: but a broken spirit drieth the bones."⁵¹

SECONDARY CAUSES OF OSTEOPOROSIS

There are secondary causes of osteoporosis that are beyond the scope of this article to encompass. These include medications such as anticonvulsants, methotrexate, heparin, and steroids, etc., and conditions such as renal failure, hyperthyroid, hyperparathyroid, diabetes mellitus,⁵² hypertension,

hypercholesterolemia,⁵³ peptic ulcer disease,⁵⁴ and multiple myeloma, etc.

HOW SIGNIFICANT ARE EACH OF THESE RISK FACTORS?

To put these risk factors in perspective:

- Smoking - more than doubles your risk of hip fracture.
- Genetics - if your mother had osteoporosis and broke her hip, your risk of hip fracture doubles, not necessarily because you inherited bad bones, although there is some inheritability of bone structure. But the real problem lies in the lifestyle habits you inherit, or adopt, from your parents. You eat as they ate, you exercise, or do not exercise, as they did or did not exercise, etc.
- Inactivity - a resting pulse rate of greater than 80 beats per minute increases your risk by 80%. "What does a fast heart rate have to do with my bones?" you may be wondering. Athletes have very low heart rates. People in good cardiovascular shape have lower heart rates. Having a fast heart rate is really evidence that you may be a couch potato.
- Falls - any falls during the previous year has been shown to increase your risk of hip fracture by 60%.
- Caffeine - If you currently are using caffeine, (coffee, tea, cola, etc.), 1½ cups of coffee per day will increase your risk by at least 30%.

Some lifestyle factors thought to be helpful actually have very little impact on bone health, and some of them may have other dangerous risks.

- Estrogen - for example current estrogen use has little or no effect, positive or negative as far as the bones are

concerned, but as regards cancer, it has a significant detrimental effect.

- Calcium - daily calcium intake is of minimal help, about 10%.
- Obesity - carrying around an extra 20 pounds of weight may actually decrease osteoporosis by 20% but carries with it the negative risks of diabetes, arthritis and cancer.

The lifestyle factors making the biggest difference are:

- Exercise - walking for exercise, which decreases risk by 30% and being on one's feet more than 4 hrs per day, which drops the risk by 40%.⁵⁵ So, get up and get moving!

Osteoblasts never lay down thick calcium, like would sustain a hard-working athlete, on an inactive couch potato. That would be a waste.

BONE REMODELING

Bones are biologically active—always under construction, like the roads around where I currently live. In our town one crew goes around taking up the old pavement and a second crew goes around laying down new pavement. By the way, the paving crew never lays down thick pavement like would sustain a 4-lane freeway on a backwoods country road. That would be a waste. So it is with your bones. One set of cells, the osteoclasts, goes around taking up the old calcium, and another set of cells, the osteoblasts, goes around laying down the new. By the way, the osteoblasts never lay down thick calcium, like would sustain a hard-working

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athlete, on an inactive couch potato. That would be a waste.

By age 25 bones have reached maturity. By age 35 bones have achieved their peak bone mass. By age 40 the bones start to lose mass at about one half a percent per year. By age 45, in those perimenopausal years, bone loss can reach 3% per year, and if that continues for 10 years, a woman can lose 30% of her skeleton.

THE CALCIUM BANK

Bones are the calcium bank. More than 99% of the calcium resides in the bones. The remaining 1% is in the blood and other fluids. The osteoclasts make withdrawals, from the “bone bank”, and osteoblasts make deposits. The goal is to maintain a calcium balance where the deposits are at least as great as the withdrawals. It’s like the good old saying about finances, “If a man’s ‘out-go’ exceeds his income, then his upkeep will be his down fall.”

DAILY CALCIUM ALLOWANCE

How much calcium should be included in the diet to maintain a positive calcium balance? According to the National Academy of Sciences a middle-aged person needs at least 1000 mg per day. The National Institutes of Health, believing osteoporosis to be epidemic, recommends 1500 mg of calcium daily.⁵⁶ The World Health Organization, monitoring the health of the entire world, finds osteoporosis rare. They state that 500 mg is more than adequate. Who is right?

CALCIUM BALANCE

Several things affect the overall calcium balance of the body. We get calcium in food and drink to supply our body’s needs. Some of this

calcium is absorbed and some of it passes on and is lost in the stool. That which is adsorbed is transferred to the blood and bones and some of it is excreted in the urine through the kidneys. If our calcium absorption exceeds our losses than we have a positive calcium balance. Of the four components of calcium balance, intake, absorption, stool loss and urine excretion, the only one we can significantly influence is urinary loss. Here is where we need to focus our efforts on tipping the calcium balance in our favor.

Urinary Calcium & Calcium Balance

Protein gm/day	Urinary Ca mg/day	Ca Balance mg/day
47	168	+31
95	240	-58
142	301	-120

To illustrate—someone on a diet consisting of 47 grams of protein and a urinary calcium excretion of 168 mg/day would be in a 31 mg positive calcium balance, (meaning that by the end of that day the total calcium in their body actually increased by 31 mg.) This is good. Double the protein intake to 95 grams and the urinary calcium excretion will jump to 240 mg and the balance at the end of the day will now be -58 mg. Triple the protein (142 mg/day) and the urinary calcium loss will climb to 300 mg/day and the balance will be a -120 mg/day.⁵⁷

“But,” you may say, “How do you know that calcium is coming from the bones? Maybe you just consumed more calcium with that extra protein and it turned up in the urine.”

To further test this question a molecule called N-telopeptide was studied. When calcium is

taken from the bone so is N-telopeptide. When calcium appears in the urine along with N-telopeptide we know exactly where the calcium came from—the bones. When the protein in a person's diet is increased from 49 gm/day to just 70 gm/day, (not even doubled or tripled), the urinary excretion N-telopeptide increases by 33%! The only place that the calcium appearing in the urine could have come from is the bones.⁵⁸

The message? You cannot eat enough calcium to offset the effect of other poor lifestyle choices on your bones.

Can the problem be solved by simply taking more calcium? What about 1400 mg of calcium a day? An experiment was done in which subjects were divided in to three groups. Each group was given 1400 mg of calcium per day, but different levels of protein (48 gm/day, 95 gm/day, 142 gm/day). The group on the 48 gm/day protein diet maintained a positive calcium balance of 20 mg/day. The other two groups had negative calcium balances, -30 mg/day and -70 mg/day, respectively.

The message? You cannot eat enough calcium to offset the effect of other poor lifestyle choices on your bones.^{59,60}

Let us put this in perspective. If you lost 50 mg of calcium a day for 20 years you could lose 365 grams of your skeletal mass. How much did you start out with? The average female has around 821 grams.⁶¹ That would mean that you could lose 44% of your skeletal calcium in 20 years.

HOW MUCH PROTEIN DO YOU NEED?

During World War I, Denmark was cut off from the rest of the world. Consequently, they

instituted a food-rationing program to monitor the distribution of nutritional resources. Their principal foods were bran bread, barley porridge, potatoes, greens, cabbage, some milk, and some butter. The people of the cities and towns got little or no pork. Beef was so costly that only the rich could afford to buy it in sufficient amount. And they ate less than before, and often lost weight. No attention was paid to protein requirements. While fat was regarded as a very valuable addition to the diet, it was not considered as being a necessity. Bran was considered to be a very valuable food that was well-digested by man. Alcoholic beverages were nearly eliminated, as raw material was not rationed to distilleries. While the rest of the world saw death rates skyrocket from the "Spanish Influenza," the death rate for Denmark for the year October, 1917, to October, 1918, dropped to 10.4 per thousand. Dr. Hindhede, observing the health improvements on this forced low protein vegetarian diet, put himself on a low protein diet, and finding that he did quite well, published that 40 grams of protein a day is sufficient to maintain good health.⁶²

It was not until the mid-1900's that researcher William C. Rose described the requirements of the 8 essential acids and determined the total protein requirements to maintain the body's nitrogen balance. In his work it was revealed that if the perfect protein were eaten, one that supplied the optimal proportion of each of the 8 essential amino acids, only 12.7 gm of protein per day were necessary.⁶³

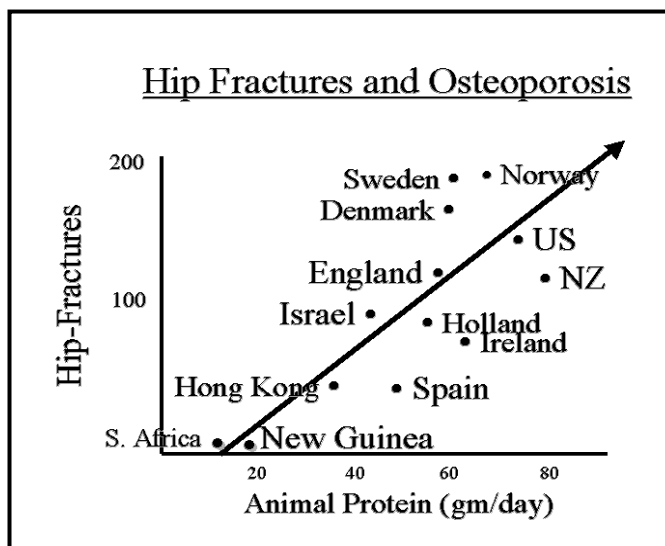
Has such a diet been tried with success? In Somalia there is a group called the Bantus. The Bantu women get around 350 mg of calcium a day and their protein intake is only 10% of their diet. They have no calcium deficiency, and they have almost no hip fractures.⁶⁴ On the other hand are the Eskimos. Eskimos consume

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between 2000 mg and 2500 mg of calcium a day and have high level of weightbearing activity, yet they have the

highest rates of osteoporosis in the world! Their protein intake averages 250-400 gm/day.^{65,66}

One of the most telling studies on the effects of a high protein diet on osteoporosis was published by Abelow, et. al. in which they compared the rate of hip fracture in different countries to their per-capita animal protein consumption. Countries like South Africa, with



low animal protein consumption, had a low rate of hip fracture. Countries like the United States and England, with high animal protein consumption, had high hip fracture rates. The relationship between animal protein consumption and hip fracture rate for 13 countries maintained a linear relationship, which could send the message, "Need hip fracture? Eat animal protein."⁶⁷

Animal protein is rich in phosphorus and sulphur as are processed foods.⁶⁸ (Animal products supply about 64% of the phosphorus in the American diet and grains another 19%.) Phosphorus and sulphur are metabolized by the body into sulfuric acid⁶⁹ and phosphoric acid. These acids are then buffered with calcium from your bones. What is more, as protein is

metabolized; excess urea is produced, which acts like a diuretic to hasten the loss of calcium in the urine.⁷⁰

The drawbacks to a high animal protein diet are not confined to calcium loss in the urine. Excess protein consumption has been linked to progressive loss of renal function,^{71,72} kidney stones,^{73,74} gouty arthritis from uric acid,⁷⁵ elevated cholesterol,^{76,77} and increased cancer risk.⁷⁸

Does animal protein include milk protein? Does the consumption of dairy products carry the same level of risk for osteoporosis as other animal products? In a 12-year study of 77 thousand woman, the daily consumption of dairy products increased hip fracture risk by 45%.⁷⁹ In another study of men and women aged 65 years old and older, dairy product consumption, particularly during their 20s, increased their risk of hip fracture later in life by 190%-240%. And why would a high calcium food like milk be such a poor protection against osteoporosis. Typically, only about 20-40% of milk calcium is absorbed, depending on the calcium status of the person. Calcium is absorbed better from most vegetable sources than from dairy foods.⁸⁰ What is more, once milk is digested, it has such high protein⁸¹ and phosphorus⁸² that it causes calcium loss.⁸³ Another factor is the sulphur content. Milk protein has twice as much of the sulphur containing amino acid methionine as soy or wheat protein.⁸⁴ Methionine breaks down to sulfuric acid which must be buffered with calcium from the bones.⁸⁵

There are other benefits to plant protein that go beyond their lower sulphur content. Some plant proteins, such as those coming from soy or turmeric, actually have helpful weak hormonal activity. Studies suggest that dietary soybean protein is effective in preventing bone loss due to ovarian hormone deficiency.⁸⁶ What is more,

soy contains genistein, which has been shown to increase bone mineral density by 6% over a two-year period.⁸⁷

WHERE DO WE GET OUR CALCIUM?

“Okay. So, if I eat something with calcium, which is also high in sulphur or phosphorus, I lose the benefit. So, what can I eat to get my calcium?” you may be asking. The absorptive efficiency of calcium from most vegetable sources is very good.⁸⁸ Some vegetarian foods high in calcium are dandelion greens, kale, turnip greens, mustard greens, collard greens, lambs quarters, baked beans, sesame seeds, blackstrap molasses, hazelnuts, green soybeans, dried figs, amaranth grain, and carob flour. By the way, lambs-quarters have one and a half times as much calcium as milk, without the protein, sulphur and phosphorus problems.

EXERCISE

Exercise provides mechanical stress to the skeleton. Calcium is added to the stressed skeleton to strengthen it to meet the demands put on it. As they say, “If you don’t use it, you lose it.”

If you do not find time to exercise you will have to find time to be sick.

Recall that perimenopausal women lose bone mass at a rate of 3% per year. Researchers wanting to study the effect of exercise on bone mass took two groups of women--one who did not exercise and one which was trained in daily exercise. As expected, the ones who did not exercise lost 3% of their bone mass every year. On the other hand, the exercise group not only cut losses, but also gained a little bone mass

each year.⁸⁹ Exercise is one of the main ways of increasing or maintaining bone mass. In another study that looked at woman’s ongoing activity level, women who were the most active had a 55% lower risk of hip fracture.⁹⁰

VITAMIN D

Vitamin D works on the small intestine and the kidney. In the small intestine, vitamin D increases absorption of calcium. In the kidney, vitamin D increases the reabsorption of calcium. Thus, vitamin D increases the available calcium for the bones.

An 18-month study of women in their 80s revealed that the addition of 800 units of vitamin D to their diets increased their bone mass by 2.7% in just 18 months. What is more, they had 43% fewer hip fractures than expected.⁹¹

Sunlight is the natural source of vitamin D.⁹² Twenty minutes a day out in the sun with at least 25% of your skin exposed to the sun, without the use of sunblock, should be sufficient.

BANKING ON YOUR BONES: RECOMMENDATIONS FOR BONE HEALTH

1. Weight bearing exercise. Thirty minutes a day of weight bearing exercise such as walking, out in the open air and sunshine.
2. Reduce protein and grain consumption. Eat foods that will not produce acid that has to be buffered by calcium from the bones.
3. Choose to abandon the calcium thieves. Thieves include sugar, chocolate, salt, caffeine, alcohol, tobacco, sodas, chronic stress, and depression.
4. Get at least 20 minutes of sunshine a day on 25% of your body.

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5. Eat a plant-based diet rich in naturally occurring calcium. In one study increasing the intake of fruit and vegetables from 3.6 servings per day to 9.5 reduced calcium loss in the urine by 30%.⁹³ The biggest animals that walk our earth are vegetarian, and they have strong bones and teeth.

SO, WHAT SHOULD WE EAT?

An unrefined plant-based diet! The original diet!

Then God said, "I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food." "And you will eat the plants of the field."⁹⁴

What is more, God has promises for those who reach out to serve others.

"The Lord will guide you continually, and satisfy your soul in drought, and strengthen your bones; you shall be like a watered garden, and like a spring of water, whose waters do not fail."⁹⁵

Best wishes in your quest for stronger bones.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

“There was an epidemic of cholera in New York City about this time.

Sylvester Graham advertised in the newspapers for vegetarians and offered a reward for anybody that would bring forward a single case of a vegetarian who had the cholera. A brother told me yesterday that where he lived, there were one hundred cases of smallpox in the little town, but not a single vegetarian had the disease.”ⁱ

– Dr. J.H. Kellogg, M.D.

ⁱ General Conference of SDA. "General Conference Bulletin, vol. 4", 1901, p. 191, para. 2

CHAPTER 8

COVID, INFLUENZA, EBOLA, AND OTHER PANDEMICS: IS YOUR IMMUNE SYSTEM PREPARED?

Do your hands become clammy when you think about COVID? Are you afraid of losing your life because of COVID? When watching news and stories about COVID on social media, do you become nervous or anxious? These and other questions come from the newly developed Fear of COVID-19 Scale (FCV-19S) created just for this ominous pandemic and its aftermath.¹

With cases and deaths increasing every day, and an unprecedented worldwide media coverage, the COVID pandemic will always have a place in the annals of history.² And why shouldn't it? With all the other disasters threatening humanity, maybe we need to recognize the real nature of these events that seem to be competing for our attention. What are they trying to tell us? Luke tells us, "Then said he unto them, Nation shall rise against nation, and kingdom against kingdom: And great earthquakes shall be in divers places, and famines, and pestilences; and fearful sights and great signs shall there be from heaven. ...And then shall they see the Son of man coming in a cloud with power and great glory."³ Pestilence comes as a sign of the times, that Jesus is soon to return.

Of those seeking medical care for COVID-19: 98% complain of fever, 75% pneumonia, 70% fatigue, 70% are found to have lymphopenia (insufficient white cells to fight an infection),

60% dry cough, others have muscle and joint pain and even abdominal pain. Some people end up in the ICU, usually from Adult Respiratory Distress Syndrome (60%), cardiac arrhythmias (45%), circulatory failure and shock (30%), acute Cardiac injury, and/or acute kidney injury. The mean incubation period has been five days, but the range has been reported from 0–24 days.^{4,5}

"And great earthquakes shall be in divers places, and famines, and pestilences; and fearful sights and great signs shall there be from heaven."

How it is Coronavirus spread? Airborne droplets that reach the eyes, nose or mouth are its primarily mode of spread. It can also spread by touching contaminated surfaces and then touching one's face. The more viruses you are exposed to the higher is your risk of contracting the disease. Environmental precautions and personal protective equipment are designed to reduce the number of viruses to which you are exposed.⁶

Will a mask protect me? For health care workers exposed to infected patients, N95 respirators are recommended. For infected

Blue Print for Health and Healing

patients, surgical masks are recommended to help reduce viral spread.⁷ That said, masks do reduce blood oxygen levels, raise blood carbon dioxide levels, and can suppress the immune system.⁸

Once a pandemic has begun quarantine is not likely to be effective, efforts may focus on "social distancing." Social distancing includes measures to increase distance between individuals (6ft), staying home when ill unless seeking medical care, avoiding large gatherings, telecommuting, and closing schools.⁹

Once a pandemic virus has been identified, it will likely take 4-6 months to develop, test, and begin producing a vaccine. The supply of pandemic vaccine will be limited, particularly in the early stages of a pandemic. And while vaccines may or may not be helpful, vaccines are not a substitute for a good immune system.¹⁰ For example receiving measles, mumps and rubella (MMR) vaccination significantly increases the odds of acquiring chronic inflammatory arthritis.¹¹ Compared to receiving the common tetanus vaccine: receiving a hepatitis B vaccine increases the odds of acquiring multiple sclerosis by 420%, systemic lupus erythematosus by 810%, and rheumatoid arthritis by 1700%!¹² And if, peradventure you were vaccinated with a yearly flu vaccination recently, your odds of acquiring COVID are 36% higher.¹³

How does one prepare their immune system for exposure to COVID? (This information applies to many infectious diseases including influenza, smallpox, Ebola, etc.)

"When Lord Palmerston, Premier of England, was petitioned by the Scottish clergy to appoint a day of fasting and prayer to avert the cholera, he replied, in effect, "Cleanse and disinfect your streets and houses, promote cleanliness and health among the poor, and see that they are plentifully supplied with good food and raiment,

and employ right sanitary measures generally, and you will have no occasion to fast and pray. Nor will the Lord hear your prayers, while these, his preventives, remain unheeded."¹⁴

Rupert Blue, MD, surgeon general during 1918 flu suggested: avoid needless crowding; smother your coughs and sneezes; your nose not your mouth was made to breathe through; remember the three Cs, clean mouth, clean skin, and clean clothes; food will win the war, help by choosing and chewing your food well, wash your hands before eating, don't let the waste products of digestion accumulate; avoid tight clothing, tight shoes, tight gloves; seek to make nature your ally not your prisoner, and when the air is pure, breathe all of it you can—breathe deeply.¹⁵

Let me tell you about the best preventative measures, "Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power—these are the true remedies."¹⁶ It is in practicing these health virtues that a strong immune system is developed, and disease is averted.

Let us start by looking at how the body fights off a virus attack. When the virus reaches the lungs there is an initial exponential growth in the number of viruses. The first line of defense is your Natural Killer cells. When they go to war, as evidenced by a rise in interferon, the viral numbers drop off exponentially, but not to extinction. Before the infection is completely licked and the patient is out of the woods, B-cells must act their part, which is to produce viral specific IgA. If the immune system is strong and all the parts of it are working as they should be, the infection can be overcome. It should be our study then to determine what lifestyle factors influence the immune system.¹⁷

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FRESH AIR

The negative air ions found in fresh air activate natural killer cells and significantly reduce the number of disease-causing microbes in the air.¹⁸

In 1918, when the hospitals were full, overflow tents were set up on the lawns for extra patients. Guess who survived the 1918 flu the best: You guessed it, the people sleeping outdoors.¹⁹

“The H1N1 ‘Spanish flu’ outbreak of 1918–1919 was the most devastating pandemic on record, killing between 50 million and 100 million people. Should the next influenza pandemic prove equally virulent, there could be more than 300 million deaths globally. The conventional view is that little could have been done to prevent the H1N1 virus from spreading or to treat those infected; however, there is evidence to the contrary. Records from an “open-air” hospital in Boston, Massachusetts, suggest that some patients and staff were spared the worst of the outbreak. A combination of fresh air, sunlight, scrupulous standards of hygiene, and reusable face masks appears to have substantially reduced deaths among some patients and infections among medical staff.²⁰

It has been said “...there is health in the fragrance of the pine, the cedar, and the fir. And there are several other kinds of trees that have medicinal properties that are health-promoting.”²¹ It is of interest to note that pinecone extracts have been shown to suppress the growth of viruses in cells.²² Some people even use pine as essence oil for this reason.

Sage²³ and Juniper²⁴ essence oils have been shown to inhibit coronaviruses. Citrus has been shown to inhibit viruses.²⁵ Citrus essence oil has been recommended by some to reduce viruses in the air. Air quality can have an effect on your

susceptibility to disease. Respiratory virus infection and pneumonia are significantly increased in people who live in cities with high levels of ozone or sulphur dioxide pollution.²⁶ In one study, office workers showed significant declines in number and function of natural killer cells after their office was remodeled exposing them to formaldehyde, phenol and organic chlorohydrocarbons.²⁷ What’s more, mold exposure in water-damaged buildings reduces natural killer cells and initiates lung damaging inflammatory processes. Living in a home with mold problems increases the risk of respiratory symptoms and infections.²⁸

SUNLIGHT

In one study, exposure to natural sunlight one hour a day for 12 days, significantly increased circulating immune cells. The effect lasted for up to two weeks after the end of the experiment.²⁹

If you feel the warmth of the sun, you are boosting your intra-mitochondrial melatonin, decreasing your risk of COVID, by reducing cellular inflammation and cytokine storm.³⁰

It has been found that viruses can suppress the body’s ability to produce its antiviral interferon. Sunlight helps disable the viruses’ ability to suppress the production of interferon.³¹

Sunlight’s ultraviolet light is known to kill pathogens and it also kills viruses.³²

Vitamin D is a natural product of sunlight’s effect on cholesterol in the skin. This vitamin boosts the immune system for fighting the viruses. High vitamin D levels are associated with two thirds fewer COVID-19 infections, one

half as many cases that progress to become severe, and one third the death rate.³³

ABSTEMIOUSNESS

Abstemiousness or temperance involves the avoidance of things harmful and the moderate use of things that are considered good. Smokers are at 1-1/2 times higher risk of catching a respiratory tract infection and are 70% more likely to miss work because of the illness.³⁴ Chronic alcohol consumption has been shown to suppress the activity of natural killer cells.³⁵ What is more, alcohol and tobacco, when combined even in small amounts, even more significantly suppress natural killer cell activity.³⁶

Intemperance can involve both the amount and quality of food we eat. Obesity and overeating impair natural killer cells activity. Caloric restriction—eating less—has been shown to restore immune responsiveness in overweight individuals.³⁷ Dietary restriction to 60% of usual increases natural killer numbers fourfold and their activity twofold.³⁸ Increasing age is also associated with a predictable decline in immune function. Caloric restriction, while still maintaining nutrition, restores natural killer activity to that found in younger individuals.³⁹ Even judicious fasting can have a positive effect on the immune system for fighting infection.⁴⁰

Electromagnetic fields promote certain viruses to start growing and increase inflammation in your body making you more likely for you to catch COVID, and more likely that you will have a more severe case.^{41,42}

REST

Studies reveal that people who sleep well have significantly better immune function than people with insomnia.⁴³ To illustrate the effects

of missing your sleep, one study showed mice who got the flu vaccine but were sleep deprived contracted the flu as though they had never been immunized.⁴⁴ With the practice of good lifestyle habits your immune system is better prepared to protect you from disease.

Rest and relaxation also encompass mental and spiritual rejuvenation. According to researchers at the University of Wisconsin, meditation improves the immune response to Influenza vaccination.⁴⁵ Among those who observe the weekly rest according to the Bible, Seventh-day Adventists had higher plasma levels of the immune stimulating antioxidants. Among Seventh-day Adventists, consumption of a vegetarian diet was associated with an even higher increase in immune stimulating antioxidants.⁴⁶

EXERCISE

Recent studies reveal that patients who consistently meet the physical activity guidelines are 2-1/2 times less likely to die of COVID-19.⁴⁷

As individuals age, their immune systems decline. Being physically fit helps attenuate this decline. Natural killer cells respond positively to moderate exercise in both number and function. Over-fatigue increases the risk of upper respiratory tract infection, while regular moderate physical activity reduces the risk.⁴⁸ In one study moderate exercise was associated with a significant reduction in the risk of upper respiratory tract infection.⁴⁹

If one is to exercise in cold weather, proper clothing is essential. Sufficiently protecting the arms and legs from cold helps prevent inflammation and congestion of lungs and brain thus helping prevent viral illness.^{50,51,52} The clothing should fit comfortably without obstructing the circulation of the blood or

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natural respiration of the lungs. Clad in this way, we can take exercise in the open air, even in the dew of morning or evening, or after a fall of rain or snow, without fear of taking cold.^{53,54}

PROPER DIET

God gave us wonderful immune systems; one of our first considerations will be to avoid any food that could compromise this first line of defense.

In a study of dietary fat, eating the fat of a typical American diet caused a 50% reduction in natural killer cell activity. A high fat diet reduces natural killer activity by 79%, while a low-fat diet causes no reduction in natural killer cell activity.⁵⁵ Not all fats were created equal. For instance, a high cholesterol diet depresses natural killer cells to ¼ their usual activity.⁵⁶ Fish oil has been observed to impair immune function and it also delays the clearance of viruses from the lungs.⁵⁷

Milk, the baby food of cows, has drawbacks for the prevention of viral illness. Increased milk drinking results in decreased natural killer cell activity. What is more, tripling your milk protein intake can triple your risk of contracting cancer.⁵⁸

Many people complain of a “sweet tooth”. This may not be the trait of a viral illness survivor. Mice fed a diet containing sucrose (table sugar) had significantly lower immune cell responsiveness.⁵⁹ Sugar consumption weakens the ability of immune system to destroy pathogens. If a person eats no refined sugar or carbohydrate for 12 hours, each white blood cell can destroy 14 bacteria. When 24 teaspoons of sugar are consumed in a day, the white blood cells are so compromised that they can only destroy one bacterium each.⁶⁰

A high salt diet suppresses the white cell's infection fighting ability and leaves you more susceptible to a COVID attack.⁶¹

Observers of the Biblical weekly rest were found to have higher plasma levels of the immune stimulating antioxidants. Those who also consumed a vegetarian diet had even higher antioxidant levels.

High protein diets have also been shown to compromise the immune system. A diet comprised of 25% protein hampers natural killer cell function whereas a diet with only 5% of the calories coming from protein enhances natural killer activity.⁶² Soybeans are an excellent source of protein. Soy has strong antioxidant properties and is a potent immune stimulant that has shown benefits not only for respiratory tract infections, but also for cancer.⁶³

I had a friend in high school that put himself on a fresh fruit and vegetable diet. I talked to him not long ago and asked him about his diet. He said that in the last 25 years since being on this diet he has not had a cold, flu, or other respiratory tract infection even once. Science has born this out; fresh fruit and vegetables have been shown to be antibiotic, antiallergic, tumor-protective, anti-inflammatory and stimulating to the immune system.⁶⁴ What's more, people on plant-based diets have been shown to have significantly higher intakes of antioxidants than omnivores: 305% higher vitamin C, 247% higher vitamin A, 313% higher vitamin E, 120% more copper.⁶⁵ Compared with omnivores, people on a plant-based diet have significantly higher blood concentrations of: Beta-carotene, vitamin C, and vitamin E and

vegetarian's natural killer cell activity has been found to be twice that of omnivores.⁶⁶

“An apple a day keeps the doctor away?” Five or more apples per week actually improves lung function

Remember the old saying, “An apple a day keeps the doctor away?” Five or more apples per week actually improves lung function.⁶⁷ Apples contain phytochemicals which inhibit viruses.⁶⁸ One of these phytochemicals is quercetin. Quercetin has been shown to protect the lungs from damage by respiratory-tract infections. Quercetin is also found in, onions, green leafy vegetables, and beans.⁶⁹

Garlic has long been recognized as a potent immune stimulator. In one study garlic reduced respiratory tract infections by 63%.⁷⁰ It is reported that during the 1918 flu epidemic, 20 people in one area ate raw garlic daily with their meals; none of the 20 contracted the flu.⁷¹ It has been suggested that 3 to 5 cloves be eaten per day.

Grapes possess a phytochemical (resveratrol) that strongly inhibits the replication of viruses within cells and significantly improved survival of virus-infected mice.⁷²

A deficient diet with only 50% of the USRDA of vitamins has been shown to significantly depress natural killer activity.⁷³

Vitamin A deficiency reduces natural killer cell number and function especially in older adults.⁷⁴ Vitamin A deficiency also results in a loss of IgA producing cells.⁷⁵ Remember that IgA is critical for the eradication of viruses from the lungs. Vitamin A pills have not proven as helpful as just eating good food. Foods high in vitamin A are paprika, cayenne, sweet potato, carrots, kale, spinach, winter squash, cantaloupe, and broccoli.

Vitamin E is effective in helping the body reduce the number of viruses in the lungs. It also helps prevent the loss of appetite and weight loss associated with being sick with a virus. What's more, vitamin E helps lower the damaging inflammation in the lungs caused by tumor necrosis factor alpha.⁷⁶ It is usually the inflammation that starts the downward spiral that ends in death for some respiratory virus sufferers. Vitamin E pills have not proven as helpful as just eating good food. Foods high in vitamin E include sunflower seeds, almonds, flaxseed, wheat germ, olives, pine nuts, peanut butter, and ground cloves, just to name a few.

Vitamin C, popularized by Linus Pauline, is also helpful in prevention. Vitamin C actually increases lung macrophage function and helps reduce the number of viruses running around in the lungs.⁷⁷ Taken before or after the appearance of respiratory tract infection symptoms it can relieve or even prevent them.⁷⁸ Vitamin C is also a potent antioxidant that helps reduce damage in infected lungs preserving vital lung tissue.⁷⁹ Vitamin C is also best taken in the form of food. Foods high in vitamin C include strawberries, bell peppers, chives, red cabbage, broccoli, pineapple, oranges, lemons, kale, cauliflower, and peas. I like to juice half a lemon into my first morning glass of water.

Severe folate deficiency is associated with a 60% reduction in lymphocyte counts and significantly impaired natural killer cell function in one study.⁸⁰ Dietary changes or supplementation, but not both could reverse this effect.⁸¹ If a person was already on a Folate sufficient diet, taking folate pills only decreased their immune systems function. Foods high in Folate include arrowroot, wheat germ, peanuts, sunflower seeds, spinach, lentils, pinto beans, and parsley.

Selenium increases natural killer activity by 70% while protecting the lung tissues from

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inflammation.⁸² A diet high in selenium reduces covid-19 cases by 10 times!⁸³ Higher selenium levels improve COVID-19 survival rate.⁸⁴ Lower selenium levels increase the COVID-19 death rate.⁸⁵

Selenium is very important for recovery from a respiratory tract infection—infected lung tissues recover more quickly if you aren't deficient in this element.⁸⁶ Foods high in selenium include brazil nuts, mixed nuts, sesame seeds, wheat, sunflower seeds, and wheat germ.

Another nutrient necessary for both natural killer cell numbers and function is zinc.⁸⁷ High zinc levels reduce COVID-19 recovery time by 2/3. Patients low in zinc took, on average, 25 days to recover, whereas patients with sufficient zinc took only 8 days to recover.⁸⁸ Zinc balances immune responses, and has a proven direct antiviral action against some viruses. Foods high in zinc include wheat germ, pumpkin seeds, sesame seeds, wheat bran, pine nuts, wild rice, and cashews.

Does anyone have a penny? Antibody titers and natural killer-cell cytotoxicity were markedly suppressed in animals fed a copper deficient diet.⁸⁹ Copper is best obtained from Spirulina, seaweed, sesame seeds, soybeans, cashews, sunflower seeds, and mixed nuts; but not peanuts.

Magnesium-deficient animals exhibit dramatic elevations of inflammatory mediators that are responsible for the cytokine storm and hemorrhagic pneumonia from which people with pandemic viruses die.⁹⁰ You can obtain your magnesium from rice bran, wheat bran, pumpkin seeds, soybeans, flaxseed, Brazil nuts, sesame seeds and cashews.

Turmeric is widely used in India for the treatment of inflammation. It inhibits several cytokines responsible for lung damage in viral pneumonia.⁹¹ It is also an antioxidant through

modulation of glutathione levels in alveolar lung cells and it is a potent oxygen radical scavenger.⁹² It is also a good source of vitamin C.

Elderberry extract has been shown to have antiviral action.⁹³ When coronaviruses were treated with Elderberry, it reduced their numbers by 10⁻⁴.⁹⁴

Astragalus⁹⁵ and Licorice⁹⁶ exhibit anti-coronaviral activity. Astragalus stimulates the Natural Killer cells.⁹⁷ Chameleon plant—Houttuynia cordata—stimulates lymphocytes to fight Coronaviruses.⁹⁸ Chinese cedar—Toona sinensis Roem—has activity against viruses.⁹⁹ Echinacea purpurea, a plant originally used by Native Americans to treat respiratory infections, has been shown to increase natural killer cytotoxicity by nearly 100%.¹⁰⁰

Let's summarize the foods you may want to eat in preparation for the COVID pandemic. Important vegetables to eat would include garlic, onions, carrots, kale, spinach, and Broccoli. Fruits I would concentrate on are apples, strawberries, grapes, and citrus. Mixed nuts are very valuable; also make sure you get some Brazil and pine nuts. Seeds are also indispensable, have on hand some sunflower, sesame, and pumpkin seeds. Nuts and seeds are best eaten raw rather than roasted and salted. Other foods to concentrate on include soybeans, wheat germ and even turmeric.

Now just think, what have we been describing? The Bible diet! "Then God said, "I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food." "and you will eat the plants of the field."¹⁰¹ God has said, "If thou wilt diligently hearken to the voice of the Lord thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I

have brought upon the Egyptians: for I am the Lord that healeth thee.”¹⁰²

THE USE OF WATER

You cannot underestimate the value of proper hydration. Consequences of dehydration include constipation, urinary tract and respiratory infections, delirium, renal failure, electrolyte imbalance, hyperthermia, and longer time for wound healing just to name a few.¹⁰³

Turmeric is widely used in India for the treatment of inflammation. It inhibits several cytokines responsible for lung damage in viral pneumonia.

Other uses of water include bathing as well as hot and cold treatments. “Most persons would receive benefit from a cool or tepid bath every day; morning or evening. Instead of increasing the liability to take cold, a bath, properly taken, fortifies against cold.”¹⁰⁴ Taking a cool bath (64°F) before going out in cold weather stimulates the immune system. It augments white blood cell response to cold exposure and increases natural killer cell activity.¹⁰⁵ The way I practice this particular bit of scientific information is to do alternating hot and cold treatments. If I feel the onset of a cold, flu, or other respiratory tract infection I head for the shower. I set the faucet as hot as I can stand and shower until I feel my internal temperature rise. I learned to detect this rise by actually testing my temperature a couple of times till I could correlate the temperature with what I was feeling. When the desired small rise in body temperature is achieved, I then switch to cold, as cold as possible, for one minute. I then repeat the process one or two more times and then

jump in bed for about one-half hour. This is usually sufficient to stop dead in its tracks any intruder from the virus family. Ending every bath or shower with cold is an excellent preventative measure and is stimulating to the immune system.

Just an aside, another good measure at the very onset of a cold is the use of charcoal. Charcoal binds viruses.¹⁰⁶ It also reduces inflammation by adsorbing excess inflammatory mediators.¹⁰⁷ Drink one to two teaspoons of activated charcoal powder in one glass of water. Sip it slowly and let it coat your throat. This can be repeated every two to four hours as symptoms persist.

TRUST IN DIVINE POWER

The relation between health and spirituality has only recently come to light. Religiosity or spirituality has been shown to increase the function of the immune system.¹⁰⁸

Charcoal binds viruses. It also reduces inflammation by absorbing excess inflammatory mediators.

Trusting in Divine power leads to better mental health that helps boost the immune system. Depression is reliably associated with reduction of natural killer activity and a suppression of lymphocyte proliferation¹⁰⁹ both of which could spell trouble in a pandemic. Loneliness is also associated with poorer immune responses. People with high levels of loneliness and a small social network have the lowest immune activity. Loneliness is also associated with elevations in cortisol, an immunosuppressant hormone.¹¹⁰ Depression is a bad enough suppressor of the immune system

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by itself, add to that alcoholism and the two suppress natural killer function even further.¹¹¹

One of the benefits of trusting God is that the problems of living that usually are the source of stress are now His problems. Increases in stress hormones result in decreased natural killer cell activity and IgA levels,¹¹² consequently the number of respiratory infections increases with increasing psychological stress.¹¹³ Stress that we hang on to ourselves usually drives us to exasperation and anger. A single five-minute experience of anger can significantly reduce IgA levels for up to five hours.¹¹⁴ A lack of a sense of humor, worrying about daily problems and experience negative emotions can also significantly decrease IgA levels.¹¹⁵

Trusting in Divine power will lead one to a life of service to others. In a study of individuals who serve others, mortality was significantly reduced for those who provided support to friends, relatives, neighbors, and their spouse. Receiving support had no effect on mortality.¹¹⁶ In one study, people who volunteered more had 63% less mortality than those who volunteered the least. Any amount of volunteering reduced mortality by 60% even among weekly attendees at religious services.¹¹⁷ We've always known that "It is more blessed to give than to receive." Acts 20:35

SUMMARY

- Use sanitary precautions to reduce exposure to the COVID virus.
- Be prepared in case of national shortages of essential supplies and services.
- Vaccines and antivirals may be of limited supply and of limited efficacy. Do all you can to boost your immune system.
- Eat a nutritious balanced diet. Be sure to eat a variety of nutritious foods, including plenty of vegetables, fruits, beans, nuts, seeds and whole grain products.
- Go easy on salt, sugar, alcohol, cholesterol, and saturated fat.
- Drink lots of water.
- Exercise on a regular basis in the open air and sunshine.
- Get plenty of rest.
- And, by all means, keep the communication open with your heavenly Father.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

“The salads are prepared with oil and vinegar, fermentation takes place in the stomach, and the food does not digest, but decays or putrefies; as a consequence, the blood is not nourished, but becomes filled with impurities, and liver and kidney difficulties appear.”ⁱ

– E. G. White

ⁱ White, E. G. (1938). Counsels on Diet and Foods. Washington, D.C.: Review and Herald Publishing Association. p. 345.

CHAPTER 9

NATURAL KIDNEY HEALTH

People have been asking about failing kidneys and natural ways to stay off of dialysis. The Lord has given us good success using natural remedies, when used in accordance with His will, supernatural results have been seen.

HERE'S ONE STORY

"We have a special, real, true miracle to share with you that happened here recently. There was a gentleman that was dying in ICU. He was a diabetic of 30 plus years and had a complication with a foot infection and his kidneys had gone into complete failure. For a time, everyone thought he was going to die and at one point, he too wanted to die. But the Lord worked a miracle. The Lord impressed John (Dr. Clark) to go visit him after they released him from the hospital on dialysis for (what they said would be) the rest of his life. When John visited the gentleman and his wife, they were willing to try things differently, following health principles outlined in books such as Ministry of Healing, Counsels on Diets and Foods, and Healthful Living. The gentleman began to do all that John laid out for him which included charcoal poultices over his kidneys and his infected/ulcerated foot, a major change in his diet, drinking much more water, exercising and other things. Within several weeks his foot ulcer/infection healed up, he was taken completely off dialysis, and he was no longer on

ANY medication for diabetes—his blood sugars being completely in the normal range. To all (the gentleman, his wife, their family, the church members, the physicians treating him, and other patients that knew him) it was completely a miracle. He lost around 45 pounds over several months. It was a real blessing to our hearts to see his life spared and his health turn around so dramatically for the better. He is still very weak and struggles to push himself to exercise to regain his muscles and strength back, but he knows that the health message given by God is true. He is a different man and is now witnessing about health everywhere he goes. Isn't that wonderful?" (Northern Lights Health Education Newsletter July 2013 www.NorthernLightsHealthEducation.com).

Within several weeks his foot ulcer/infection healed up, he was taken completely off dialysis and he was no longer on ANY medication for diabetes: his blood sugars being completely in the normal range.

You must be aware that kidneys are delicate organs that respond well to temperate measures. Perfect health depends on perfect circulation.

About 15% of US adults suffer chronic kidney disease; 554,038 patients undergo dialysis

several times a week.¹ Chronic kidney disease is loss of kidney function. The most common causes are poor lifestyle choices leading to high blood pressure, chronic glomerulonephritis (kidney damage), high blood sugar (diabetes), drug side effects, polycystic kidney disease, locked urinary tract, and kidney infection.²

WATER

Drinking pure water is essential. In normal situations 8 to 10 glasses a day provide good cleansing for the kidneys. This may have to be modified if kidney function is too poor, but we advocate more water than some.^{3,4,5} Water is a safe natural diuretic.⁶ The kidneys would rather be filtering blood that is like water than dehydrated blood that is like thick mud.^{7,8} Besides not drinking enough water, another way people make mud in their blood stream is by consuming their meals as liquid, in preparations like smoothies, soups, and juices. Liquid meals should be avoided, they only make more work for the kidneys. No liquid should be taken with the meals, as this also makes mud. Water should be taken at least 30 minutes before meals and no sooner than 2 hours after. On a kidney recovery program, I have people start the day with one quart of warm water. It is good to squeeze the juice of one lemon⁹ into this first quart of water of the day and drink it at least 30 minutes before breakfast (preferably when first arising from bed). After drinking the water, it is good to take a ten-to-fifteen-minute walk outdoors. Avoid caffeine-containing beverages including teas; these only decrease blood flow to the kidneys.¹⁰ For people who retain reasonable kidney function I recommend 3 quarts of water a day, one upon rising (with lemon in it), one 2 hours after breakfast (with a little charcoal powder mixed in it), and one 2 hours after lunch (never cold, but lukewarm).

For people with poorer kidney function I decrease the after-meal quantities as appropriate.

Water is a safe natural diuretic.
The kidneys would rather be filtering blood that is like water than dehydrated blood that is like thick mud.

DIET

The best diet for kidney health consists of fruits, grains, nuts, and vegetables.^{11,12} I recommend around 80% of your diet consisting of fresh fruit or fresh vegetables (fresh, not cooked food) for kidney restoration.¹³

Whole ripe olives provide nutrients that are most beneficial to the kidneys^{14,15} but not olive oil. All oils, butters, margarines or oil-based dressings, only thicken the blood and decrease its ability to carry oxygen to the kidneys^{16,17}.

Fiber, especially soluble fiber, as found in oat and barley bran are extremely helpful.^{18,19,20} It is recommended that someone desiring to improve the health of their kidneys take at least ½ cup of oat bran or similar fiber each day. It can be cooked, added to another food or eaten raw, for example, with soymilk or oatmeal etc.

Charcoal is an excellent supplement for reducing the burden upon kidneys as it adsorbs substances otherwise dependent upon the kidneys for removal from the body.^{21 22 23} One teaspoon of activated charcoal powder can be mixed and drank in one cup of water and this can be repeated two to three times a day. Alternatively, charcoal capsules, 2 or more, taken three times a day, can be helpful. One good plan is to see how much charcoal you can consume while still avoiding constipation. I have

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had some people take 3 teaspoons of charcoal powder in a quart of water together with one teaspoon of psyllium²⁴ husk powder to maintain stool softness with success.

Avoid all animal products! (Milk, eggs, cream, yogurt, flesh of fowl or beast). Consumption of animal protein reduces kidney function almost immediately and causes progressively permanent deterioration of function over time.^{25,26} Animal protein, especially cheese, increases the acid load that kidneys have to process, and also increases kidney damage.^{27,28} If you have any desire to maintain current kidney function or see improvements in kidney function, animal protein of all descriptions will not benefit you. Vegetable protein sources can be beneficial, even soy.²⁹ A switch from dairy to soy can: restored kidney function, improved insulin sensitivity, and lower blood pressure.³⁰

To preserve kidney function never eat inflammatory foods.^{31,32} Inflammatory foods include anything created by fermenting, rotting, spoiling, aging, processing, refining, or frying. Examples include, but are not limited to vinegar, cheese, soy sauce, chocolate, vanilla, tempe, meso, yogurt, sour cream, sauerkraut, pickles, and mushrooms. No vinegar whatsoever! No sodas,^{33,34} or refined fructose^{35,36} containing products whatsoever; even Agave is dangerous.³⁷ No refined sugar or sweets.³⁸ It is imperative that you learn to read the ingredients on food labels. Fried foods fry the kidneys.³⁹ Refined oils, such as cooking oil, lard,⁴⁰ butter and margarine damage the kidneys.^{41,42,43} Kidneys recover better on a low salt diet.⁴⁴

Eating less food⁴⁵ (i.e., fewer calories, fasting⁴⁶ one day a week, is very helpful and skipping the evening meal is also very helpful. Two meals a day is best.) and losing weight⁴⁷ also are indispensable to kidney preservation and health. Being overweight increases the

damage to your kidneys.^{48,49,50} Weight loss decreases dangerous visceral fat lipid peroxidation.^{51,52} Weight loss improves kidney function in obesity.^{53,54}

To preserve kidney function never eat inflammatory foods. Inflammatory foods include anything created by fermenting, rotting, spoiling, aging, processing, refining, or frying.

Foods that help urine production include artichoke, celery, eggplant, cauliflower, asparagus, green beans, apples, peaches, cantaloupe, pears, watermelon, grapes, onions, chives, and leeks. Also helpful for kidney disease are squash, chestnuts, dates, potatoes, and sweet corn (non-GMO)⁵⁵. All in all, eating a diet consisting of 80% fresh fruit or vegetables is best for kidney restoration.

DRUGS AND TOXINS

Anti-inflammatory pills^{56,57} (Motrin, Naprosyn, aspirin, etc.) or acetaminophen^{58,59} (Tylenol) destroy kidney function and even baby aspirin⁶⁰ is a hazard. Ever notice a change in the color of your urine after taking supplement pills? Most supplements,⁶¹ especially vitamins, are unhelpful because they only put an extra burden on the kidneys.

Avoid exposure to toxic substances, such as diesel fumes,⁶² chemicals such as glyphosate herbicide (Roundup),⁶³ heavy metals, industrial chemicals, elevated ambient temperatures, and infections.⁶⁴ Foods with them most glyphosate include pizza, wheat flour, crackers, pasta, oats, chick peas, and lentils.⁶⁵ Of particular importance is the assessment for the presence of mold/mildew in your environment. Mold/mildew exposure causes kidney

failure.^{66,67,68} Genetically modified foods (GMO) are a detriment to kidney health.⁶⁹

If you drink more than 2 alcoholic beverages per day, your risk of kidney failure increases 4-fold.⁷⁰

Avoid exposure to toxic substances, such as diesel fumes, chemicals such as glyphosate herbicide (Roundup)

TEA

Certain herbal teas can be beneficial. Dandelion tea, for example, helps with urine production⁷¹ and reduces inflammation.⁷² A good plan is to drink one cup of Dandelion tea one-half hour before eating both breakfast and lunch.

CLOTHING

Avoid tight bands around the abdomen, (elastics and belts) as these affect circulation to the abdomen and kidneys.⁷³ Clothe all parts of your body (head, arms, ankles, and especially legs, etc.) evenly and adequately, especially in cold weather.⁷⁴ Perfect health depends on perfect circulation.

OUTDOOR EXERCISE

Get active exercise^{75,76} in the open air, involving all your limbs. Get fresh air, even when indoors, open windows for ventilation, especially at night. Walking after every meal for 10-15 minutes improves circulation. People who lay around (as in hospital beds)⁷⁷ have their kidneys shut down whereas activity stimulates kidney function.^{78,79,80} Gardening is a most excellent exercise for health. Sweating is helpful

to remove toxins otherwise dependent upon good kidney function for removal. For this reason, saunas can be helpful.^{81,82}

Sunshine and Vitamin D are beneficial to kidney function and slow its decline in kidney failure.⁸³

Not getting enough sleep increases the risk of kidney failure by 80%.⁸⁴ Melatonin, increased by a good night's sleep, is also critical to kidney health.⁸⁵

BATHING

Bathe regularly and do thorough skin-scrubbing to open up the pores of the skin.⁸⁶ The bath is a soother of the nerves. It promotes general perspiration, quickens the circulation, overcomes obstructions in the system, and acts beneficially on the kidneys and urinary organs. In scientific studies a bath led to a significant increase of urine flow.^{87,88}

We recommend charcoal poultices over the kidneys at night for toxin removal while you are seeking to restore kidney function. This will eliminate toxins otherwise dependent upon the kidneys for removal from the body.

CHARCOAL POULTICES

We recommend charcoal poultices over the kidneys at night for toxin removal while you are seeking to restore kidney function. Our procedure is to take two 1-quart freezer bags. Put ½ cup of activated charcoal powder into each bag. Then add 2 teaspoons of psyllium husk powder to each bag. Close the bag and shake until well mixed. Add 1 cup (or 240ml) of water to each bag. Close bag and knead it until it is well

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mixed and of a “playdough” consistency. Using a rolling pin, roll the charcoal “playdough” out while still in the bag to an even thickness. Cut the bag along its seam and peel off one side of the plastic bag. Place the charcoal poultices one over each kidney on the mid back and wrap the person’s trunk with plastic wrap such as Glad “Press and Seal.” Secure the poultices in place with a form fitting garment or large elastic bandage or “Ace wrap.” Leave these on all night and remove them in the morning. The next night, turn the poultices over and use the other side. Peel off the plastic freezer bag from the remaining side and apply as before. You can make a lot of these and store them in a freezer for future use.

HYDROTHERAPY

Hydrotherapy is beneficial at restoring circulation.⁸⁹ Twice a day you can apply the following: We like to use hot water bottles and ice packs. Fill two hot water bottles with hot water and apply the hot water bottles to the kidneys on the mid back for 3 minutes. Then remove the hot water bottles and apply the ice packs for 1 minute to the same area. Repeat this process 7 times and end with cold, then have the person lay down and rest for 20 minutes to finish the treatment. This stimulates kidney function.

KIDNEY FAILURE REVERSED

“I would like to share with you the great blessing the Lord has done in my brother’s health with regard to his kidneys. I thank God for answered prayers. Dr. Clark, the Lord blessed

the diet regime you so kindly recommended for my brother. He has been following the diet faithfully and that in itself is a miracle. They did another test of his blood and this time also the urine. The results that came back last week said “I have good news for you!” The creatinine had been 3.31 and kidney function 20% the first time, which you might recall. Well, the second results showed a creatinine level of 1.12 and kidney function at 54% and another result showed 74%! A miracle of God! Dr. Clark, I want to thank you so much for your help which is always given with faith in the Lord.” L.B. from Needles, CA. (Northern Lights Health Education Newsletter Spring 2012 www.NorthernLightsHealthEducation.com).

We have had people with fifteen percent kidney function return to seventy-five percent function in a matter of 6 weeks following the above recommendations.

TO SUMMARIZE:

- Eat natural foods as grown.
- Avoid animal protein, fats, alcohol, caffeine, and fermented or refined foods.
- Avoid drugs and supplements.
- Drink plenty of water, not liquid meals.
- Exercise in the open air and sunshine.
- Get plenty of sleep.
- Let God be your healer!

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, “How Can I Apply Healthy Principles in My Daily Life”.

“You are not to breathe with your lungs, nor to talk with your throat. The abdominal muscles are to be used to breathe with and to talk with. The lungs are not to be active, but passive; they are not to act, but to be acted upon by the machinery which is to be kept in motion by the exercise of the abdominal muscles. So, likewise, with the throat; it is not to be the organ, but only “the channel, of communication.” The exercise of the muscles of the abdomen, causing contraction of the lungs, forces the air through the throat over the vocal cords, and thus creates the tones; then the tongue, teeth, and lips cut the tones into words, and thus speech is formed. Therefore, do not breathe with the lungs, and do not talk with the throat. Breathe with the abdominal muscles, and talk with the abdominal muscles and then mouth.”ⁱ

- A.T. Jones

ⁱ Jones, A. T. "The Home Missionary, vol. 5", 1893, p. 260, para. 8. {HOMI December 1893, p. 260.8}.

CHAPTER 10

LUNG HEALTH: BREATHING EASIER!

He could not walk across the room without gasping for breath, even on supplemental oxygen, which he carried with him everywhere he went. I'll refer to him as Ted. Ted was a diabetic, a smoker with chronic obstructive pulmonary disease (COPD), and additionally he had suffered a massive heart attack that left him in disabling heart failure. The doctors sent Ted home on oxygen with little hope for recovery. I was asked to see Ted by his concerned friends. My approach was to assign lifestyle interventions for Ted designed to reverse and remedy his illnesses and limitations based on what we call the eight natural remedies; "Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power—these are the true remedies."¹ In this article I want to share with you the basis for the advice I gave Ted and the results he experienced.

How important are your lungs? You eat two or three times a day, you drink water four or five times a day, but you breathe as many as 25,000 times a day.

Did you know this? "The power of God is manifested in the beating of the heart, in the action of the lungs, and in the living currents that circulate through the thousand different

channels of the body. We are indebted to Him for every moment of existence, and for all the comforts of life. The powers and abilities that elevate man above the lower creation, are the endowment of the Creator."²

HOW IMPORTANT ARE YOUR LUNGS?

You eat two or three times a day, you drink water four or five times a day, but you breathe as many as 25,000 times a day. Just try holding your breath for a minute or two and your body cries out for air. We like good food, we like clean water, but what about pure fresh vitalizing air?

Your lungs give you access to the atmosphere all around you. Without lungs you cannot obtain the oxygen every cell in your body needs. With your lungs, you interface with the outside world. The lungs are designed by God to provide a buffer of protection from harmful things in your environment. Your immune system is very active in your lungs for this purpose.

MORNING WALK

Walking in the fresh morning air is especially important. It is healthier to walk out in the country than in the city.³ Having one's window open at night is especially important.⁴ Keeping windows open during the day for fresh air is important.⁵ In 1918, when the Spanish Influenza was going around, much as coronavirus is going

around these days, the patients who could not secure a hospital bed were accommodated with tents out on the hospital lawn. Guess who survived the 1918 Spanish Influenza the best? You guessed it, the people out in the fresh air. For more on prevent and treatment of viral lung diseases, such as coronavirus, see the chapter on pandemic prevention and treatment.

GASSING YOUR LUNGS

Avoid cooking indoors with gas⁶ or kerosene as this hastens lung demise.⁷ Even burning candles indoors negatively affects the lungs.⁸ Avoid all contact with mold/mildew as it increases lung diseases by 62%!⁹ Mold exposure in water-damaged buildings reduces natural killer cells, which fight diseases like the flu, and initiates lung-damaging inflammatory processes. Living in a home with mold (mildew) problems increases the risk of respiratory symptoms and infections.¹⁰ I have literally felt my lungs burning when breathing air in a building infected with mold. Freedom from air pollution is important for lung health.¹¹ Houseplants can help reduce indoor air pollutants.¹²

FOOD FOR THE LUNGS

You are made up of what you eat. What you eat affects the health of your lungs. You may have heard it said, “An apple a day keeps the doctor away”. It may surprise you to learn that people following this advice actually breathe 138 milliliters more of air with every breath.¹³ What’s more, God has endowed apples with critical phytochemicals found to help the immune system of your lungs to fight infections caused by viruses.¹⁴ Other delicious foods that improve the immune system in your lungs

include: grapes,¹⁵ onions, ¹⁶ garlic,¹⁷ eggplant,¹⁸ and asparagus.¹⁹

“An apple a day keeps the doctor away.” It may surprise you to learn that people following this advice actually breathe 138 milliliters more of air with every breath

Pineapple is also helpful for the lungs because it is high in vitamin C, and it contains a very good phytochemical called bromelain. Bromelain is anti-inflammatory and helps break down fibrosis.^{20,21,22,23} In general, a diet of 80% fresh fruits and vegetables is very beneficial for lung patients.²⁴

Now, while there are foods beneficial for the lungs, others can be detrimental to lung oxygen exchange. It would be well to avoid free oils because they work against the lungs by lowering blood oxygen levels²⁵ and increasing inflammation.²⁶ What’s more, it takes more oxygen from the lungs to digest fats than to digest complex carbohydrates.²⁷ Oils are especially hazardous to lung function when used in frying because frying increases histamines in the food.²⁸ Histamines trigger asthma and other lung disorders. For this and other reasons cheese is also especially bad for the lungs.²⁹ It is high fat, fermented, and it has histamines. An asthma patient of 15year duration called me one day, and while I did give them many of the pointers found in this article, the one that stuck out most in their mind was the advice to abstain from fermented dairy, especially cheese. In one week, abstinence from cheese (which had been a major part of their diet) had made all the difference in the world. In fact, within one day of stopping the consumption of cheese, their symptoms had markedly improved.

Lung Health: Breathing Easier!

For those of you who are prone to reach for the saltshaker at every meal, be aware that a high salt intake reduces tissue oxygenation and increases inflammation thus compromising lung efficiency.^{30,31}

Fermented foods increase lung-compromising inflammation.³² You can look at our previous articles on fermented foods. Some examples of harmful fermented foods are coffee, chocolate, soy sauce, vanilla, brown rice syrup, cheese, wine, and vinegar.³³ Also, please see the chapter on autoimmune disease for inflammation issues.

NO SMOKING

Tobacco, in any form, is a top lung enemy.^{34,35,36,37} Smoking marijuana also poses a serious lung health risk.³⁸

People who are more active have better pulmonary function compared to sedentary people.³⁹ Sitting around all the time compromises your lungs. On the other hand, getting active improves your lungs.⁴⁰ An upright posture is also a benefit to improved lung function.⁴¹

Walking is the best exercise. Frequent brisk walks throughout the day are more effective than one long walk.

LUNG EXERCISES

Walking is the best exercise. Frequent brisk walks throughout the day are more effective than one long walk.⁴² Helpful breathing exercises can be performed while walking. One must train themselves to breathe deeply and correctly. Shallow breathing results in toxins not being removed from the body through the lungs.⁴³ People are more likely to breathe

correctly, using their diaphragm as opposed to breathing with their shoulders while walking.⁴⁴ When you speak, it is very important to use your diaphragm and not your shoulders for support of your voice.

I counsel people to count their steps (paces) and breathe in time with their steps. The process goes like this: walk while counting your steps as you inhale (breathe in). For example, maybe your first breath takes four steps (strides, paces) to complete. The exercise would go like this: inhale over those four steps, hold the breath for two steps and then exhale (breathe out) slowly for the next four steps. Repeat this process a few times and then try to increase the inhalation to cover five steps, and the exhalation to cover five steps. Repeat this a few times and then try to increase the number of steps over which a breath is taken in and then blown out. This is what singers do to expand lung function so they can hold out the long notes. This is what mountaineers, training to climb Mount Everest have done to improve lung capacity, in order to reduce the need to carry oxygen to high elevations. This exercise can be done every time a person walks.⁴⁵ The more beneficial times to walk are in the morning, first thing upon rising,^{46,47} and after each meal.⁴⁸ Better yet, for fastest results, walk every 1 to 2 hours during the waking hours. Walking in nature⁴⁹ improves lung function compared to walking in city streets.⁵⁰

DRESSING FOR LUNG HEALTH

Clothing is important. Clothing should not have any tight bands, especially around the chest⁵¹ or abdomen (bra's, belts, and waistbands). Clothing should be warm, especially of the arms and legs. If one is to exercise in cold weather, proper clothing is essential. Sufficiently protecting the arms and

legs from cold helps prevent inflammation and congestion of lungs and brain thus helping prevent lung influenza.^{52,53,54} Cold blood returning from cold arms that are not as well clothed as is the chest (trunk) inflames the lungs. Correct breathing is breathing from the diaphragm, not the shoulders.

IDEAL LUNG WEIGHT

Being overweight has a downside. Obesity (35+ lbs/16+kg over your ideal body weight) decreases tissue oxygenation, putting extra burden on the lungs.⁵⁵ Obesity is also a risk factor for obstructive apnea, a breathing disorder during sleep.⁵⁶

WATER AND YOUR LUNGS

Your lungs need good hydration. It is recommended to drink 3 quarts (liters) of water a day;^{57,58} one upon rising, taken warm with some fresh-squeezed lemon juice in it, one mid-morning, and one mid to late afternoon.

Direct sunlight on the chest is a good practice for people working up to a total of 20 to 30 minutes of sun exposure each day.

For some lung conditions and diseases, breathing water vapor from a boiling pot (steam) can be helpful. Breathing steam this way moistens the lungs, mobilizes secretions, and improves lung health⁵⁹ (always take care not to burn yourself).

Sunlight provides lung benefits.⁶⁰ Direct sunlight on the chest is a good practice for people; working up to a total of 20 to 30 minutes of sun exposure each day.

For lung health and total health, it is best to get 8 hours of sleep each night. It is also best to get it early in the night, starting around 9:00 pm.^{61,62} This improves your body's antioxidants and recovery from the day's activities.

Trust in divine power is a must. Pray for strength to change to a better lifestyle and claim promises such as, "seeing He giveth to all life, and breath, and all things;"⁶³

(Ted), the gentleman who was sent home on oxygen by his doctors, took my advice based on the above information – he took it as his last hope of life. He walked and breathed faithfully. He ate the best foods. He spent time outdoors. In 2 months time, Ted went from a man that was out of breath from walking across a room to a man walking one and a half miles a day. His diabetes and hypertension improved, and his doctors began taking him off medications and lowering his administered oxygen. His mind, darkened by illness, became clear and he enjoyed conversations and deep study of the Bible. The last time I saw a picture of him, he was on the cover of an advertisement for a program to improve people's health.

Lungs can definitely be improved with a natural approach using the eight natural remedies. We have seen pulmonary cripples totally recover.

"The mechanism of the human body cannot be fully understood; it presents mysteries that baffle the most intelligent. It is not as the result of a mechanism, which, once set in motion, continues its work, that the pulse beats and breath follows breath. In God we live and move and have our being. The beating heart, the throbbing pulse, every nerve and muscle in the living organism, is kept in order and activity by the power of an ever-present God."⁶⁴

Lung Health: Breathing Easier!

IF YOU WANT GOOD LUNG FUNCTION:

- Breathe fresh, clean, outdoor air as much as you can.
- Adjust your diet to support good lung function.
- Maintain a high level of physical activity outdoors in the fresh air and sunshine.
- Do breathing exercises that will help your lungs.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

“Our Creator has formed the limbs with large veins and vessels to contain a large proportion of blood, that the limbs may be sufficiently nourished and proportionately warm with other portions of the body. But fashion robs the limbs of coverings, and the life current is chilled from its natural channel and thrown back upon its internal organs. The many coverings over the chest and lungs induce the blood to these parts, and the animal heat thus retained weakens and debilitates these delicate organs, causing congestion and inflammation. The head, lungs, heart, liver, and kidneys have too much blood, while the limbs have not enough for warmth and proper development. The result is, the blood-vessels in the limbs contract because they are not filled and cannot contain the due proportion of blood which nature designed they should, and they are always chilly.”ⁱ

—E. G. White

ⁱ White, E. G. (1877, January 1). “Proper Dress.” *The Health Reformer*. {HR January 1, 1877, par. 7}.

CHAPTER 11

NATURAL THYROID HEALTH

Connie's obstetrician was adamant, Connie must go on thyroid replacement medications or else she and her unborn baby would suffer significant long-term health consequences. Connie's thyroid hormone levels were far below normal, and she felt really tired and slow. As Connie thought about it and did some research she felt very uncomfortable with what she was learning about thyroid medication side effects, which she could anticipate would negatively impact her and her unborn child. Connie started looking for alternatives. We will come back to Connie and what become of her.

A lot of people suffer from thyroid disease and don't realize it. Knowing when you have it and what to do about it can be a life renewing experience.

LIFESTYLE CHOICES MAKE THE DIFFERENCE

Thyroid disease is largely caused by poor lifestyle choices. Most people with thyroid disease can recover with simple lifestyle changes and natural remedies. God works with natural remedies to bring about healing and restoration of health.

In this article we want to discuss how your thyroid functions. We want to take a look at things that can compromise the function of your thyroid; competitors, inhibitors, and toxins. We will finally consider some beneficial lifestyle choices that can make a difference in thyroid health and simple home remedies to aid in thyroid recovery and restoration.

An estimated 20 million Americans have some form of thyroid disease. Women are five to eight times more likely than men to have thyroid problems. One woman in eight will develop a thyroid disorder during her lifetime.¹

The thyroid's job is to make thyroid Hormones. Thyroid hormones affect every cell in and organ of your body. They regulate the rate at which calories are burned, affecting weight loss or weight gain. They can slow down or speed up the heartbeat. They can raise or lower body temperature. They influence the rate at which food moves through the digestive tract. They control the way muscles contract. And they control the rate at which dying cells are replaced.²

In the thyroid gland hormones are made when iodine is added to tyrosine residues in thyroglobulin to make T4 and T3. When thyroid hormone is released from the thyroid as T4 it requires selenium, iron, and zinc to change it to the active thyroid hormone form, T3. Once the active thyroid hormone form (T3) is in the blood stream, omega-3 fatty acids help facilitate its movement into the cells.³ Magnesium and zinc are also necessary to help in stabilizing thyroid. Deficiencies in any of these nutrients could result in thyroid dysfunction.

Two autoimmune conditions commonly affect the thyroid. The first is Graves' Disease, where auto-antibodies actually stimulate the thyroid to produce excess thyroid hormone resulting in hyperthyroidism. The other is Hashimoto's thyroiditis in which anti-thyroid antibodies actually end up destroying or inhibiting thyroid function resulting in too little thyroid hormone being produced, this condition is called hypothyroidism.

Signs and symptoms of hypothyroidism may include fatigue, increased sensitivity to cold, constipation, dry skin, weight gain, puffy face, hoarseness, muscle weakness, elevated blood cholesterol levels, muscle aches, tenderness and stiffness, pain, stiffness or swelling in your joints, heavier than normal or irregular menstrual periods, thinning hair, slowed heart rate, depression, impaired memory, and/or enlarged thyroid gland (goiter).⁴

WHAT CAUSES THYROID DYSFUNCTION?

Believe it or not, meat eating tops the list, especially red meat, because it significantly increases the risk of autoimmune thyroiditis (Grave's/Hashimoto's).⁵ You may realize that meat eating goes hand in hand with a high total serum cholesterol. A high total serum cholesterol level suppresses the thyroid's function.⁶ It is the fat and cholesterol in the meat that raises the cholesterol in your body. This dietary fat from meat increases the risk of thyroid dysfunction by 55%.⁷ That said, Omega-3 polyunsaturated vegetable fats are beneficial to the thyroid cells.⁸ This reminds me, God has weighed in on the animal fat issue, in Leviticus 7:23 He says, "Speak unto the children of Israel, saying, Ye shall eat no manner of fat, of ox, or of sheep, or of goat." So, you may be thinking, if I don't eat animals, what would I eat? For good thyroid health, studies reveal that: exclusion of all animal foods is associated with half as much thyroid dysfunction as compared with omnivorous diets."⁹

Other foods harmful to vibrant thyroid health include sugars/sweets¹⁰ and white flour products.^{11,12} Sugar is a very inflammatory food and increases the inflammation in the thyroid, which in turn compromises its function. This may seriously challenge your sweet tooth, but a little self-denial on this issue could just pay off in better thyroid health. The eating of refined carbohydrates—sugars, sweets, white flour, and white rice products—results in a low antioxidant status and the accumulation of advanced glycation end products (sugar coated proteins), which, in turn, leads to autoimmune thyroiditis.¹³ Having said that, it may be becoming obvious that diabetes is not a friend to good thyroid function. Diabetes significantly increases the risk of hypothyroidism. The high blood insulin levels in diabetes destroys the thyroid gland. On the other hand, Hypothyroidism decreases insulin secretion increasing the risk of diabetes.^{14,15,16,17,18,19} What's more, consumption of refined cereal products (refined carbohydrates) compromises thyroid function,²⁰ and doubles the risk of thyroid cancer,²¹ and nobody wants thyroid cancer.

You may be thinking that the answer is artificial sweeteners, but let me caution you right here, artificial sweeteners, such as Aspartame, increase the risk of autoimmune thyroiditis too.²²

Studies show that if you replace all the refined carbohydrate foods in your diet with whole grains and vegetables, it will have positive effects on your thyroid function.²³ Some of this improvement can be attributed to the additional fiber you will consume. Consumption of sufficient dietary fiber, as opposed to eating refined carbohydrates which have no fiber, reduces the risk of Hashimoto's and hypothyroidism.²⁴ Fiber is what keeps your bowels regular and feeds the good bacteria in your gut. Improving gut flora has been shown to improve thyroid function.^{25,26} It might be referred to as the gut thyroid connection.

Sugar is a very inflammatory food and increases the inflammation in the thyroid, which in turn compromises its function. This may seriously challenge your sweet tooth, but a little self-denial on this issue could just pay off in better thyroid health.

Really, the key to thyroid health and recovery from disease is reducing inflammation. Inflammation is a key ingredient in disorders of your thyroid. The best way to address thyroid inflammation is through eating an optimal, nutritious, antioxidant rich diet.²⁷ Are you eating your antioxidants?

One very important and indispensable antioxidant is Vitamin C. As an antioxidant it helps preserve thyroid function.²⁸ It significantly helps improve autoimmune thyroiditis by decreasing TPO-Ab antibodies.²⁹ Vitamin C also counteracts the deleterious inflammatory effects of MSG on the thyroid.³⁰ What foods are rich in vitamin C? Oranges, red bell peppers, kale, brussels sprouts, broccoli, strawberries, grapefruit, kiwi, and green bell peppers, just to name a few.³¹

Eating your protection is really the answer. Dietary fresh fruits and vegetables help reduce the risk of thyroid dysfunction because of their high antioxidant levels.³²

Some people's thyroid problems stem from their inability to rein in their appetites. When they overeat, it increases thyroid oxidative stress/inflammation. On the other hand, caloric restriction decreases thyroid inflammation saving the thyroid from oxidation-induced autoimmune thyroiditis.³³

ENVIRONMENTAL THREATS

Diet is not the only lifestyle factor affecting thyroid function, there are also environmental issues. Electromagnetic Field (EMF) exposure, from cell phones and towers, WiFi, smart meters, etc., depresses T3 levels.³⁴ Cellular telephone EMF has been extensively studied, due to widespread usage, and has been found to decrease the levels of T3 and T4,³⁵ while it increases TSH levels.³⁶ TSH increases when the brain is trying to spur the thyroid on to catch up on the making of thyroid hormones.

Our environment is polluted with many thyrotoxic substances. The following substances have been shown to negatively affect thyroid function: fluoride, bromide, chloride, perfluoroalkyl substances, perchlorate, folic acid supplementation, flame retardants,³⁷ nitrates,³⁸ pesticides, thiocyanate, triclosan, BPA, MSG, aluminum, and mercury.

Fluoride, bromide, and chloride are in the halide family together with iodine, and compete in the thyroid with iodine.

Fluoride decreases thyroid and brain function. The toxic effects are accumulative over multiple generations. Each generation gets dumber and more hypothyroid.³⁹ Know your sources of fluoride exposure. Toothpaste alone can exceed safe limits.⁴⁰ Fluoridation of drinking water has resulted in an increase in the mean content of fluoride in soft drinks, fruit juices and in canned goods (notably soups).⁴¹ Most soft drinks contain fluoride levels exceeding recommended levels.⁴² So can wines⁴³ and teas.⁴⁴ Often salt is fluoridated.⁴⁵ Processed foods such as cereals are a significant source of fluoride,⁴⁶ as are fish⁴⁷ and chicken.⁴⁸

Go easy on the salt! Sodium chloride (common salt) suppresses thyroid function, especially if you lack iodine.⁴⁹ This is because chloride is another one of those elements that competes with iodine.

Chlorine is a common disinfectant for tap water. Drinking chlorinated water suppresses thyroid hormone production in laboratory animals.⁵⁰ You may want to let your water sit out for a time to off-gas the chlorine, or run it through a filter that removes chloride before drinking it. Showering in chlorinated water is another way in which thyroid chlorine levels can be raised dangerously high.⁵¹

Bromide is in the same class of elements as iodine and competes with iodine in the thyroid, lowering thyroid function.⁵² Bromide is used in: pesticides (methyl bromide), some bread

products (potassium bromate as a dough conditioner added bleach white flour),⁵³ brominated vegetable oil that may be added to citrus-flavored drinks, hot tubs, swimming pools and cooling towers, water cleansers, certain asthma inhalers and prescription drugs, fire retardants, plastic products, personal care products, such as hair lotions,⁵⁴ fabric dyes, and fire retardants.⁵⁵

What do microwave popcorn, fast food restaurant menus,⁵⁶ plastic food packages, non-stick cookware,⁵⁷ fish,⁵⁸ eggs, and meat⁵⁹ have in common? Perfluoroalkyl substances, which decrease your thyroid function.⁶⁰ These fluorinated substances are highly reactive and increase autoimmune thyroid disease.⁶¹ What about non-stick cookware? Perfluorinated chemical compounds,⁶² found all over our environment, are known to be endocrine disruptors (the thyroid is part of the endocrine system)⁶³ and are used to coat “non-stick” cookware (Teflon).⁶⁴ They are also used as antifungals.⁶⁵ They are used to line your food packages.⁶⁶ Perfluorinated chemical compounds can compete with thyroxine (T4) for binding to the human thyroid hormone transport protein transthyretin so that your thyroid hormones get stuck in the thyroid.⁶⁷ Higher concentrations of serum perfluorinated chemical compounds are associated with increased thyroid disease.⁶⁸ They can also cause thyroid deficiency in unborn babies which leads to mental retardation.⁶⁹ So what should one cook food in? Good quality stainless steel cookware would be a first choice.

Go easy on the salt! Sodium chloride (common salt) suppresses thyroid function, especially if you lack iodine.

Bisphenol A (BPA), found in plastics, is a endocrine disruptor with effects on the thyroid as well as other endocrine functions.⁷⁰ BPA is a xenoestrogen commonly used in food storage plastics,⁷¹ vegetable cans, baby bottles, microwaveable containers, polyesters, adhesives and car parts.⁷² It is one of the highest-volume chemicals produced worldwide, human exposure to BPA is thought to be ubiquitous.⁷³ BPA causes an over-production of hydrogen peroxide by the thyroid, leading to oxidative damage and autoimmune thyroiditis.^{74,75}

Monosodium Glutamate (MSG), a common food flavor enhancer, significantly decreases

serum free T3 and free T4 levels, while significantly increasing serum TSH.⁷⁶ Oral intake of MSG results in degenerative changes in the thyroid gland,⁷⁷ as well as neurons and astrocytes in cerebellum.⁷⁸ It takes some research to discover all the ways industry hides MSG in common foods.⁷⁹ One good website for this is <https://truthinlabeling.org/>.

Mothers with dental amalgam fillings, which contain the toxic element mercury, have significantly lower thyroid levels and their children can also have hypothyroidism as a result of this oral toxin, leading to mental retardation.⁸⁰

Aluminum suppresses TSH,⁸¹ T4, and T3.⁸² Many people do not realize it, but tea⁸³ can be a big source of unwanted aluminum, as can be cheese,⁸⁴ baking sodas, geoengineering,⁸⁵ and vaccines.⁸⁶ Please see our Alzheimer's article for more unwanted aluminum sources.⁸⁷

Perchlorate is a contaminant that is commonly found in surface and groundwater, some foods such as dairy milk,⁸⁸ some fertilizers, road flares, car airbags, fireworks, explosives, and rocket propellants.⁸⁹ Perchlorate competitively inhibits the transport of iodide into the thyroid.⁹⁰ It is 30 times more potent to the thyroid than iodine. Its effect upon the thyroid is additive with other toxins such as thiocyanate and nitrates.^{91,92} Make sure the water you drink is pure.

Nitrates are commonly consumed from drinking water and some foods. Processed meats are high in nitrates.⁹³ Some supplements can be extremely high in nitrates.⁹⁴ Nitrates from fertilizers often contaminate drinking water.⁹⁵ ⁹⁶ high levels of nitrates in drinking water are a risk factor for thyroid dysfunction.⁹⁷ Nitrates impair thyroid function by interfering with the thyroid's relationship with the brain and thyroid stimulating hormone, and by competing with iodine uptake. The water used for drinking and cooking in areas where people get goiters has been found to have higher nitrate content.⁹⁸

Thiocyanate concentrations, equivalent to those obtained from tobacco smoke, have three independent antithyroid actions: (i) they inhibit iodide transport into the thyroid, (ii) They inhibit iodine organification into T3 and T4, and (iii) they increased iodide efflux from the thyroid.⁹⁹ Canola (rapeseed, the source of canola oil) can be a significant source of thiocyanate and glucosinolates which suppress the thyroid.¹⁰⁰ Thiocyanate can also be found in dairy milk.¹⁰¹ Rats receiving milk from cows fed rapeseed

meal (canola) developed thyroid enlargement, a sign of thyroid dysfunction.¹⁰² As much as brassicas get a bad rap, studies show that they are of little impact at <1 kg/d for several months,¹⁰³ unless of course you are juicing large amounts of them. Attention to adequate iodine consumption is recommended in individuals consuming large amounts of brassica vegetables routinely.¹⁰⁴

Folate is a B vitamin readily available in vegetables like spinach. When folic acid is substituted, for example as in vitamin pills, hypothyroidism results. Excess folic acid during adolescence suppresses thyroid function causing permanent deficits in motivation and spatial memory.¹⁰⁵ Better to eat spinach and green leafy vegetables with folate, than to take laboratory concocted supplement pills of folic acid.

That caffeine during pregnancy causes hypothyroidism in your unborn baby and reduces their intelligence.

Triclosan is a potent antibacterial and antifungal compound that is widely used in personal care products, hand sanitizers, toothpaste, plastics, and fabrics. Recently, triclosan has been shown to alter endocrine function in a variety of species. It acts as an endocrine disrupter and significantly decreases total serum thyroxine (T4) triiodothyronine (T3).¹⁰⁶ Washing your hands with something else like a natural soap is better for your thyroid.

Herbicides (e.g., glyphosate) and pesticides (e.g., pyrethrin) interfere with thyroid function, increasing the risk of thyroid disease.^{107,108} Herbicides are toxic chemicals that kill plants. Glyphosate is a herbicide, sold under the name "RoundUp", that kills plants by depleting their selenium and compromising their ability to produce the amino acid tyrosine.^{109,110} Glyphosate exposure is associated with an increased risk of hypothyroidism.¹¹¹ In Humans tyrosine is essential to the production of thyroid hormones. The Canadian Food Inspection Agency found that 90 percent of pizza, 88 percent of wheat flour, 84 percent of crackers, 84 percent pasta, 75 percent of oats, 70 percent of chickpea flour, and 67 percent of lentils samples contain unwanted glyphosate.^{112,113}

HABITS

Have you had your caffeine hit yet this morning? In animal studies, caffeine significantly reduces T3 levels.¹¹⁴ If you are pregnant and interested in the thyroid health of your child, it will be of interest to you to know that caffeine during pregnancy causes hypothyroidism in your unborn baby and reduces their intelligence.¹¹⁵ One popular source of caffeine is coffee. Thyroid function already declines with age; coffee prematurely hastens this decline.¹¹⁶ Methylxanthines found in coffee, tea, colas, and chocolate have been shown to be mildly antithyroid and strongly goitrogenic in laboratory animals.¹¹⁷ Goiters, or enlargement of thyroid, occurs when the thyroid is pushed, by excess TSH, to make thyroid hormone, but lacks the nutrients, such as iodine, to do so.

People who drink coffee or take caffeine often have a difficult time sleeping. Sleep is very important. Both shorter (<7 h/day), or longer (>8 h/day), sleep times increase the risk of thyroid dysfunction compared to the optimal sleep duration (7-8 h/day).¹¹⁸ Another thing that compromises sleep and your thyroid is an evening meal. Two meals a day with no snacking between meals is healthier for your thyroid.

PSYCHOLOGICAL

How are you feeling today? Both stress¹¹⁹ and anxiety¹²⁰ significantly suppress thyroid function.¹²¹ We have discovered, in recent years, that the impact of psychological stress on health is enormous. Stress management is key to thyroid health.

BODY MASS INDEX

Another factor weighing in on your thyroid health is your body mass index—whether or not you maintain a healthy weight. For some, aggressive weight loss may ease hypothyroidism. About 10% of obese subjects are hypothyroid. Weight gain has been associated with hypothyroidism while weight loss normalizes it.^{122,123} Obesity also increases autoimmune thyroiditis.¹²⁴

A very good therapeutic approach to hypothyroidism and obesity can include eating less food—caloric restriction. Caloric restriction decreases hydrogen peroxide production

potentially saving the thyroid from oxidation-induced autoimmune thyroiditis.¹²⁵

Are you having trouble losing weight? It could be the thyroid replacement medication's fault. Thyroid hormone supplementation increases obesity.¹²⁶ Levothyroxine (a popular thyroid hormone replacement drug) is not benign, it can increase your chances of developing lung cancer¹²⁷ and pancreatic cancer.¹²⁸ What's more the use of thyroid hormones can increase the risk of cataracts in your eyes.¹²⁹ Thyroid replacement drugs can also increase the risk of osteoporosis.¹³⁰

OSTEOPOROSIS

Speaking of osteoporosis, thyroid dysfunction itself can cause osteoporosis. Thyroid disorders have an important impact on bone metabolism and fracture risk, such that hyperthyroidism, hypothyroidism, and subclinical hyperthyroidism are associated with a decreased bone mineral density (BMD), and increased risk of fracture.¹³¹

TRAUMA

Incidentally neck injury can impact your thyroid. Whiplash and cervical nerve pressure can cause hypothyroidism with resultant 10-30 pounds weight gain over the next 3-4 months.¹³²

HYDRATION

Drink pure, uncontaminated water; rehydration helps balance and regulate the thyroid hormones.¹³³

HELP FOR THYROID FUNCTION

So, what is the secret to getting your thyroid working again. I have personally seen people with a long history of thyroid replacement hormone therapy get off their pills and achieve normal thyroid function. Besides avoiding all the thyroid competitors, inhibitors, and toxins we have discussed, my recommended approach includes such modalities as; assuring adequate body levels of Iodine, selenium, tyrosine, zinc, iron, and magnesium, use of helpful herbs, taking time for appropriate exercise; proper application of hot and cold hydrotherapy treatments, oral and topical use of charcoal, exposure to thyroid stimulating sunlight, gentle massage to encourage blood flow, and thyroid friendly clothing.

Let's start with micronutrients that the thyroid needs for good health and the production of adequate thyroid hormones. Iodine,¹³⁴ selenium,^{135,136} iron,¹³⁷ magnesium,¹³⁸ zinc,^{139,140} vitamin A,¹⁴¹ chromium,¹⁴² and copper¹⁴³ all matter to your thyroid's health.

Iodine is the key element in thyroid hormone synthesis. The iodine content of plant foods depends on the iodine levels in soil and in groundwater used in irrigation, in crop fertilizers, and in livestock feed. Iodine concentrations of plants grown in soils of iodine-deficient regions may be very low.¹⁴⁴ Milk alternatives contain far less iodine than whole milk.¹⁴⁵ Pasteurizing milk decreases its iodine levels.¹⁴⁶ There is some iodine in a few common foods, and there has been a push in the past to put it in salt.¹⁴⁷ My favorite go to source for iodine is kelp, and the product I find well-stocked with iodine is "Maine Coast Sea Vegetables Organic Kelp Granules Salt Alternative." I often have people take between ¼ and 1 teaspoon per day. The goal is to get somewhere between 1 and 12.5 mg of iodine per day.

I would not attempt to increase my iodine intake without making sure that my selenium intake levels were good. The goal is to get around 400 mcg of selenium per day. The best food for accomplishing this is Brazil nuts. One ounce of Brazil nuts, (6–8 nuts) contains around 544mcg of selenium.¹⁴⁸

I have personally seen people with a long history of thyroid replacement hormone therapy get off their pills and achieve normal thyroid function using natural remedies.

Iron deficiency increases the risk of hypothyroidism by 500%.¹⁴⁹ So, where can one find good iron for a good diet? Some iron rich foods include soybeans, sesame seeds, bran, lentils, wheat germ, tofu, oats, walnuts, peas, lettuce, and alfalfa sprouts, just to name a few. Vitamin C also helps with iron absorption, so include some good vitamin C foods in your meal plans as well.

Tyrosine can best be obtained from foods such as: seaweed, spirulina, soy, parsley, peanuts, pumpkin and squash seeds, broad beans (fava beans), sesame seeds, mungo beans, cowpeas (blackeyes), lima beans, black walnuts, tahini, wheat germ, oat bran, wild rice, chia seeds, oats, tofu, macadamia nuts, pine

nuts, sunflower seed, flaxseed, navy beans, yellow corn, almonds, Brazil nuts, pistachio nuts, walnuts, edamame, hazelnuts, lentils, spinach, and chickpeas. Be aware that B vitamin deficiency can compromise tyrosine absorption, the two go hand in hand.¹⁵⁰

As we think about thyroid and improving its function we do not want to overlook the value of medicinal herbs. The Bible tells us that God intended the herbs for our service. "He causeth the grass to grow for the cattle, and herb for the service of man: that he may bring forth food out of the earth;"¹⁵¹ I recommend acquiring the herbs and then making them into a medicinal tea. There are a lot of good herbs for thyroid. Ashwagandha Root because it improves TSH, T3, and T4.^{152,153} Chamomilla improves TSH, T3 and T4, and improves pathological changes in the thyroid tissues.¹⁵⁴ Bauhinia purpurea significantly increases the thyroid hormones T3 and T4.¹⁵⁵ Rhodiola helps all the symptoms of hypothyroidism.¹⁵⁶ Coleus forskohlii increases T4 and T3 secretion from the thyroid.¹⁵⁷ Commiphora guggul reverses the effects of toxins that cause hypothyroidism.¹⁵⁸

Some herbs are valuable for hypothyroidism because of their mineral content. As we mentioned earlier, seaweed is good for the thyroid because of its high iodine content.¹⁵⁹ Basil is a good source of selenium.¹⁶⁰

There are some herbs that are helpful because they reduce autoimmune thyroiditis. For example, Cordyceps sinensis: restores the balance between helper T and cytotoxic T cells in autoimmune thyroiditis.¹⁶¹

Not all people suffer with hypothyroidism when their thyroids go haywire, they get the opposite complication of hyperthyroidism, or too much thyroid hormone. In which case, Bugleweed improves symptoms of hyperthyroidism by decreasing excess T4, so do foods from the cabbage family.¹⁶² So, if you have hyperthyroidism, make it a point to include more foods from the cabbage family in your menus.

You may not feel like exercising when your thyroid hormones are suboptimal, but exercise is actually part of the solution. Physical activity significantly improves all important thyroid function laboratory values.¹⁶³ Being sedentary tends to lower thyroid function.¹⁶⁴ Having regular times for exercise can be of great benefit.

Hydrotherapy can be most beneficial when approaching thyroid dysfunction. Hydrotherapy is the application of hot and/or cold water to a

part of the body. In this case the thyroid, which surrounds our voice box or Adam's apple. I usually use hot water bottles or gel packs, or a cloth dipped in hot water for the hot application, and ice bags or a cloth dipped in cold water for the cold application. Our regimen is to apply hot to the thyroid for 3 minutes. Then cold to the thyroid for one minute. Then to repeat this cycle of alternating hot and cold for 5 cycles. Then end with the cold application. To finish we would wrap the neck with a cloth or scarf and let the patient rest for at least 20 minutes. This can help reduce inflammation, improve circulation, and stimulate hormone production.¹⁶⁵

We recommend charcoal poultices to the thyroid gland overnight for toxin, inflammation¹⁶⁶ and edema removal while you are seeking to restore function. Our procedure is to take one cup of water and put it into a saucepan on the stove. Add 3 tablespoons of activated charcoal powder and 3 tablespoons of ground flax seeds and bring it to a boil. Stir well. Turn off the heat and let cool. This can be applied one fourth inch thick to the thyroid and surrounding neck area, and then covered with a plastic wrap for overnight treatment. Leave this on all night and remove it in the morning. The next night, turn the poultice over and use the other side. You can even make a lot of these poultices ahead and store them in a freezer for future use.

Have you heard of the sunshine vitamin? Being low in Vitamin D increases the risk of autoimmune thyroid disease.^{167,168} Suboptimal vitamin D status is associated with more Hashimoto's thyroiditis¹⁶⁹ and more aggressive thyroid cancers.¹⁷⁰ Increases in blood vitamin D levels can be achieved equally by supplementation or by natural sun exposure.¹⁷¹ So get some sun today! Especially direct

sunshine to the thyroid area for at least 20 minutes a day.

Get some sun today! Especially direct sunshine to the thyroid area for at least 20 minutes a day.

Ever had a neck massage? Massage has the ability to increase thyroid blood flow and to increase the release of thyroglobulin from the thyroid.¹⁷² You can massage your thyroid yourself or get someone else to do it for you.

It has been said that perfect health depends on perfect circulation. It would be helpful to clothe all parts of your body (head, neck, arms, ankles, and especially legs, etc.) evenly and adequately, especially in cold weather.¹⁷³ I believe turtlenecks are good for the thyroid health recovery, where practical, because they cover the neck and keep it warm.

Connie made some lifestyle changes and started taking natural sources of iodine, selenium, and an herb tea blend. Connie's thyroid picked up to within normal limits and she delivered a normal happy child.

IN SUMMARY:

- Avoid all the competitors, inhibitors, and toxins that affect the function of your thyroid.
- Adopt some of the beneficial lifestyle choices that we have discussed.
- Try some simple home remedies to aid in thyroid recovery and restoration.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

“When drugs are introduced into the system, for a time they may seem to have a beneficial effect. A change may take place, but the disease is not cured. It will manifest itself in some other form. In nature’s efforts to expel the drug from the system, intense suffering is sometimes caused the patient. And the disease, which the drug was given to cure, may disappear, but only to re-appear in a new form, such as skin diseases, ulcers, painful diseased joints, and sometimes in a more dangerous and deadly form. The liver, heart, and brain, are frequently affected by drugs, and often all these organs are burdened with disease, and the unfortunate subjects, if they live, are invalids for life, wearily dragging out a miserable existence. Oh, how much that poisonous drug cost! If it did not cost the life, it cost quite too much. Nature has been crippled in all her efforts. The whole machinery is out of order, and at a future period in life, when these fine works which have been injured, are to be relied upon to act a more important part in union with all the fine works of nature’s machinery, they cannot readily and strongly perform their labor, and the whole system feels the lack. These organs, which should be in a healthy condition, are enfeebled, the blood becomes impure. Nature keeps struggling, and the patient suffers with different ailments, until there is a sudden breaking down in her efforts, and death follows. There are more who die from the use of drugs, than all who would have died of disease had nature been left to do her own work.”ⁱ

– E. G. White

ⁱ White, J. S. (1865). Health, or, How to Live. Steam Press: Seventh-day Adventist Publishing Assoc., Battle Creek, Mi. {HHTL 189.2}.

CHAPTER 12

ARTHRITIS: DON'T LET JOINT PAIN SLOW YOUR JOURNEY

ARTHRITIS AND AMERICANS

According to the (Centers for Disease Control) CDC, arthritis is the leading cause of disability in the United States. Twenty-three million Americans (about 11 percent of the U.S. population) report symptoms of joint arthritis but have never sought medical care for relief. Another 42.7 million Americans (about 20 percent of the U.S. population) have been diagnosed with arthritis by a Physician. Thus, nearly one out of three Americans suffer disabling joint pain, much of which could be alleviated or entirely averted if they only knew how to better care for the health of their joints¹.

So, you may ask, “What can I do to improve the health of my joints--to make sure they last as long as I do?” In this article we will explore the contribution of diet, exercise, obesity, and water-drinking to joint health and longevity.

Because the knee is a very vulnerable joint to arthritis, I will use it as a model in our discussion. I could have just as easily used the spinal discs, hip, shoulder, or ankle.

The junction of the femur, often called the thighbone, and the tibia, sometimes referred to as the shinbone, form the knee joint. The end of the femur and the top of the tibia are covered with a layer of cartilage about one eighth of an inch thick. This cartilage provides protection, shock absorption and smooth motion for the joint.

Lubrication fluid is held in the knee by the joint capsule, this capsule is like a bag that

surrounds the entire knee joint. When a person complains of having “water on the knee” it usually means that they have extra joint fluid in their joint capsule.

Cartilage is a rubbery material that has no blood vessels running through it. It depends on nutrients diffusing or soaking into it from the bone and joint capsule for health and repair².

To maintain good cartilage nutrition, blood must be kept flowing by the joint. Blood vessels so small that only one red blood cell can pass through them at a time, line the joint capsule. These vessels are called capillaries. Nutrients have to pass from the blood cell in the capillary to the cartilage cell in the cartilage. This involves moving nutrients from the blood cell, across the capillary wall, through the joint capsule into the joint fluid. The joint fluid must then pass through the layers of cartilage to reach the cartilage cell. To remove the waste products from the cartilage cell the whole process must work in reverse. Good cartilage nutrition depends on the diffusion of fluid from the blood vessel, across the synovial membrane or joint capsule, into the joint space. Cartilage health also depends on the diffusion of waste products back across the synovial membrane and back into the blood vessel.

Anything that inhibits the free flow of fluid, to and from the cartilage, compromises cartilage health and longevity. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair produce arthritis.

CARTILAGE AND WATER

Sixty-five to eighty percent of cartilage is made up of water. In cartilage, water functions like a "shock absorber." Water also lubricates and nourishes the cartilage. Water is the medium that carries nutrition to the cartilage from the blood cells and waste products away from the cartilage back to the blood stream. Dehydrated joints become acidic, and oxygen starved. This can cause cartilage cells to become sick or die.³

If you do not drink enough water, you starve your cartilage cells for nutrition and drown them in their own waste products. Cartilage depends on water for health and repair. Poor hydration causes a failure in repair and produces arthritis.

CARTILAGE AND EXERCISE

Cartilage has no blood vessels directly supplying it. It depends on cyclic weight bearing to squeeze or pump nutrients in and waste products out of its sponge-like matrix⁴.

If you do not exercise, nutrition will not be pumped to and waste products from the cartilage. Cartilage depends on exercise for health and repair. A sedentary lifestyle with failure of cartilage repair can produce arthritis.

OBESITY AND CARTILAGE

Overweight people carry immense loads on their cartilage, thus increasing wear. Cartilage is like a sponge and when it is constantly compressed, as happens in obesity, fluid is not pumped to and from the cells.^{5,6} Constant pressure on the cartilage presses out the water from its matrix, thus dehydrating it. The result is poor cartilage nutrition, increased accumulation of metabolic acid, and cartilage cell death. As the cartilage deteriorates, narrowing of the joint space between the femur and the tibia can often be seen on x-ray.

Obesity stops fluid flow to and from the cartilage, thus compromising cartilage nutrition. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair produce arthritis.

CARTILAGE AND DIET

"You are what you eat" and your joints may be the first to protest your dietary choices. Few people understand the connection between how their joints feel and what they eat and drink. Joint health and joint longevity are dependent on daily care of their nutritional needs and vulnerabilities.

Our goal is to explore the relationship between diet and cartilage health. We will be looking at risky foods by category including refined foods, inflammatory foods, vasoactive foods, slow transit foods, and plaque-forming foods.

The effect of eating refined foods on the blood cells is to cause them to stick together in stacks or chains.

REFINED FOODS

Refined foods are foods that have been highly processed to break down complex nutrients into very basic nutrients. This process tends to destroy or remove nutrients such as vitamins, minerals, and fiber. Refined foods tend to be calorie dense making it easy to eat more calories than your body needs.

Eating refined foods causes the red blood cells in our blood vessels to stick together in long chains or stacks. Scientists call these stacks or chains of blood cells rouleaux. Rouleaux do not flow freely through small capillaries, they tend to flow very sluggishly and slowly, if at all.⁷

Arthritis: Don't Let Joint Pain Slow Your Journey

Sugar, refined starches, oil, alcohol, and cream are a few examples of refined foods that create rouleaux.^{8,9}

Rouleaux impede fluid flow to and from the cartilage; this interferes with cartilage nutrition. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair result in arthritis.

The unrefined vegetarian diet has been shown to improve blood flow.^{10,11} This is because vegetables, seeds, and nuts are high in Omega-3 fatty acids,¹² which promote blood flow. It is also more difficult to overeat on an unrefined vegetarian diet.^{13,14}

Dehydration thickens the blood which favors the formation of rouleaux. Drinking plenty of water is important in preventing thickening of the blood.¹⁵

Stress has also been correlated with increased blood thickness¹⁶. Reducing the stress in your life can be an important means of preserving vital blood flow to joint tissues.

INFLAMMATORY FOODS

Inflammatory foods, when eaten, increase inflammation throughout the entire body. This increased inflammation tends to cause thickening of the blood vessel walls. Thickened capillary walls restrict the free flow of fluid to and from the cartilage cells.¹⁷

Examples of inflammatory foods include meat,^{18,19} especially pork,²⁰ dairy, especially cheese,²¹ and ice-cream.²²

Foods that are produced through the process of fermentation or rotting contain aflatoxins which also increase inflammation. This includes foods like wine, vinegar, certain mushrooms, and peanut butter made from moldy peanuts. Any food on which mold has grown tends to accumulate aflatoxins, especially foods with *Aspergillus* mold.²³

Inflammation thickens vessel walls impeding fluid flow to and from the cartilage, thus

interfering with cartilage nutrition. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair can result in arthritis.

Believe it or not, some forms of fasting have been shown to decrease inflammation when followed by a vegetarian diet.²⁴ Studies show that it is the naturally occurring substances found in fruits, vegetables, grains, bark, roots, stems, and flowers called flavonoids that contain the anti-inflammatory properties.²⁵

Soy products have also been discovered to possess anti-inflammatory properties.²⁶

We have already discussed the benefits of omega-3 fatty acids for promoting blood flow. These fatty acids,²⁷ as found in flaxseed²⁸ and olives,^{29,30} have been discovered to have anti-inflammatory effects.

VASOACTIVE FOODS

Blood vessels have muscles in their walls that change their size or diameter. When the muscles tighten, the vessel gets smaller and fewer blood cells can travel through it. Vasoactive foods are those foods that contain substances that cause blood vessels to constrict or get smaller in diameter. When a blood vessel that allows only one blood cell to pass through it at a time constricts, all blood flow stops, and no nutrients are delivered to the joint tissues.

Examples of vasoactive foods include foods containing caffeine³¹ such as coffee,³² tea, and colas. Nicotine is also a vasoactive substance.^{33,34}

Vasoconstricted blood vessels impede blood flow. This affects fluid transfer to and from the cartilage thus compromising cartilage nutrition. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair produce arthritis.

Dietary changes known to improve vascular responsiveness include: a vegetarian diet,³⁵ tomatoes,³⁶ and diets rich in antioxidants,³⁷

vitamin E,³⁸ zinc,³⁹ and copper.⁴⁰ Foods known to impair vascular responsiveness include diets high in cholesterol,⁴¹ salt,⁴² fat,⁴³ sugar,⁴⁴ and excess calories.⁴⁵

SLOW-TRANSIT FOODS

By slow-transit foods we mean foods that take a long time to travel through the body from the mouth to the anus. They spend a long time in the stomach and intestines. Slow-transit foods are usually slow because they are high in fat and low in fiber. Fiber is the bulk in stool that helps keep food moving down the digestive track.⁴⁶

Slow transit foods are usually high in fat and low in fiber, and include meat, fast foods, pastries, especially donuts, fried foods, and greasy foods.

Because low fiber food is in the colon so much longer, bacteria tend to multiply.⁴⁷ This results in bacterial overgrowth. When bacteria over grow they produce many toxins.⁴⁸ These toxins can produce all the effects we have already talked about up to this point: (1) thicken or coagulate the blood;^{49,50} a similar effect to that of rouleaux, (2) vasoconstriction,⁵¹ and (3) inflammation.^{52,53,54}

Foods eaten late at night tend to pass more sluggishly through the digestive system thus they have the same effect of fostering bacterial overgrowth and decreasing circulation to the joints.⁵⁵

Slow-transit foods impede fluid flow to and from the cartilage, thus compromising cartilage nutrition. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair cause arthritis.

As already mentioned, fiber plays a significant role in the time food stays in your system.⁵⁶ Increasing the amount of fiber you get

in your diet is one way to improve joint health. Whole grains,⁵⁷ dried fruit,⁵⁸ and fresh vegetables are good sources of dietary fiber.

Mental health can also affect transit times, depression tends to slow transit and make it sluggish.⁵⁹

Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair can result in arthritis.

PLAQUE-FORMING FOODS

The next class of foods we want to discuss are those that favor the clogging of blood vessels with arteriosclerotic plaque. We call these plaque-forming foods. A plaque is a blockage in a vessel that restricts or stops the free flow of blood to and from the tissues, such as the knee joint, heart or brain.

Examples of plaque forming foods include foods high in cholesterol, like meat, butter, milk, and eggs.^{60,61}

Foods especially prone to plaque formation are those containing cholesterol that has experienced oxidation. This oxidation of cholesterol makes it especially toxic to blood vessel walls and favors the formation of plaque.⁶²

Cholesterol oxidizes in the presence of oxygen or air. Foods most likely to contain oxidized cholesterol are foods which have air and cholesterol mixed together in them; examples include pancake mixes containing dried egg, ice cream, because it is whipped full of air, and processed meats such as pork, beef, and chicken especially if they are grilled or roasted.^{63,64,65}

High-fat foods contribute to plaque growth, especially foods like french fries and lard.^{66,67}

The most dangerous fats are trans-fats. Trans-fats are produced in the process of

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hydrogenation. They can also be produced when frying or roasting because the oils are super-heated.^{68,69} Foods high in trans-fat include hydrogenated margarines or cooking oils, and fried or roasted foods.^{70,71,72}

Anything that causes deterioration in the blood circulation system can be detrimental to joint health. Hardening of the arteries compromises the circulatory system. Hardening of the arteries is facilitated by an elevated intake of salt.⁷³

Plaque and hardening of the arteries impede blood flow to and from the joint, this compromises cartilage nutrition. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair result in arthritis.

To reiterate, anything that impedes fluid flow, to and from the cartilage, impedes cartilage nutrition. Cartilage depends on its nutrition for health and repair. Poor nutrition and failure of repair produce arthritis.

What we have talked about so far is the contribution of water, exercise, and diet to joint health. Which might lead one to ask, "So! What should we eat, drink, and do?" This is a very fair question and one that we will do our best to start you on the road to answering.

Caldwell Esselstyn, Jr., MD, of the Cleveland Clinic has demonstrated on angiography that blockages in coronary arteries can be reversed by changes in diet. He makes these dietary recommendations for reversing heart disease: "The optimal diet consists of grains, legumes, vegetables, and fruit, with <10%-15% of its calories coming from fat." He goes on to say that this diet is beneficial for more than just coronary artery disease, "This diet minimizes the likelihood of stroke, obesity, hypertension, type 2 diabetes, and cancers of the breast, prostate, colon, rectum, uterus, and ovary. There are no known adverse effects of such a diet when mineral and vitamin contents are adequate."⁷⁴

WATER

The value of the sage old advice to drink at least eight glasses of water a day cannot be overestimated. Because cartilage is 65%-80% water it needs constant hydration. Starting the day with a large drink of water is one of the best things you can do for you joints. Drinking eight glasses of water a day ensures an abundant supply of fluid for cartilage hydration, nourishment, and lubrication. When cartilage is inflamed, it requires water to carry the products of inflammation away from it and healing nutrients back to it.

Another good use of water is in applying hot and cold treatments to painful arthritis joints. The usual regimen is to apply hot to the area for 3 minutes, followed by a cold application for one minute. Repeat this 5 times and end with cold. If it is an ankle you are treating, you can use two buckets of water, one hot and one cold. If it is a shoulder or knee, you may want to use hot water bottles and an ice bag. You can alternate the hot and cold from these sources in the same pattern of 3 minutes hot and one minute cold.⁷⁵

Charcoal

The cause of pain and swelling, on the molecular level, in an injured or arthritic joint, is inflammation. Inflammation is facilitated by mediators called cytokines. A very good natural remedy for decreasing the impact of cytokines on joint tissues is activated charcoal.^{76,77,78,79} The way to apply charcoal to a sore joint is as a poultice. The way we make a charcoal poultice is to cook one cup of water, with 3 tablespoons of activated charcoal, and 3 tablespoons of ground flax seeds. Bring it to a boil and let is cool. What you will have after cooking this mixture is a gel that is easy to work with. You can apply it directly to the skin or wrap it in one layer of damp paper towel and apply the damp

paper towel to the skin over the painful joint. Then wrap the applied poultice and joint with plastic wrap and an elastic bandage, to hold it in place, and leave it on overnight. It should bring down the swelling and pain. People have avoided the need for a joint replacement using this simple home remedy.

EXERCISE

Because cartilage has no direct blood supply and depends on cyclic weight bearing to pump nutrition into it, walking is one of the best exercises for maintaining its health. Walks, especially after meals are of great benefit.

“So! What should we eat?” The simplest and most direct answer that can be supplied is to eat an unrefined plant-based diet.

DIET

“So! What should we eat?” The simplest and most direct answer that can be supplied is to eat an unrefined plant-based diet. There is a vegetarian advantage. Higher consumption of fruits and vegetables decreases the risk of Osteoarthritis by 40%.⁸⁰ People who are low on vitamin C and vitamin D have a threefold risk of progression of osteoarthritis.⁸¹

BREAD, CEREAL, RICE & PASTA GROUP

Bread, cereal, rice, and pasta could make up the majority of your diet. Each of these foods should be kept unrefined so as to preserve their vitamins, minerals, and fiber. What we are talking about is eating an unrefined plant-based diet.

There are many breads on the market, but not all of them are 100% whole grain. One hundred percent whole grain breads contain

more vitamins, minerals and fiber; thus they are more nutritious for the cartilage.

Oatmeal is a good example of a whole grain cereal. Refined or highly processed grains are deficient in vitamins, minerals, and fiber. Whole grain cereals are always better for joint health.

Brown rice or wild rice is preferable to white rice because it has more naturally occurring vitamins, minerals, and fiber.

Whole grain pasta can also be purchased that does not contain refined or highly processed flours. Whole grain pasta, because it has all of the naturally occurring nutrients, is better than refined products when it comes to preserving joint health and promoting longevity.

FRUITS

Fresh fruit is preferable to fruit that has been juiced or canned. During the juicing process much of the valuable fiber is lost. Juices often get pasteurized; this breaks down the more complex sugars into very simple sugars. Large amounts of sugar are often added during the canning process, which when eaten cause the rouleaux effect that is so detrimental to joint health.

One very good fruit for avoiding or remedying arthritis is fresh pineapple. It is high in an antioxidant phytochemical, bromelain, which reduces arthritis pain.⁸²

VEGETABLES

Vegetables, prepared in a simple way, free from spice and grease make a healthful diet. Fresh or frozen vegetables are preferable to canned. Canned vegetables tend to have high amounts of added salt that contributes to elevated blood pressure and hardening of the arteries.

HERBS

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A couple of good herbs to be eaten or made into a medicinal tea are Turmeric and Gotu Kola. Gotu Kola herb reduces inflammation, balances antioxidants and reduces arthritis severity.⁸³ Turmeric is as anti-inflammatory as some commonly used arthritis treatment medications such as ibuprofen.⁸⁴

NUTS AND BEANS

Nuts, prepared free from added oil and salt, are a good source of protein. Beans are a good source of protein and fiber. Beans should be prepared in as healthful a way as possible, free from added oil and salt.

SOY AND TOFU

The soybean is very nutritious and is a wonderful addition to the diet of someone battling with arthritis.⁸⁵ In the last few years soy products have become available almost anywhere in the world. In the town where I live, soymilk, tofu, soy burgers, and soy ice cream can all be purchased at regular grocery stores making it easier to substitute for the more deleterious foods in the diet.

DRIED FRUIT & DESSERTS

Many appetizing and healthful desserts can be made, which will be both tasty and good for the health of your joints. Dried fruit is an excellent source of minerals and fiber and makes a good dessert.

Anything that aids nutrient flow, to and from the cartilage, promotes cartilage health. Cartilage depends on its nutrition for health and repair. Good nutrition and vigorous repair promote cartilage longevity.

LET'S PLAN TO AVOID ARTHRITIS!

- Can't do what you always have wanted to do.
- Pain, swelling, deformity, burden to others.
- Disability, inactivity, isolation, early death.

Instead:

- Drink adequate water.
- Exercise daily.
- Choose a wholesome diet.
- Try a few herbs.

Bon Appetite.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

“A yard beautified with scattering trees and some shrubbery, at a proper distance from the house, has a happy influence upon the family, and, if well taken care of, will prove no injury to the health. But shade trees and shrubbery close and dense around a house, make it unhealthful; for they prevent the free circulation of air, and shut out the rays of the sun. In consequence, a dampness gathers in the house, especially in wet seasons. Those who occupy the sleeping-rooms are troubled with rheumatism, neuralgia, and lung complaints. Then the great quantities of fallen leaves, if not removed immediately, decay, and poison the atmosphere. Dwellings, if possible, should be built on high ground. If a house is built where the water will settle around it, remaining for a time and slowly drying away, there is a poisonous miasma continually rising from the damp ground, which breeds sore throat, fevers, ague, or lung diseases.”ⁱ

– E. G. White

ⁱ White, E. G. (1958). Selected Messages Book 2. Washington, D.C.: Review and Herald Publishing Association. p. 463.

Chapter 13

BACK AND NECK PAIN: LIFTING THE BURDEN

George was having trouble with his back and came to see me as a second opinion. He was really tired of being called “the invalid” by his teenage sons who wanted him to join them in a game of basketball.

He wasn't doing too well on his job, stocking shelves at a Walmart, either. He had come to see me, probably to apply for disability.

Five years earlier he had fell down a set of stairs into somebody's basement while delivering heating oil. He had been pulling a hose across the snow when he slipped and fell. He was in trouble and went to see a doctor who treated him with some anti-inflammatory pills and sent him to physical therapy. When he didn't get better they did an MRI where they discovered something wrong with his back that they felt surgery would help. For six months after the surgery he did better, but then it was back to square one, pain in the back, aching pain. Pain that seemed to take away all his energy. Pain that radiated down his hips and down his legs. He was off work again for pain and he went to see the doctor. They gave him more anti-inflammatory pills and sent him back to physical therapy. Nothing seemed to help. Another MRI didn't show anything that needed to be operated on. But he was still not doing well. He started switching from job to job, but nothing was working. The doctor even put him on narcotic pills and ordered more physical therapy. They gave him steroid injections in his spine, called epidurals. But they were no help. Another year passed and then they sent him to see another spine surgeon who ordered another MRI, but found nothing that needed an

operation. Finally, he was sent to me, for a second opinion, possibly to get disability.

George was in trouble. As he would stock the shelves, the pain in his back would stop him. he'd take time off work from time to time. At age 52 he just felt like life had passed him by, that he was going to have to stay disabled at home from now on. He just really wasn't planning, in middle age, to be laid up like this. We're going to come back to George, but let's talk about back pain and how it's related to all his symptoms.

Our goal in this article is to help back pain sufferers recover without drugs, injections, therapy, or surgery.

I specialize in Lifestyle medicine. Lifestyle medicine maximizes your health above the probability of disease. I have been practicing lifestyle medicine since 2005, as well as researching and teaching people how to overcome back pain and other lifestyle diseases.

Back pain responds best to simple lifestyle improvements.

Overview: In this article I will be addressing spine physiology, good hydration, Impact of Obesity, the food we eat and how it affects the spine, exercise and stretching, and the mind/body connection.

In the last 15 years, physician visits for back pain have increased by 40%.¹

Back pain is the second most common cause of disability in US adults² and a common reason for lost work days.^{3,4} An estimated 149 million

days of work per year are lost because of back pain.⁵ The condition is also costly, with total costs estimated to be between \$100 and \$200 billion annually, two-thirds of which are due to decreased wages and productivity.^{6,7}

ARE YOU AT RISK FOR BACK PAIN?

There are many risk factors for back pain. Risk factors include: driving,⁸ vibration,⁹ physical inactivity,¹⁰ sedentary occupation and prolonged standing or sitting,¹¹ smoking,¹² previous full-term pregnancy,¹³ increased body mass index,¹⁴ tall stature,¹⁵ frequent twisting or bending,¹⁶ and depression, stress, fear, anxiety.¹⁷

When someone comes to the doctor reporting work related back pain, the sooner the patient can be returned to gainful employment the more likely they will remain productive. For the most part 95% of patients return to work within 3 months, otherwise they may not ever get back to work. Only 20% return to work after 1 year of being off work on disability, and only 2% will return to work after 2 years of disability. Don't get stuck in disability!

Many people get into trouble with their backs through poor lifting techniques,¹⁸ and/or poor posture¹⁹ or poor ergonomics.^{20,21}

Aside from the risk factors for back pain, there is usually an instigating event that sets off the cascade to pain and disability. These may include, lumbar "strain" or "sprain" in 70% of cases, degenerative changes in 10%, herniated disk in 4%, osteoporosis fractures in 4%, spinal stenosis in 3%, spondylolisthesis in 2%, spondylolysis, discogenic low back pain or other instability in 2%, traumatic fracture in <1%, congenital disease in <1%, cancer in 0.7%, inflammatory arthritis in 0.3%, and infections in 0.01%.²²

BACK PAIN AND CELL PHONE USE

I was also interested to discover that there is a relationship between the use of electronic devices in our modern age and back pain. To be exact, daily TV watching, more than 3 hours a day, increases the risk by 17%, daily use of a laptop computer increases the risk by 40%, use of a cell phone in the supine or laying position increases the risk by 23%, use of the cell phone in semi-supine or half laying half sitting position increases the risk by 49%, daily cell phone use for more than 3 hours increases the risk by 36%, and the use of a tablet increases the risk by 67%.²³ Are you aware of, or managing your device time?

DON'T MISS THESE WARNING SIGNS

There are certain characteristics of back pain we refer to as, "Red Flags" due to their ominous character. History of cancer, because pain could indicate recurrence. Unexplained weight loss, because it too could indicate cancer. Osteoporosis, if present would suggest compression fractures of the spine. Prolonged use of corticosteroids, because they cause osteoporosis and resultant fractures. Older age, and/or major trauma, because they could indicate undiagnosed fractures. Intravenous drug use and/or fever, because they could indicate an infection in the spine. Back pain at rest or at night, because cancer, autoimmune disease or infection can present this way. Bowel or bladder dysfunction, because it indicates advancing disease.

That said, indications that something like surgery may need to be done include: loss of bowel or bladder control; progressive motor loss (advancing weakness); or sometimes even otherwise uncontrollable pain. And surgery is not a panacea, indeed, after two years most patients are the same, whether or not they opted for surgery.²⁴

WHY DOES BACK PAIN REALLY HAPPEN?

It has a lot to do with the anatomy in the back. If we look at the spine, there are vertebra with disks between the vertebra. The disc is very much alive and needs to have access to some blood flow for oxygen and nutrition. But there's an interesting thing about these discs, there is only blood flow to the outer edge of the disk. The middle of the disc doesn't have blood vessels running through it, and so it's very vulnerable to not having good blood supply. If you looked at the top of the disk, down from above, you would see that there are blood vessels all the way around the edge but none in the middle. This makes the disk very vulnerable to not getting enough nutrition.²⁵ You have to get nutrition in, and then you have to get waste products out.²⁶

PERFECT HEALTH DEPENDS ON PERFECT CIRCULATION

Think of it like a sink, you want to have a good flow of water into the sink, that would be like the blood flow to the disc. And, you want to have a good drain where the water could go out of the sink, anything that plugs the drain is going to cause the sink to back up and overflow and you will have troubles. We call it a problem of perfusion, blood flow to the disc, and elimination, blood flow out, any impediments to the blood flow in or out and your back is going to give you problems.^{27,28}

Now in your back you have unusual blood vessel anatomy. Everywhere else in your body, where ever two blood vessels come together, or branch, they come together at a "Y" --a gentle angle, so the blood can flow on to the branches. But the blood vessels coming off your aorta (the biggest blood vessel in your body) to your spine, come off at a right angle. This creates turbulence. Turbulence is a spot where more atherosclerotic plaque usually develops. So, the back is very vulnerable to having plaque build-up right where the blood vessels are coming off

to feed your spine.²⁹ Anything that plugs the pipes, we're talking plaque here, will cause disc degeneration and back pain.³⁰ Plaque can develop anywhere in your blood vessels, and it's very likely to develop in your aorta.³¹ Sometimes we take a chest x-ray and we find more calcium in the plaque in the aorta than in the vertebra themselves. When this happens, all that calcium can end up plugging the spinal blood vessels. We know if plaque is in the aorta, it's probably in other blood vessels in the body as well, including the spinal blood vessels.

You can have plugged pipes (blood vessels) too, for example from inflammation. If you get inflammation building up around blood vessels it tends to squeeze the blood vessels closed. As the inflammation squeezes a blood vessel, less and less blood comes to your spine, and your spine deteriorates.³² If you work hard, under these conditions, your discs will wear, but they won't repair. The next time you work hard the damage will accumulate, and your back will keep getting worse and worse.

BACK PAIN PROTOCOL FOR GEORGE

Let's get back to George our back pain patient in my office. George was hinting that he might like to be on disability, but I reminded him that he told me he'd like to be out there with his teenage boys playing basketball, and that he had said he was tired of being called the invalid. he admitted that was right. I asked him if he would be willing to try something to get him over his back pain and return to work and being able to play basketball with the kids. He said he would be willing to try anything. I said how about for a week, one week! He said he would be willing to try anything for a week.

I handed him a piece of paper and a pen, and I started writing too. I told him the first thing he needed to do when he got up in the morning was to drink two glasses of water, big glasses, like 12-ounce glasses, and then not to eat for about a half hour, but then, when he did eat his breakfast eat nothing but oatmeal for the next

week. Now by nothing but oatmeal, I mean, he could put some things in his oatmeal, like soy milk, or nuts, or raisins, but no oil, no margarine, no sugar, just oatmeal. Then I had him take a vitamin C, 500 milligrams right after breakfast.

In one week, our plan is to reverse five years of back pain that failed surgery, failed physical therapy, failed epidural steroids, failed narcotics and failed anti-inflammatories. Our goal is that in one week we're going to take this guy and put him back to normal, back to work.

Then, immediately upon completing breakfast, I asked him to take a walk for 10 minutes, a 10-minute walk, come rain or shine, or snow, just put on the right clothes, just go out and do it.

Two hours after breakfast, or mid-morning, I had him drink two more glasses of water, large glasses.

At lunchtime I had a special plan for his lunch, vegetables only, and preferably raw, but the idea especially is not to have any oil or excess salt. So, for the week he was to eat salads. I warned him not to put vinegar and oil on the vegetables, just things like olives, sunflower seeds, not commercial dressings that have things in them that aren't particularly helpful.

He was to have another vitamin C after lunch and another 10-minute walk.

Mid-afternoon he was to have two more glasses of water, large glasses.

At supper time which was to be at least three hours before going to bed he was to eat just fresh fruit, raw fruit, fruit like cantaloupe, and watermelon, and apples, and bananas, and strawberries, and just raw fruit and make sure it's three hours before bedtime. He was then to have another vitamin C. Then he was to take another outdoor walk for 10 minutes, immediately after eating. Then two glasses of water two hours after supper.

I told him, no coffee, tea, sodas, no tobacco, luckily, he didn't smoke, no alcohol, no eating between meals. I said if you do get hungry between meals, then drink ice water. And so, we had his plan. When he got through writing it all down, and he said, okay. I asked him if he thought he could do all that and he said he thought he could. And I gave him a follow up appointment in one week.

What is the nature of the cure? Why did I tell him to do the things that I told him? What difference do these recommendations make for back pain?

WATER BENEFITS

For starters, I had him drinking water from the very moment he got up in the morning. Dry discs can be the source of pain.^{33,34} Research shows that men, on average, need 3.7L of water a day and women, 2.7L.³⁵ These numbers would have to be modified on days when the temperatures rise, and also when a person's activity level increases. Urine color is a good indicator of hydration status, as you approach good hydration, urine color tends to lighten compared to times when you knew you were dehydrated.^{36,37}

Disc dehydration can happen, not just from poor water intake, but also from mechanical pressure brought to bear on the disc from an increased body mass index, and also from carrying heavy objects.³⁸ This, and other reasons make obesity a risk factor of back pain especially of disc disease origin.^{39,40} It's like squeezing the water out of a sponge, the sponge becomes dehydrated. So, with the back, obesity puts loads on the discs that squeezes them out, or dehydrates them.

BREAKFAST FOR BACK PAIN SUFFERERS

A breakfast of oatmeal may not seem like a cure-all for back pain, but given its ability to

keep the stools regular and lower blood thickening cholesterol, oatmeal has actually been found to be helpful for musculoskeletal complaints.⁴¹ It also has to do with the displacement phenomena, if you're eating a lot of oatmeal, you're probably not eating a lot of other stuff. I had taken a history of his diet in the process of talking with him and he was on an average American diet that was fairly high in grease and low in fiber, so this was a good change for him.

Oatmeal is a whole plant food, it has not been submitted to any refining processes that would reduce its fiber and nutritional qualities. When foods are eaten that have been processed or refined, making them deficient in fiber and nutrients, the result is increased blood sugars, increased blood cholesterol, triglycerides,⁴² and glycated hemoglobin (red blood cells coated with sugar) and glycation end products (other necessary body cellular components coated with sugar). These changes to the blood cells make them more likely to aggregate into clumps or chains we call "rouleaux".⁴³ Refined foods that cause this health destroying clumping of red blood cells include sugars or refined starches, fats or refined oils such as cooking oils, margarines, butters, and animal shortenings. Clumped blood, or blood cells in chains, does not circulate well to the back and back pain can result.^{44,45} These rouleaux or clumps or clots need to be broken down, or back pain and disability will result.^{46,47}

The importance of fiber in the relief of back pain should not be overlooked. Fiber deficient foods cause constipation, and constipation can precipitate back pain.^{48,49} Incidentally, constipation, in and of itself, can be the source of pain which can radiate to the back, or be felt in the spine.⁵⁰

Speaking of the gut, your intestines are filled with a lot of bacteria, a diet deficient in fiber tends to favor bacteria responsible for increasing back pain.⁵¹ Whereas a diet abundant in fiber nurtures bacteria that fight back pain.

A good recipe for healthy oatmeal for back pain:

- 2 cups water
- ½ cup whole rolled oats
- ¼ cup oat bran
- 2 Tbsp. ground flax seed
- ¼ tsp sea salt

Bring to a boil, let simmer for 45 minutes, eat with your favorite fresh fruit, nuts and seeds.

Oats and oat bran are not the only sources of fiber. Most unrefined, unprocessed foods, such as fresh fruits and vegetables, nuts and seeds, beans and grains, are high in nutrition and fiber. Fresh fruits and vegetables have the advantage of having antibiotic, antiallergic, tumor-protective, anti-inflammatory and immune system stimulating properties.⁵² These are the types of foods you will want to be eating if you want to improve your back health and avoid pain.

Good whole plant foods also increase blood concentrations of antioxidants. This is a defense against back disability. For example, total plant-based vegetarians have significantly higher intakes of antioxidants than omnivores.⁵³ Compared with omnivores, total plant-based vegetarians have significantly higher blood concentrations of: vitamin A, vitamin C, and vitamin E.

OILS AND SPINAL OXYGEN SUPPLY

As we mentioned earlier, refined oils (margarines, butters, cooking oils, animal shortenings, etc.) are not going to promote back health, because they cause clumping of the red blood cells. They also cause a decrease in the oxygen carrying capacity of the blood. When we eat a high fat meal, within six hours the oxygen in the brain falls below seventy percent, what's more it does not return to normal for three

whole days!⁵⁴ This happens to all the tissues of the body including the back. Low oxygen levels in the back result in pain, poor recovery from exercise or injury, and chronic disability.

When choosing oils it is well to take into consideration their composition. If oils must be used, the best choice is oils high in omega-3 fatty acids because, in moderation, they can reduce intervertebral disc degeneration.⁵⁵

FERMENTED FOODS

Fermented foods are foods in which deterioration has caused inflammation in the actual food, which can be transferred to you and your back. Foods that are a product of fermentation are full of toxic waste products of putrefaction such as aflatoxins⁵⁶ and ethyl carbamate⁵⁷, which can cause inflammation and cancer. Aflatoxins, formed in the process of aging or fermenting,⁵⁸ are a source of inflammation.⁵⁹ Dietary sources of aflatoxins include: cheese,⁶⁰ wine, vinegar, and any food created by rotting or fermentation. For the best results, in fighting back pain, fresh foods, free from any taint of rot or spoilage (fermentation) will give the best result.

"The salads are prepared with oil and vinegar, fermentation takes place in the stomach, and the food does not digest, but decays or putrefies. As a consequence, the blood is not nourished, but becomes filled with impurities, and liver and kidney difficulty appear. Heart disturbances, inflammation, and many evils are the result of such kind of treatment, and not only are the bodies affected, but the morals, the religious life, are affected."⁶¹

SUGAR AND REFINED CARBOHYDRATES

I mentioned sugar as a refined food to be avoided earlier. There is a significant association between sugar and back pain symptoms. Sugar consumption increases the risk of back pain by 84%.⁶²

SCHEDULE FOR SUCCESS

Strict meal times are important. I have had patients who still had pain after starting this program which did not resolve till they realized that the part of the program they were not being conscientious about was their meal schedule regularity. Once they adhered to a consistent daily schedule, seven days a week, the pain resolved. Not everyone is used to such a consistent schedule. Some are used to eating whenever they can, others eat between meals. Some get hungry when they should not, especially when making changes in their schedule. To combat hunger at inappropriate times I recommend drinking cold water,⁶³ and taking a walk.

In the diet that I recommended for the patient in our story, fruits and vegetables played a major role, and I encouraged him to get as many of them in the raw state as I could. Studies of people with back pain show that eating more fruits and vegetables improves back pain outcomes.⁶⁴

THE FRESH ADVANTAGE

I also pushed him to eat only raw/fresh fruit for his third meal. This is because fresh fruit digests quickly and he would have better sleep if his digestion was all finished by the time he went to bed. Better sleep is associated with better back health.^{65,66} Ending the last meal at least 3 hours before retiring for the night helps ensure complete digestion before sleeping and improves sleep and back pain.

What kind of diet was I giving him? Isn't this the original diet? "Then God said, 'I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with

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seed in it. They will be yours for food.” “and you will eat the plants of the field.”⁶⁷

HABITS OF HARM

Notice that I told the patient in our story not to use coffee, tea, sodas, alcohol, or tobacco, and not to eat between meals. Coffee is especially detrimental to spine health.⁶⁸ Coffee mimics the flight/fight reflexes in which blood is decreased to certain body tissues, like the back, and increased in others in the interest of survival when confronted with a threat or stress. Coffee greatly increases the incidence of chronic back pain.⁶⁹

Nicotine is also a chemical which alters a person's body's blood,⁷⁰ it too makes the body mimic the physiological fight/flight response to stress or trauma. Additionally, Smoking decreases available oxygen for the spinal tissues and increases oxidative stress, and inflammation. People who smoke have a much higher incidence of back pain.^{71,72}

PSYCHOLOGICAL STRESS

Now that said, stress and trauma cause the same decrease in blood flow to important structures in the spine which result in pain.^{73,74} For example, high anxiety people have 2 and ½ times higher incidence of back pain.⁷⁵ People who are lonely also have higher risks of back pain⁷⁶ and neck pain.⁷⁷ Poor job satisfaction can be a serious problem leading to increasing risks for back pain.⁷⁸ Because stress is such a driver of back pain, stress relief has a very positive effect at helping with back pain.⁷⁹

Even the Bible makes a connection between stress and pain. “I stayed by myself and was filled with anger. Why do I keep on suffering? Why are my wounds incurable? Why won't they heal?”⁸⁰ “Sorely have they afflicted me from my youth, yet they have not prevailed against me. The plowers plowed upon my back; they made long their furrows.”⁸¹

Forgiveness also plays a role in back pain. “Look upon mine affliction and my pain; and forgive all my sins.”⁸² “And the inhabitant shall not say, I am sick: the people that dwell therein shall be forgiven their iniquity.”⁸³ Back pain patients who have learned by experience value of forgiveness have less pain, anger and psychological distress. It has been found that the anger resulting from a lack of forgiveness has the greatest impact. Patients who have the hardest time forgiving others are at the highest risk of back pain and psychological distress.⁸⁴

Jesus had the ultimate stress management, “Come unto me, all ye that labour and are heavy laden, and I will give you rest. Take my yoke upon you, and learn of me; for I am meek and lowly in heart: and ye shall find rest unto your souls. For my yoke is easy, and my burden is light.”⁸⁵

VITAMIN C

You may be wondering why I would have George take vitamin C as a tablet, and honestly, today my first choice would be to encourage him in eating some specific high vitamin C food, such as kiwi, pineapple, red cabbage, red bell peppers, etc. The reason I emphasize vitamin C for back pain is that most of your connective tissues are dependent upon vitamin C for repair. You may be aware that a deficiency of vitamin C results in a condition called scurvy, where a person's connective tissues deteriorate. That would certainly cause back pain. Vitamin C also helps thin the blood, and it a strong antioxidant. Vitamin C has been discussed in the literature as of benefit for back pain.⁸⁶

PUMP LIFE INTO YOUR DISCS

Intervertebral discs are highly dependent on cyclic loading for good nutrition, they have to be pumped. Since, as stated earlier, blood vessels do not traverse directly through any disc, the disc is dependent on the diffusion of nutrients from surrounding tissues, which do have local blood

supply, for its nutrition.^{87,88} This is one of the reasons exercise, such as walking, is so important.⁸⁹ Indeed, one of the advantages of walking, outdoors in the fresh air, over, say running, is the increased blood and tissue oxygen levels and any given moment in time.⁹⁰ And, do not get me wrong, the benefits of walking are not limited to mechanical advantages, walking is also a great stress reliever.⁹¹ Especially if you can experience nature as you exercise.⁹² Walking is very good at reducing pain.⁹³ The best walking is energetic walking, holding the head high, and swinging the arms in time with your walking, while taking big steps.

While you are out there walking don't forget the benefit of sun to back pain. The sun stimulates antioxidants such as melatonin,⁹⁴ and it plays a role in vitamin D production. People with higher melatonin⁹⁵ and Vitamin D levels have less back pain.⁹⁶ The major determinant of melatonin and vitamin D levels is sun exposure.^{97,98}

STRETCHING

Now, while walking is the best overall exercise, there additional stretches and exercises which have value in treating back pain. Over all, personal fitness reduces back pain.⁹⁹ Stretching is particularly helpful, because it improves one's range of motion, makes connective tissues more flexible, and reduces stiffness which can lead to injury.¹⁰⁰ Stretching exercises can be a preventative measure as well as a treatment.^{101,102}

Let's start with flexion exercises or stretching. Flexion exercises can be very good for the spine, easing back pain.^{103, 104} An easy example would be bending over and trying to touch your toes. Now, you may say, that's easy, I know how to do that. And while it is easy and you may know how to do that, do you know how long to do it for? The answer is two minutes. That's write, two minutes. Two minutes of stretching on each of these stretches ensures that the muscles

assume a new length and do not rebound and get tighter. Forward flexion exercises strengthen abdominal and buttock muscles reducing the load on the spine. They also stretch the back and hip muscles and widen the spaces between vertebrae, thereby reducing pressure on the nerves. These are slow, easy stretches. Sudden twisting or vigorous forward flexion, such as aerobic dancing and rowing could raise pressure in the discs and may actually do more harm than good.

The opposite of flexion, or forward bending, exercises are called extension exercises or stretches. These exercises open up the spinal canal and develop the muscles that support the spine. Extension exercises may minimize pain that radiates from your back to other parts of your body.¹⁰⁵ An example would be laying on your stomach on a bed, while keeping your pelvis flat on the bed, use your arms to do, as it were, a push-up, arching or extending your back. Again, hold each of these stretches for 2 minutes.

The next exercise or stretch, in this routine designed to fight back pain, would be a twisting stretch. My favorite variety of this exercise is to sit in a chair with my legs tucked under the seat between the chair legs, and then grab the back of the chair with my hands and twist my shoulders as far in one direction as is reasonable. For me, when I have had back pain, this stretch has made the most difference. Again, I hold it for two minutes. After two minutes, twist in the opposite direction for two minutes.

The next back pain stretch is what is sometimes referred to as the piriformis stretch.¹⁰⁶ While lying flat on one's back, flex the right hip up into sitting position, or 90 deg. Grab the knee with the right hand and the ankle with the left hand. Bring the right knee toward the right shoulder and the ankle toward the left shoulder as far as is reasonable. Again, hold it there for 2 minutes. Then perform the stretch on the opposite leg for two minutes.

The next exercise I refer to as the windshield wiper exercise. The exercise is done standing

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with your back to a wall. Slightly bend your knees (meaning, don't lock the knees in a straight position). Lift both shoulders at same time and roll them back to touch the wall. Put your hips against the wall, then your back, and then the back of your head. You are now in the correct anatomical position. The bending will be done while staying in this position in contact with the wall. That way there is no twisting of the spine. Slowly bend to one side, reaching the hand down toward the knee, stretch to tolerance (will feel some stretching, but you don't want any pain). This exercise you will not do for 2 minutes, just hold the stretch for 10 seconds (or 4 deep breaths). Then come back up to the neutral position (standing up straight). On this side-bending exercise, the individual will need to bend the knee on the side he/she is bending towards. Next, slowly bend to the opposite side. Again, hold for 10 seconds or 4 deep breaths. Return to standing up straight. This is one repetition. Do a total of 6 repetitions and do the exercise once a day.

NECK EXERCISES FOR NECK PAIN

For neck pain, stretches can also be helpful. Do each one for 2 minutes.

The First is to turn the head as far to one side as is practical and see if you can put your chin on or over your shoulder. Hold it there for 2 minutes and then turn to the other side for 2 minutes.

Next, flex the neck, with your chin to your chest, for 2 minutes and then extend the neck, chin toward the roof, for 2 minutes. If at any time you feel faint, stop the exercise and return the neck to its usual position.

Next is to try to put your ear on your shoulder, first one direction and then the other for 2 minutes each.

Next are exercises where you resist the push of your hand. Place your hand on your forehead and press against it for 2 minutes. Then repeat with your hand behind your head, pressing for 2 minutes.

Then, on each of left and right sides of your head, repeat this exercise of pressing against your hand for 2 minutes each side.

AEROBIC EXERCISES

Aerobic exercises can also be helpful.¹⁰⁷ It would be good to get at least 30 minutes of aerobic exercise three times a week. Aerobic exercises include brisk walking, jogging, and swimming. Aerobic exercise gets your heart pumping faster. If you cannot do 30 minutes at a time, try three 10-minute sessions per day and work up.

THE REST OF THE STORY

Let's talk about George again, the gentlemen that came to me for a second opinion on his back pain. I waited a week and looked at my list of patients, and he was on the list. I was thinking and wondering if he was going to show up. He did, and he was looking pretty stoic. I asked him to come in and he walked down the hall. I was bursting with curiosity, I said, "Well, did you do it? What happened? He says, "Well, Dr. Clark, within three days I could tell a dramatic difference, my back pain was totally gone, I was feeling so much better, that deep aching pain that always took all my energy was gone, I could do things with the kids again", he said, "but, I had a problem, I was always drinking iced water between meals, because I was always hungry between meals, and I was always going to the bathroom." He said, "I was wide awake though, when I was on break at Walmart, everybody else was nodding off and going to sleep and eating their junk food, and here I was, wide awake!" We talked a little more, and I said, "Well, I guess there's not much more to do for you, you're basically fixed, and you did it yourself, and you'll have to expand on your diet, the more you can eat of a vegetarian diet, that's low in fat and low in refined products the better off you'll be. So, he left. About three months later I was going to Walmart and I walked over

to the vegetable section, and there he was, he was pushing a cart in the vegetable section, I said, "How are you doing" and he said, "Oh hi Dr. Clark, praise the Lord I'm doing well, my back's great, I'm finding a new house and I'm moving to a new area of town where I can walk out in the country."

IN SUMMARY

- Hydration is very important because your discs are supposed to be about seventy to eighty percent water and if you don't drink your water they become zero percent water and turn into hard pancakes, like hard rubber, and then they're painful because that hard rubber has nerves in it.
- Nutrition is especially important, because nutrition is part of keeping the blood vessels open, and keeping the blood going to the discs, and keeping the best antioxidants reaching the discs.
- Exercise is valuable because it keeps pumping the discs so that you get the food to the center of the discs and the waste products away from the disc, it's also important for getting the oxygen to the disc cells.
- It is best to exercise outdoors where you have more oxygen and less stress. Stress management is very important, because there's a lot of psychological connections between why people have low back or neck pain.

"Today thousands are sick and dying who might get well if they would; but imagination keeps them sick. Self-made invalids, they think that to work would make them worse, when work is just what they need to make them well. Without labor, they can never improve. When the body is inactive, the blood flows sluggishly, and the muscles decrease in size and strength. Rising above their aches and pains, forgetting that they have aching backs, sides, and heads, they should engage in useful employment. Physical exercise, and a free use of air and sunlight, --blessings which heaven has abundantly bestowed on all, --would give life and strength to many an emaciated invalid."ⁱ—E.G.White

ⁱ White, E. G. (1902, February 27). "The Blessing of Labor." The Youth's Instructor.

CHAPTER 14

AUTOIMMUNE INFLAMMATORY DISEASES: WHEN SELF IS THE ENEMY

“How long will he have to live in that bubble?” David Vetter, born with a dysfunctional immune system had lived in a sterile plastic “germ-free isolator” world all of his life. The question was; when would science deliver on its quest, through some new technological advance, to find a solution to David’s dilemma? If allowed to encounter the environment, the one we live in every day, David would most certainly pick up a pathogen that would end his life. Even NASA got involved! Top engineers put their heads together and crafted a most eloquent space suit for David. But after a few forages out into the real world, David’s fears of contamination, microbes and death drove him back to his reclusive spot at Baylor University Medical center. David finally died when an attempt to solve his life-threatening condition with a tissue transplant operation, failed to resolve his immune system deficiency.¹

If we did not have an immune system, we like David, would die. But where did our immune system come from? “I will praise thee; for I am fearfully and wonderfully made: marvellous are thy works; and that my soul knoweth right well.”²

THE ADVANTAGE OF AN IMMUNE SYSTEM

The skin is our first line of defense. “Every square inch of human skin consists of 19 million cells, 60 hairs, 90 oil glands, 19 feet of blood vessels, 625 sweat glands, and 19,000 sensory cells that can transmit information at more than 200 miles an hour.”³ What is more, immune cells of the skin secrete antibodies that can stop invaders. And not just from the skin of our

bodies, antibodies from the immune system emerge to protect the nose, sinuses, throat, lungs, stomach, and intestines. Without these antibodies from the immune system, we’d all be doomed.

After the skin, our next line of defense centers in our immune system’s ability to mount an all-out counterattack to invaders, and I do mean counterattack. These invaders can be identified or unidentified. If the immune system identifies them (has had experience with them before) then it can deal more specifically and carefully with them. If the immune system has never seen them before, then it gets out the big guns and shoots anything that seems out of place. As long as this line of defense only destroys invaders, we are happy. This line of defense is called inflammation. It is especially active to deal with any new injury, antigen, bacteria, or virus.

FRIENDLY FIRE: WHY AUTOIMMUNE INFLAMMATORY DISEASE?

A compromised immune system cannot deal with infections and antigens in its usual healthy way, consequently it resorts to inflammation. Tissue damage often occurs as the body attempts to rid itself of disease.⁴ When the only weapon available is a sledgehammer, collateral damage is sure to occur. Autoimmune inflammatory diseases arise under several situations where the immune system is not able to function most efficiently. Inflammation can occur when: the immune system is not in optimal health, the immune system is confused by hostile antigens, the immune system is

overstimulated, the immune system's inflammatory process is secretly triggered, or the immune system is overpowered by oxidative stress or other sources of inflammation. A few examples of autoimmune inflammatory diseases that occur under these conditions are rheumatoid arthritis, polymyalgia rheumatica, psoriasis, ankylosing spondylitis, polyarteritis nodosa, scleroderma, inflammatory bowel disease, ulcerative colitis, Crohn's disease, irritable bowel, some cases of type I diabetes, fibromyalgia, multiple sclerosis, systemic lupus erythematosus, allergy, chronic fatigue, and asthma, etc.

WHAT PERTURBS THE IMMUNE SYSTEM

The list of what brings down the immune system so that it resorts to primitive means of defending the body could be very long. We will try to point out some of the ones most common and the most dangerous, rather than giving an exhaustive list.

A compromised immune system cannot deal with infections and antigens in its usual healthy way, consequently it resorts to inflammation.

THE AGING IMMUNE SYSTEM

As we age our immune system tends to lose its acuity making autoimmune inflammatory diseases more likely.⁵ Now you may be thinking, "There is nothing I can do about aging!" But, as you will discover, aging can be influenced for better or for worse.

STRESSING THE BODY'S DEFENSES

Stress essentially drives the immune system to suicide. Emotional stress or job "burn out" provokes inflammation, increasing the risk of cardiovascular disease and autoimmune inflammatory disease.⁶ Having experienced major stressful life events within the last 2 years

increases the risk of developing an autoimmune inflammatory disorder 140%.⁷

ANTIOXIDANTS

A deficiency of antioxidants favors oxidative stress. Oxidative stress kills cells: The immune system then makes anti-bodies to their spilled DNA.⁸ Many autoimmune inflammatory diseases are identified by the presence of anti-DNA antibodies.

HEAVY METAL BLUES

Heavy metals increase the body's inflammation, increasing the risk of autoimmune inflammatory diseases. Top heavy metal villains include lead,⁹ mercury, beryllium, nickel, chromium, cobalt,¹⁰ cadmium, and vanadium.¹¹ Mercury increases inflammatory tissue damage by 50%.¹²

THE DRUGGED IMMUNE SYSTEM

Many drugs are known risk factors for these diseases. For example, estrogens: estrogens enhance the release of inflammatory mediators from white cells in the immune system.¹³ Oral contraceptive use increases autoimmune inflammatory disease risk by 90%.¹⁴ Hormone replacement therapy increases autoimmune inflammatory disease risk 150%.¹⁵ Pharmaceutical drugs are not the only source of these hormones. Chemicals and animal products are also big sources of hormone and hormone like substances that can cause autoimmune inflammatory disorders.

BETTER LIVING THROUGH CHEMISTRY?

There are many chemicals, especially in some work environments,^{16,17} which increase the risk of autoimmune inflammatory disease.¹⁸ For example, hair preparations, especially dyes, increase the risk of an autoimmune inflammatory disease by 90%.¹⁹ Another culprit is Sodium Lauryl Sulphate (SLS), which breaks down the body's barriers to antigen invasion and it also causes inflammation.²⁰ SLS is the

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most common major ingredient in shampoo's, toothpaste and other personal care items.

What are you eating? Food preservatives, such as BHA (3-tert-butyl-4-hydroxyanisole),²¹ and additives, such as emulsifiants, thickeners, surface-finishing agents and contaminants like plasticizers can trigger inflammation in the body.²²

Do you eat crackers with soup? The stomach's job is to produce acid for the digestion of food. When alkali substances such as baking soda/powder are ingested, as found in crackers, many biscuits and cakes, the stomach has to work twice as hard to achieve the same level of acidity. Baking soda/powder intake is associated with a 190% increase in risk of stomach cancer, a cancer often the result from increased stomach acidity, irritation, and inflammation.²³

Toxins and waste products are eliminated through the skin. People avoid jobs that provoke sweat and as a result skin pores become clogged with waste. Consequently, a greater burden is placed on the liver, bowels and kidneys to dispense of these. This leads to increased inflammation and increased skin, liver, bowel, and kidney disease. Good skin hygiene helps combat inflammatory disease.²⁴ Good skin hygiene may involve thorough scrubbing, brushing and sweating.

WOULD YOU LIKE THAT FRESH OR ROTTEN?

Can you find a good banana in a dumpster? Aflatoxins, formed in the process of aging or fermenting,²⁵ are a source of inflammation.²⁶ Dietary sources of aflatoxins include cheese,²⁷ wine, vinegar, and any food created by rotting or fermentation. Scientists use weak vinegar solutions to cause inflammatory bowel disease in rats as a model for studying ulcerative colitis and Crohn's disease in humans.^{28,29} What is more, chemicals formed when foods are pickled³⁰ increase oxidative stress, inflammation,³¹ autoimmune disease, and cancer.^{32,33}

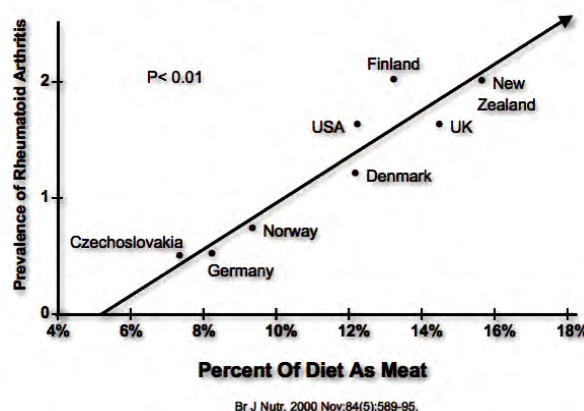
Another source of aflatoxin exposure is the environment. Mold in the environment increases the risk of autoimmune inflammatory

disease by 180% for the lungs³⁴ and 360% for joints.³⁵ Shade trees and shrubbery close and dense around a house, water-damaged buildings,^{36,37,38,39} decaying leaves,⁴⁰ compost heaps,⁴¹ sauna baths, wet basements, swamps and lowlands—all are sources of aflatoxins and inflammation. Avoid all decay, both personal and environmental.

PERFECT HEALTH DEPENDS ON PERFECT CIRCULATION

Inflammation increases when blood flow is congested and slowed.^{42,43,44,45} As a result autoimmune inflammatory diseases are more likely with a sedentary lifestyle, tight clothing or cold extremities. On the other hand, when circulation is quickened, inflammation decreases.⁴⁶

Meaty Statistics



In cold weather, wearing short sleeves or short pants exposes the limbs to cooling, chilling the blood back from the extremities to the chest, abdomen and pelvis where inflammation can set in. Additionally, the circadian rhythm (your internal equilibrium clock which controls the balance between inflammation and anti-inflammation) is disrupted,⁴⁷ inflammatory mediators are released,^{48,49} and the risk of autoimmune inflammatory disease increases.

Studies show that tight clothing has a negative effect on the body. From slowed digestion of food to increased inflammatory mediators, tight clothing is sure to increase

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one's risk of autoimmune inflammatory disease.^{50,51}

Another way in which circulation is unbalanced, and can be the source of inflammation, is through overwork of the brain. Overwork of the brain in the absence of good outdoor physical exercise results in increased inflammation. Inflammatory diseases are significantly more prevalent in those doing mental work compared to those involved in physical labor.⁵²

SLEEPING OFF THE DISEASE

Sleep loss is associated with increased inflammation and autoimmune disease.^{53,54,55,56} Many of the things that we are discussing affect sleep quality and therefore also affect the risk of disease.

AIR QUALITY CONTROL

Indoor air has far more contaminants than outdoor air. Indoor air contaminants are a source of inflammation. Contaminants include breathable dust, nitrogen dioxide, chemicals such as formaldehyde, aspergillus aflatoxins, and various molds.⁵⁷

DON'T LET THIS ONE GET OUT OF HAND

Some causes of autoimmune inflammatory disease start small and increase with time to something bigger than expected. Improper use of the voice,⁵⁸ voice strain,⁵⁹ shallow or improper breathing^{60,61} can all cause inflammation of the lungs and throat increasing the risk of autoimmune inflammatory diseases.

Repetitive or forceful tasks cause tissue microtraumas leading to inflammation that can spread to the whole body⁶² increasing the risk for autoimmune inflammatory disorders.^{63,64,65}

CONDIMENTS AND SPICES

Strong dietary condiments and spices can be the source of inflammation leading to autoimmune disease. Mince pies, cakes, preserves, highly seasoned meats with gravies,

pickles, excessive salt, grease, pepper, mustard, and ketchup, etc.

Excessive salt intake increases hypertension and renal injury caused in part by oxidative stress and inflammation in the kidneys and blood vessel walls.^{66,67}

Red and black pepper significantly increase the stomach's acidity leading to cell destruction, microbleeding, and inflammation.⁶⁸ Red pepper increases stomach acid excretion 700%.⁶⁹

STIMULANTS

What about caffeine? Caffeine and its relatives increase the risk of acquiring an autoimmune disease. Once inflammation starts in the body, caffeine can accelerate it by 300%-600%.⁷⁰ Chocolate increases the risk by 150%, cola drinks by 120%⁷¹ and coffee 118%.⁷²

Does alcohol impair the immune system? Alcohol consumption increases free radical formation and whole-body inflammation.⁷³ Wine can be especially aggravating, worsening such inflammatory diseases as asthma.⁷⁴

Smoking (even second-hand smoke)⁷⁵ causes increased inflammation thereby using up the body's protective antioxidant resources. Toxic fumes and caustic chemicals from burning tobacco increase the risk of acquiring an autoimmune inflammatory disease.^{76,77} The risk of acquiring an autoimmune inflammatory disease increases 65% with smoking and 98% with alcohol consumption.⁷⁸

FOOD WOULD YOU LIKE THAT FRESH OR ROTTEN?

Notice that we have been writing about a lot more than just diet. Diet is important, but there is a whole lot more to autoimmune disease than just diet.

SNACK ATTACK!

Fried potatoes, salty snacks, desserts and processed meats are among the top instigators of elevated oxidative stress and whole-body inflammation.⁷⁹ Can you name one snack food that is healthy?

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WESTERN DIET WOES

A number of studies have identified the western diet, (described variously as including red meat, processed meat, pork/hot dogs, butter, lard, hydrogenated fats, high-saturated fat, high-fat dairy, eggs, french fries, potatoes, regular and diet soft drinks, pizza, refined grains, breads and pastas, coffee and tea, sweets/candy and desserts), as increasing the risk of autoimmune inflammatory diseases by as much as 210%.^{80,81,82}

THE KEY IS TO EAT YOUR PROTECTION

Patients suffering from autoimmune inflammatory disease have significantly lower blood antioxidants levels.^{83,84} Studies also show that commercial supplements are of no value in correcting this deficiency.⁸⁵ Proper diet is the only solution to poor nutrition and reducing the risk of autoimmune inflammatory disease.⁸⁶

FIBER: START ROUGHING IT

Patients suffering from autoimmune inflammatory disease can also have significantly lower fiber and magnesium intakes. Fibrous foods are usually higher in magnesium. Fiber and magnesium deficiency are associated with a 300%-400% elevation in inflammation.⁸⁷

MINERAL DEPLETION IS A GLOBAL ISSUE

The amount of magnesium in all foods has decreased by 19% in the last 50 years.⁸⁸ Low levels of zinc,⁸⁹ selenium,⁹⁰ and magnesium⁹¹ are associated with increased inflammation. Whole wheat flour has 530% more magnesium, 320% more zinc, and 110% more selenium than white flour.⁹² Pumpkin seeds are a rich source of zinc and Brazil nuts are a good source of selenium.

DOUGHNUT DESPAIR

Doughnuts are a huge source of advanced glycation end products! Carbohydrates fried

with oil accumulate advanced glycation end products (AGEs), toxins that activate the body's inflammatory mediators.^{93,94} AGEs can also be formed in the body if the blood sugar becomes elevated. A slice of 100% whole wheat bread has 536 AGEs units,⁹⁵ while a plain-glazed doughnut weighs in at a whopping 425,740 units of AGEs.⁹⁶

HIGH-FRUCTOSE IS HIGH RISK

Fructose (in all its forms, e.g., high fructose corn syrup) activates inflammatory mediators in the liver⁹⁷ and blood vessels^{98,99} increasing the risk for autoimmune inflammatory disease.

RISK MANAGEMENT

The results of a study that came out of Israel help put things in perspective. Dietary choices that increase autoimmune inflammatory disease risk include sugar (430% increased risk), cholesterol (360%), eggs (350%), saturated fat (animal fat, 310%), soft drinks (300%), and vegetable oil (22%).¹⁰⁰

FAT AND CHOLESTEROL

Dietary cholesterol is especially harmful.¹⁰¹ Cholesterol provokes the immune system to increase inflammation.^{102,103} A high-cholesterol diet more than triples the risk of autoimmune inflammatory disease.

High-fat food is at greater risk for lipid oxidation or peroxidation. Cheese is high in fat and is created by decay, thus it is high in oxidized lipids (fats). These oxidized cheese lipids significantly increase the risk of autoimmune inflammatory diseases.^{104,105}

Butter significantly increases oxidative stress by stimulating the immune cells to produce inflammation when there is no other reason to be causing inflammation.¹⁰⁶

High-fat diets increase body inflammation.¹⁰⁷ Of special concern are trans-fats that significantly increase the inflammatory responses of the body. Saturated fat, as found in animal products and tropical oils such as palm oil, have been shown to increase the body's

inflammation.¹⁰⁸ Compared to a diet predominating in monounsaturated (vegetable) fat, eating a high-saturated (animal) fat diet increases body inflammation 270%.¹⁰⁹ What's more animals fed a fatty diet develop a high rate of autoantibodies (antibodies against one's own self),¹¹⁰ a classic finding in autoimmune inflammatory diseases.

Of special concern are oils that have been become oxidized. Oxidized oils pose an immediate and long-term threat to body anti-inflammatory reserves heightening the risk of multiple autoimmune inflammatory diseases.^{111,112} Oxidized oils are common to deep fat fryers, fried foods, and packaged foods with a long shelf history.

Cooking food in oil (frying) produces trans-fat,¹¹³ acrylamide¹¹⁴ and lipid peroxidation.^{115,116} These by-products of frying are all stimulators of inflammation leading to increased risk of autoimmune inflammatory disorders.¹¹⁷ Trans-fat can also be found in hydrogenated and partially hydrogenated vegetable oils, margarines and shortening.

Oxidized cholesterol promotes tissue inflammation and cell death leading to atherosclerosis (inflammatory heart disease) and autoimmune inflammatory disease.¹¹⁸ Common sources of oxidized cholesterol are spray-dried egg powders (such as found in pancake mixes), Parmesan cheese, butter oil, ice cream, sausages, and beef tallow. Oils and cholesterol are especially apt to oxidation when heated in the presence of air for a longer period for example in deep-frying at fast food restaurants.¹¹⁹

SAME FOODS EVERYDAY?

Eating the same foods day after day overwhelms the body's food tolerance mechanisms and can result in food allergy and/or autoimmune inflammatory disease.¹²⁰

ENRICHED!

A diet high in refined carbohydrates negatively affects the balance of free radical

generation and antioxidant defense leading to inflammation overload.^{121,122,123} A breakfast consisting of a bowl of corn flakes with skimmed milk, a piece of toast and a glass of orange juice converts almost instantly to 16 teaspoons of sugar. Sixteen teaspoons of sugar will increase the body's oxidative stress and inflammation by 240%.¹²⁴ A can of soda has 12 teaspoons of sugar.

Patients with autoimmune inflammatory diseases have a high incidence of sensitivity to wheat gluten, as high as 10 times higher than normal individuals.

Refined grain products, (e.g., white bread, white rice, white pasta), tip the body's oxidant/antioxidant balance toward oxidation, increasing inflammation and the risk of autoimmune disease.^{125,126}

THE GLUTEN CONNECTION

Patients with autoimmune inflammatory diseases have a high incidence of sensitivity to wheat gluten, as high as 10 times higher than normal individuals.¹²⁷

ANIMAL ANTIGENS

Individuals with autoimmune inflammatory disease show higher than normal sensitivities to animal product antigens; 1200% higher for dairy, 600% for eggs, 460% for pork, and 400% for fish.¹²⁷ If you have autoimmune disease or know you should be taking precautions to avoid autoimmune inflammatory disease it might be prudent to stay away from these sources of disease.

MORE ON MILK

The link between dairy and autoimmune inflammatory diseases is multifactorial,^{128,129}

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milk is immunosuppressive,¹³⁰ it has many hormones which increase disease risk,¹³¹ milk is the source of many infectious agents (viruses and bacteria) that precipitate autoimmune inflammatory disease,¹³² it contains many antigens which initiate the autoimmune process,^{133,134,135,136} and milk provokes and aggravates¹³⁷ the inflammatory process.¹³⁸

GO BIG RED

Why is red meat red? Heme iron makes red meat red and red cells red. Heme iron increases the body's sensitivity to oxidative stress and inflammation.¹³⁹ Consumption of red meat increases the risk of autoimmune inflammatory disease by 130%.¹⁴⁰ Epidemiological studies comparing the amount of meat eaten in countries around the world with how much autoimmune inflammatory disease they have, shows that with increased meat consumption there is increased disease.¹⁴¹ The message of course is, if you need an autoimmune inflammatory disease, eat more meat.

PROTEIN PORTIONS

Many people these days are worried about whether or not they are eating enough protein in their diet. It is a bit of a mania. In fact, it is actually hard to achieve a low protein diet. Protein, eaten in excess of body needs, increases the risk of autoimmune inflammatory diseases by 190%.¹⁴⁰ (For more information on protein, please refer to our handout and presentation on osteoporosis.)

VARIETY, THE SPICE OF LIFE?

Most people in developed countries like to eat a large variety of food at each meal as though they had to balance their entire life's nutritional requirements at one sitting. Excessive antigenic load, as encountered in a complex meal comprised of multiple diverse foods, can provoke autoimmunity, allergy, and inflammation.¹⁴²

EAT TO LIVE, OR LIVE TO EAT?

Another instigator of the autoimmune inflammatory process is overeating. Overeating provides fuel for a bigger fire than can be healthfully managed. Excessive caloric intake is associated with increased body oxidative stress¹⁴³ and increased incidence of autoimmune inflammatory diseases.⁸² On the other hand reduced caloric intake decreases autoimmune inflammatory disease risks.¹⁴⁴

Many people these days are worried about whether or not they are eating enough protein in their diet. It is a bit of a mania. In fact, it is actually hard to achieve a low protein diet.

WEIGHT MANAGEMENT

For the avoidance of these diseases, carrying extra weight is not ideal. Studies show that whole body inflammation increases with increasing body weight.^{145,146} Being overweight increases the risk of acquiring an autoimmune inflammatory disorder by 275%.¹⁴⁷

As a person gains weight, fat tends to gather about the abdomen. While much of this fat is external, a large portion of it is also internal, around the organs. This internal fat is termed organ or visceral fat. Visceral fat is another source of inflammation¹⁴⁸ and oxidized fat. For each 1% increase in visceral fat, the risk for increasing inflammation goes up an additional 140%.¹⁴⁹

A CASE OF MISTAKEN IDENTITY

Worms—could there be a case of mistaken identity? Trichinellosis, a parasite acquired from eating pork and bear, is associated with increased inflammation.^{150,151} Musculoskeletal symptoms include muscle pain, joint pain, muscle weakness, and restriction of joint movements.^{152,153}

Trichinellosis is not the only infection implicated in autoimmune inflammatory conditions. Viral and bacterial infections are

being implicated more and more in the development of autoimmune inflammatory diseases.^{154,155,156,157} Autoantibodies increase with the number of infections a person has suffered in their lifetime.¹⁵⁸ Numerous infectious agents, including Salmonella,¹⁵⁹ E. Coli, Streptococcus and Mycobacterium,¹⁶⁰ have been linked to autoimmune inflammatory diseases. The most abundant source of these infectious agents is animal products.^{161,162,163,164,165}

NEEDLING THE IMMUNE SYSTEM

There are some risky behaviors that may need to be avoided. One of these, about which more and more scientific evidence is emerging, is vaccination. For example, receiving measles, mumps, and rubella vaccine (MMR) vaccination significantly increases the odds of acquiring chronic inflammatory arthritis.¹⁶⁶ Compared to receiving the common tetanus vaccine: receiving a hepatitis B vaccine increases the odds of acquiring multiple sclerosis by 420%, systemic lupus erythematosus by 810%, and rheumatoid arthritis by 1700%!¹⁶⁷

EXERCISE

It has been said, "If you don't find time to exercise, you will have to find time to be sick." When one sits around, it is like a car idling; smoke and fumes build up. For the sedentary individual, inflammation builds up, increasing the risk for autoimmune inflammatory disease.¹⁶⁸

STRICT SCHEDULE

How regular are you—I mean in your schedule? Studies show that extended and irregular shift work confers an increased risk of contracting an autoimmune inflammatory disease.¹⁶⁹

RESULT OF PERTURBING THE IMMUNE SYSTEM

Once the immune system becomes off balance it can really fall a long way from normal, resulting in signs and symptoms that culminate in autoimmune inflammatory disease. Besides all the well-recognized autoimmune inflammatory diseases listed earlier there are other unhappy outcomes to letting the immune system fall into disarray. We will list just a few.

The presence of an autoimmune inflammatory disease is a good sign that the immune system is probably going to have trouble performing its usual function with success. Most autoimmune disease is associated with immune suppression or dysfunction. People with autoimmune inflammatory disorders are 85% more likely to acquire serious life-threatening infections. The most common sites of infection include, joints, skin, soft tissues, and the lungs.¹⁷⁰

Despite increased medical treatment options, patients with autoimmune inflammatory diseases do not enjoy lengthy lives.¹⁷¹ Pneumonia, tuberculosis, and liver disease are significantly increased as causes of death in these patients.¹⁷²

Chest pain; should autoimmune inflammatory disease patients be worried? Inflammatory disease not only affects bones, connective tissue, and joints, but blood vessels and heart muscle as well. Patients with autoimmune inflammatory disease are 90% more apt to have congestive heart failure,¹⁷³ 95% more likely to die of sudden cardiac arrest, and 220% to have a heart attack.¹⁷⁴

Many autoimmune inflammatory disease patients suffer from osteoporosis, (thinning of the bones), making them more susceptible to fractures. The inflammatory process involved in autoimmune disease is also a major player in osteoporosis.¹⁷⁵ Many of the medications with which autoimmune inflammatory disease are treated also cause osteoporosis.

Cancer is also often the result of a deficient immune system. Immunity is a function of white blood cells. As a consequence of inflammation

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and immune compromise, the risk of leukemia (blood cell cancer) increases 150%.¹⁷⁶

RESTORING AND MAINTAINING THE IMMUNE SYSTEM

Let us change gears now and talk about how to restore a failing immune system and maintain it in a condition to assure the avoidance of further inflammatory disease, its complications, and its pain.

FRESH MORNING AIR

Occupations involving physical work in the open air are protective, while working in artificial, air-conditioned environments increase the risk of contracting an autoimmune inflammatory disease.^{177,178} One of the most effective immune boosters is an early morning walk in the fresh air near a body of water as the sun is just coming up.¹⁷⁹

HAVE YOU SEEN THE SMILING SUN RECENTLY?

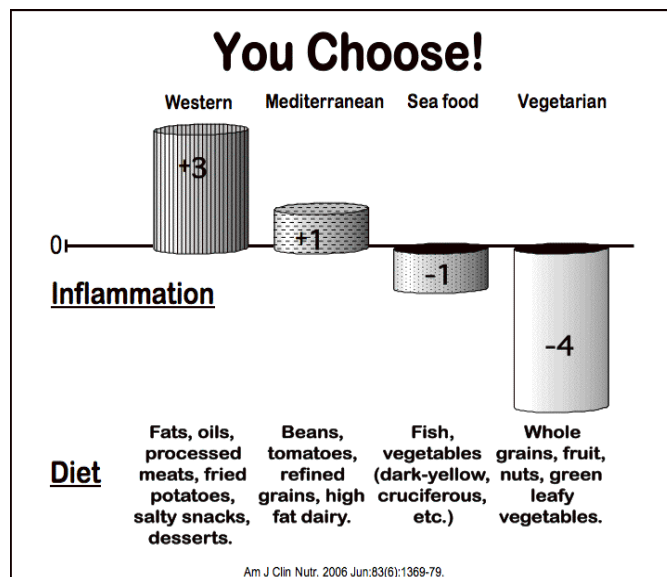
Sunlight exposure reduces inflammation in the body.^{180,181,182} Sunlight exposure is a major source of vitamin D.¹⁸³ Vitamin D deficiency increases the risk of many common cancers, multiple sclerosis, rheumatoid arthritis, hypertension, cardiovascular heart disease, and type I diabetes.¹⁸⁴ It is recommended that at least 25% of your skin be exposed to the sunlight for 20 minutes each day, and longer if you have darker skin.

WHAT ABOUT EXERCISE?

“But I can’t exercise, I have pain!” you may be thinking. Exercise tips the inflammatory/anti-inflammatory balance in favor of reduced inflammation and reduced disease risk.^{185,186,187,188} With few exceptions, sufferers of autoimmune inflammatory diseases benefit significantly from physical activity, which leads to significant improvements in strength, pain, and fatigue without making the disease worse.^{189,190,191,192,193}

As individuals age their immune system declines. Being physically fit helps to slow this decline. The immune system responds positively to moderate exercise, while too much exercise tends to suppress it.¹⁹⁴

While you are out exercising, as I know you



will be, loose clothing is of greater benefit than clothing that restricts movement and blood flow. Tight clothing has been shown to interfere in body temperature variations, blood flow and hormone levels; factors implicated in autoimmune inflammatory disease.¹⁹⁵

CIRCADIAN RHYTHMS: THE BODIES INTERNAL CLOCK

Our bodies run on clocks. The anti-inflammatory/inflammatory balance cycles on a clock called your circadian rhythm.^{196,197} The anti-inflammatory circadian clock malfunctions when meal times are varied, or meals are taken late in the evening,^{198,199} sleeping times are varied,²⁰⁰ insufficient, or shifted to a late bedtime and/or late rise time, a job requires shift work where daily schedules vary on some days, such as on days off or weekends.²⁰¹ Regularity in sleeping hours improves overall sleep quality and anti-inflammatory effect. For the autoimmune inflammatory patient, we recommend a strict schedule for sleeping hours with a set nightly bedtime no later than 9:30 p.m., and a set regular rise time between 7.5

and 8 hours later on all weekdays and weekend days.²⁰² We recommend regular mealtimes every day of the week not varying by more than 5 minutes with no meal later than 5:30 p.m.¹⁹⁷ We recommend regularity in exercising every day of the week including days off and weekends.²⁰³

DIETARY CHOICES

A study was performed comparing four diets: (1) fats and processed meats diet (fats, oils, processed meats, fried potatoes, salty snacks, and desserts)—the western diet, (2) beans, tomatoes, and refined grains diet (beans, tomatoes, refined grains, and high-fat dairy products)—a Mediterranean like diet, (3) vegetables and fish diet (fish and dark-yellow, cruciferous, and other vegetables)—sea food diet, and (4) whole grains and fruit diet (whole grains, fruit, nuts, and green leafy vegetables)—vegetarian vegan diet. The western diet raised three markers of inflammation, the Mediterranean diet raised one marker of inflammation, the seafood diet lowered one marker of inflammation and the vegetarian vegan diet lowered four markers of inflammation; showing the superiority of the vegan diet in addressing autoimmune inflammatory diseases.²⁰⁴

VEGETARIAN ADVANTAGE

A vegetarian diet has been found to have an anti-inflammatory effect on patients with active autoimmune inflammatory disease.^{205,206,207,208} A vegetarian diet stimulates the immune system, improves tolerance to noxious antigens found in less-ideal diets,²⁰⁹ and is loaded with antioxidant anti-inflammatory vitamins and phytochemicals. Another advantage to the vegetarian diet is its high content of natural antioxidants. Studies show that patients suffering from autoimmune inflammatory diseases eat significantly fewer antioxidant foods.²¹⁰ On the other hand studies show that high antioxidant intake decreases the bodies inflammation.²¹¹

There is a real advantage to eating fruit and vegetables. Fruits and vegetables are high in flavonoids,²¹² phytochemicals and antioxidants that have been found to lower the oxidative stress, inflammation and oxidation of lipids (fats) in the body.²¹³ Fruits and vegetables are high in vitamin A. Deficiency in vitamin A leaves the body unguarded against oxidative stress and autoimmune inflammatory disease.^{214,215} Good sources of vitamin A include sweet potatoes, carrots, kale, spinach, winter squash, cantaloupe, and broccoli.

Whole grains and fiber are also a part of an autoimmune inflammatory disease fighting diet. Diets high in whole grains have been shown to have a protective effect against systemic inflammation reducing the risk of autoimmune inflammatory disease.^{216,217} Fiber, as found in whole grain products and bran, reduces inflammation in patients with inflammatory disorders.²¹⁸

What about a “low carb” diet for reducing inflammation? To the contrary, low fat, high carbohydrate diets have been shown to significantly reduce whole body inflammation.²¹⁹

What diet provides the maximal amount of antioxidant, anti-inflammatory benefits? Fresh food, that taste of Eden, is most effective. Fresh food is an uncooked vegan diet consisting of berries, fruits, vegetables and roots, nuts, germinated seeds, and sprouts, i.e., rich sources of carotenoids, vitamins C and E, (some call this a “raw food” diet). People on a fresh food diet have been shown to enjoy improvements in symptoms of autoimmune inflammatory disease including pain, joint stiffness, quality of sleep, health quality, cholesterol, and weight management.^{220,221}

Another consideration is the health benefits of omega-3 fatty acids. Omega-3 fatty acids are associated with decreased inflammation, improvement in disease symptoms and reduced risk of acquiring autoimmune inflammatory disease.^{222,223} Good sources of omega-3 fatty acids are a vegetarian diet, olives, and flax seed. Olives, with their high levels of antioxidants, omega-3 fatty acids and phytochemicals, have been found to be helpful in the prevention and

treatment of autoimmune inflammatory disorders.^{224,225,226,227} Results are not immediate but usually felt within 12 weeks.²²⁸

Are you a python? Do you swallow your food whole?

Another single food we want to mention is lemon juice and citrus. Citrus contains many bioflavonoids, phytochemicals, and antioxidants that have been found to reduce inflammation^{229,230,231} and improve symptoms of autoimmune inflammatory disease.^{232,233,234}

We mentioned that too much protein has deleterious effects for the would-be autoimmune inflammatory disease survivor. But not all proteins are created equal. Soy protein reduces the risk of autoimmune inflammatory disease by 60% compared to a diet high in animal protein.^{235,236}

CHEW YOUR FOOD

Are you drinking juices or slurping smoothies? Are you a python? Do you swallow your food whole? A better method is to chew your food well and savor every bite. The immune tissue in the mouth and throat (tonsils), tests substances coming into the body to let the body know what is food.^{237,238,239,240,241} Allergy and autoimmune inflammatory diseases are more likely to flare up when food is not chewed long and well, when the body has not had a chance to recognize the antigens.^{242,243}

TEMPERANCE: ABSTINENCE FROM THINGS HARMFUL, MODERATION IN THINGS GOOD

A program designed to benefit patients with autoimmune inflammatory disease will most surely include methods for eliminating the use of such stimulants as tea, coffee, caffeine, tobacco, and alcohol.

Another aspect of temperance is eating moderate amounts of food. When more calories are consumed than are needed, inflammation increases. On the other hand, reducing calorie intake reduces the body's inflammatory

responses.^{244,245} The goal is to match caloric intake to body energy needs.

Taken a step further, fasting is a quick way to get an energy imbalance under control.²⁴⁶ Fasting has been found to reduce oxidative stress and inflammation, and improve symptoms of autoimmune inflammatory disease.^{247,248}

The outcome of caloric restriction could have another desirable result for some – that being weight loss. Being overweight is associated with increased risk of autoimmune inflammatory disease. Weight loss is associated with a decrease in oxidative damage to lipids (fats) and proteins and decreased inflammation.^{249,250,251}

WATER CONSUMPTION: I'LL DRINK TO THAT

Studies show that optimal water intake can lower the risk of autoimmune inflammatory diseases by as much as 60%.¹⁰⁰ On the other hand, dehydration (being low on water) enhances the inflammatory response of the body to hostile antigens.²⁵² We recommend 8-12 eight ounce glasses per day.

What water should I drink? We have a saying; “friends don't let friends drink tap water.” Contaminated water is also a source of inflammation.^{253,254} Water should be obtained which is pure and free from all substances, which can potentially induce inflammation. Depending on your water condition, filtering, distilling or other treatment may be necessary.

Drinking it is not the only beneficial use of water. Many people have discovered the benefits of hydrotherapy, the use of water for treatment of disease and maintenance of health. Acute inflammatory pain can be treated with either superficial heat for reducing guarding (fear and tensing) or with cold for reducing pain.²⁵⁵ The application of heat or cold to inflamed joints tends to improve pain, joint stiffness, and joint function. The application of cold tends to raise the pain threshold.²⁵⁶ Contrast (alternating hot and cold) hydrotherapy tends to improve circulation, greatly lowering inflammation.^{257,258}

AVOIDING THE OBVIOUS

The avoidance of heavy metal exposure is key to reducing the risk of and/or symptoms of autoimmune inflammatory disease. If a high level of exposure has been experienced in the past, it may be necessary to take steps to eliminate these toxins from the body.

VACCINATION BURNOUT

Repeated over-stimulation of the immune system, as in immunizations, can result in immune fatigue and burnout resulting in increased risk of autoimmune inflammatory disease.

SHOULD I DO A CLEANSE?

When toxin accumulation is the cause of immune dysfunction, toxin elimination may be the only way to get the immune system back in balance. Sweating, something we do not like to do in this day and age, may be just what is needed to expel the aggravating toxins.²⁵⁹ Skin brushing (exfoliation) can also be a part of this elimination process. Chelation is another effective way to get rid of especially heavy metals.²⁶⁰ This can often be accomplished with dietary modifications. Sometimes a diet totally devoid for a while of the toxin to be expelled can accomplish the same goal.²⁶¹ Some have even found a colon cleanse beneficial.²⁶² I knew of a patient who was successful at managing their inflammatory arthritis if they did a colon cleanse once a quarter (which made me wonder what they were doing the rest of the time to pollute their colon again).

Another useful modality for the removal of toxins and inflammation is charcoal. Charcoal can be used for inflammation as an oral supplement,²⁶³ and as a topical treatment.^{264,265} Studies show that it is effective in reducing the symptoms and signs of autoimmune inflammatory disease.²⁶⁶

MIND BODY CONNECTION

Trust in Divine power: Spirituality is associated with less depression and increased feelings of health in patients with autoimmune inflammatory disease.^{267,268} Studies reveal that religious intervention such as intercessory prayer increases immune function, improves rheumatoid arthritis, and reduces anxiety.²⁶⁹ In a study of autoimmune inflammatory patients, six hours of one-on-one intercessory prayer was associated with significant overall improvement in disease that lasted the entire subsequent year of the study's duration.²⁷⁰

Given the relationship between stress and autoimmune inflammatory disease, stress reduction should be a priority with autoimmune disease sufferers.^{271,272} The dietary changes we advocate have also been found to reduce the psychological symptoms of stress.²⁷³ Improved spiritual health has been shown to be a valuable aid in stress management.²⁷⁴ Has not God said; "Come unto me, all ye that labor and are heavy laden, and I will give you rest."²⁷⁵ He is the great burden bearer; trusting in Him alleviates stress.

IN SUMMARY

As you engage in an autoimmune inflammatory disease recovery program you will find it helpful to *eliminate* all:

- Animal products including dairy and eggs.
- Possibly wheat gluten.
- Oxidized oils or cholesterol.
- Refined foods; sugars, starches, grains, and oils.
- Excess dietary calories.
- Foods or drinks created by aging or fermentation.
- Stimulants; coffee, tea, tobacco and alcohol.
- Strong irritating spices.
- Excess body weight.
- Tight clothing and clothing that does not provide adequate and evenly distributed warmth.
- Excessive meals (fasting may be helpful).

Autoimmune Inflammatory Diseases: When Self is the Enemy

As you engage in an autoimmune inflammatory disease recovery program you will find it helpful to:

- Have a regular schedule throughout the day for sleep, meals and exercise.
- Eat a whole plant food diet with plenty of fresh fruits and vegetables, omega-3s and fiber.
- Chew your food thoroughly and swish it around your mouth.
- Make use of pure water: drink plenty, bathe often, and perform hot and cold treatments.
- Make wise application of charcoal as poultices and taken by mouth.

And what dietary program are we really talking about? The original Bible diet! Then God said, "I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food." "...and you will eat the plants of the field."²⁷⁶ Should it be any surprise that the Maker of this marvellous immune system, which is designed to protect this marvellous body we have been given, should have the best lifestyle prescription necessary for its upkeep?

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

*“Cancer, tumors, and all
inflammatory diseases are largely
caused by meat-eating.”ⁱ*

– E. G. White

ⁱ White, E. G. (1985). Spalding and Magan Collection. Payson, AZ: Leaves-Of-Autumn Books.

CHAPTER 15

CANCER: IS THERE HOPE?

WHAT CAUSES CANCER?

Cancer has now surpassed heart disease as the number one cause of death for Americans below 85.¹ More than 10 million Americans have a history of invasive cancer. Two and one half million Americans will be diagnosed with cancer this year, (one million skin cancers). Cancer will claim over half a million victims this year.² Why all this cancer? What causes cancer? Can it be avoided? What is the answer for cancer?

As a medical student, I was presented one day with a patient who had a lesion on his lower leg.

“Dr. Clark, examine Mr. Doe’s leg and tell the class your diagnosis.”

The leg was well developed and muscular with clean skin, except an ugly purple raised area.

“Does Mr. Doe have Kaposi’s sarcoma?” I queried, mostly guessing.

“Yes”, came the affirming reply, “And...”

“Oh no,” I thought, “here comes another question.”

“Why do you think Mr. Doe has Kaposi’s sarcoma?”

To my limited knowledge Kaposi’s sarcoma occurred only in people with AIDS as a consequence of HIV infection, so I asked, “Is the patient HIV positive?”

“No”, came the reply, “but that is a good guess. Mr. Doe has had a kidney transplant and so is on drugs that suppress his immune system.”

This was my awakening to the fact that cancer often arises when the immune system is compromised or suppressed for any reason. It is true that Kaposi’s sarcoma is 1300x more likely to occur in AIDS patients, but lymphoma, (a cancer of the lymph glands throughout the

whole body), is 135x more likely, and lung cancer about five times more likely to occur in HIV positive individuals. Just to give you a perspective, ALL cancers are more than twice as common in people whose immune system is disabled or compromised by HIV infection.

Some years ago, a series of studies examined how sugar consumption weakens the immune system. Results showed that if a person ate no sugar for 12 hours, each white blood cell could destroy 14 dangerous bacteria. When 24 teaspoons of sugar were eaten (the amount in 2 cans of soda), the white blood cells were so compromised that they could only destroy one bacterium each.

Cancer has now surpassed heart disease as the number one cause of death for Americans below 85.

“But what does the immune system’s ability to eat bacteria have to do with cancer?” you may be asking. A diet high in refined carbohydrates such as sugar, starch, etc. suppresses the immune system, leaving the body unprotected from diseases like cancer. In fact, studies show that a person on a high glycemic index diet (high in refined carbohydrates) has a significantly increased risk of acquiring breast,³ prostate,⁴ colorectal,⁵ endometrial,⁶ gastric,⁷ ovarian,⁸ or pancreatic^{9,10} cancer. Malnutrition is another cause of a poor immune system. Malnutrition comes in two forms, severe caloric starvation and consumption of empty calories.¹¹ Additionally as people get older their immune systems tend to age, losing the power to fight diseases like cancer.¹²

CANCER AND VIRUSES

You may be wondering why cancer crops up in the absence of an active immune system. For this puzzle piece, let's return for a minute to the AIDS/Kaposi's association. Kaposi's sarcoma is now known to be the result of a viral infection with either human herpes virus number 8 (HHV-8) or a virus known as Kaposi's Sarcoma-associated Virus (KSV).¹³ More and more, infectious agents are being identified in relation to cancer.

So where do people get exposed to these infectious viruses? More and more, animal products such as beef, pork, chicken, turkey, milk and eggs are infected with cancer-causing viruses. Blood of workers in meatpacking plants show evidence of these viruses. These workers have an increased incidence of cancer, including cancers of the lung, mouth and throat, colon, bladder, and kidney.¹⁴ Poultry slaughterhouse workers have an increased incidence of throat cancer, liver cancer, lymphoma and leukemia.¹⁵

Animal products are known to increase the risk of cancer. The "Adventist Health Study" revealed that prostate cancer was 41% higher in meat eaters, colon cancer¹⁶ was 85% higher and ovarian cancer¹⁷ was 130% higher than in people who were vegetarians.

THE ANIMAL CONNECTION

A study out of Harvard revealed that consumption of meat and dairy products doubles the risk of metastatic prostate cancer. Meat by itself increases metastatic prostate cancer by 66%. Processed meats such as bacon, beef, pork or lamb also increase the risk of metastatic prostate cancer.¹⁸

The increased risk of getting cancer from animals is not limited to the consumption of their bodies. In a 4 year case control study in Italy, the consumption of cheese was found to increase the risk of non-Hodgkin lymphoma by 66%.¹⁹

Compared to normal breasts, cancerous breasts have 3 times the incidence of infection with bovine leukemia virus, (a virus common in milk and meat).²⁰

There are other reasons for the meat/cancer association. One of these is the way meat is prepared for marketing and the way it is cooked. Red meat is associated with increased formation

of N-nitroso compounds. These compounds cause DNA damage which results in increased colorectal cancer.²¹ When people cook meat "well-done" at high temperatures, in an effort to kill all the trichina or "mad cow" disease, they produce mutagenic compounds called heterocyclic amines, which significantly increase the incidence of colorectal cancer.²²

Animal foods prepared by frying, broiling or microwaving have been shown to increase the risk of cancer by the formation of toxins called heterocyclic amines.²³

Protein, as much as we need it, is safe only in low quantities. Too much protein tends to suppress the immune system. Compared to a low protein diet (5%), a high protein diet (25%) like ours has been shown to both promote tumors and increase metastasis to the liver and lungs.²⁴

Let's take a minute to look a little closer at dairy products. To begin with, it will help you to know that one of the important parts of your immune system is a white cell called the "natural killer cell". Milk is immunosuppressive-the more you drink, the worse your natural killer cells will function. What's more, tripling your milk protein intake triples your cancer risk.²⁵ One of the reasons for this is that cows are fed high protein diets and given growth hormones.²⁶ Cows today produce more milk than they did 100 years ago. Three servings of milk per day significantly increase insulin like growth factor in humans.²⁷ Insulin-like growth factor elevation is linked to cancer of the prostate,²⁸ breast,^{29,30} and lung.³¹

HORMONES AND CANCER

At this point it would be well to understand the role of hormones in breast cancer initiation and progression. Anything that increases or prolongs a woman's exposure to estrogen increases her risk of breast cancer. Estradiol, one of the estrogens, is a potent cell growth stimulator, which is why it also can promote cancer. Thus, there is a greater incidence of cancer associated with: early onset of menarche, late menopause, (because the woman is exposed to more years of elevated hormones), hormone replacement therapy, postmenopausal obesity, (because fat cells can produce estrogen) and history of an abortion (because after the loss of the fetus the woman

Cancer: Is There Hope?

is exposed to the estrogens that were meant to support the pregnancy).³²

One often unrecognized source of large doses of growth hormones comes from the use of animal foods. Estradiol is used as a growth promoter in farm animals. Estradiol can actually induce tumors in rats, mice, and hamsters. When levels become artificially elevated in humans there is a corresponding increase in breast and uterine cancer.³³ Postmenopausal women with estradiol levels > 9 units (in their entire blood volume) had a 7-fold higher rate of breast cancer than that of women with undetectable levels.³⁴ If a level of nine or greater is bad, you may ask, what would be a source of estradiol that might send my hormones that high? I was interested to find that one American beefsteak had 20 units, one liter of milk 18 units, 2 eggs 13 units, 50 gm of butter 4 units, and 100 gm of cheese 3 units!³⁵ One beefsteak has twice the hormones as found in the entire blood volume of one woman.

Another food that will drive up your hormones is fat. Studies show that high dietary fat intake is associated with elevated serum estrogens and androgens.³⁶ In 1975 Carroll and Khor produced charts showing increased rates of breast, colon, and prostate cancer with increased calorie, fat, and protein intake, country by country. There was a linear relationship between a country's per capita fat intake and the death rate from cancer.³⁷ Some fats are more dangerous than others. High saturated fat intake triples the risk of dying from prostate cancer.³⁸ Another dangerous fat is the chemically produced fat known as trans-fat. Trans-fat intake has been shown to increase breast,³⁹ prostate,⁴⁰ and colon cancer.⁴¹

My first clinical experience was in gynecology/obstetrics. Besides delivering babies and attending surgeries, much of my time was spent in clinic. Within a few days it became very apparent that from the day a girl came in complaining of discomfort with the onset of menses to the time that a middle aged woman came in to tell of her discomfort with hot flashes, we had women on pharmacological doses of hormones.

"And what are the consequences?" you may ask.

In a study of 37,000 women, oral contraceptives significantly increased breast cancer risk.^{42,43} Perimenopausal hormone-

replacement therapy with estrogen alone increases the risk of endometrial cancer by 45%.⁴⁴ And when estrogen is combined with progesterone, breast cancer increases.⁴⁵ Some replacement hormones are from "natural" sources such as pregnant horse urine. But many are simply chemicals from the laboratory.

VITAMIN D AND SUNSHINE

Vitamin D has received a lot of attention recently as an immune stimulator and an anti-cancer agent. Its primary source is ultra-violet light striking the skin.

"But", you may say, "sun causes skin cancer."

Here is where the discriminating mind will discern the real cause of skin cancer. In a study of precancerous skin lesions, it was found that people on a high fat diet developed three times the number of lesions compared to those on a low fat diet. Thus, in order to get your anti-cancer vitamin D from the sun, you need also to limit the fat in your diet.⁴⁶

WEIGHTY MATTERS

We have been talking about the fat that you eat, but now we need to make mention of the fat that you wear. Fat cells are actually involved in estrogen production. Excess estrogen production in obese women gives them a greater risk of dying with breast cancer.⁴⁷ Obesity is also a risk factor for pancreatic cancer⁴⁸, not to mention diabetes and arthritis. Don't underestimate the contribution of overeating of any kind to the development of cancer.⁴⁹ When you consume extra food, it tends not only to make you grow, but to make cancer grow also.⁵⁰

Obesity is usually linked with elevated triglycerides and cholesterol. Elevated cholesterol and triglycerides are associated with significant increases in breast cancer. On the other hand, high levels of HDL, the good cholesterol, significantly decrease breast cancer risk.⁵¹

CHEMICAL TOXINS

This brings us to our next topic--chemicals in our environment. Chemicals can act like hormones, increasing the risk of cancer.⁵² Insecticides such as DDT and DDD have hormonal activity⁵³ suppressing the immune

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system,^{54,55} and increasing the risk of cancer.⁵⁶ Chemicals tend to accumulate in our environment. Plants can take on small portions of these chemicals. Small creatures eat the plants and then are eaten by larger ones. As you go up the food chain a process called biomagnification occurs. For example, sea otters tested for PCBs and DDT showed up to 240x greater levels than that found in their prey.⁵⁷ The closer to the beginning of the food chain (eat from the garden) the safer your food.

The body is constantly surveying its DNA for damage and making repairs. When DNA damage accumulates, cancer can result. It has been found that lung cancer patients have suppressed DNA repair.⁵⁸ One commonly encountered substance, which prevents repair of damaged DNA, is caffeine.⁵⁹ Consequently, two or more cups of coffee per day more than double the risk of ovarian cancer.⁶⁰ What's more, when caffeine is combined with a high fat diet, it significantly increases breast cancer risk.⁶¹

In this age of scientific discovery, the lung cancer/tobacco connection need hardly be mentioned. But few realize the extent to which other cancers are affected by this poison. Tobacco's influence can be seen in many malignancies, including cancers of the lip, mouth, throat, voice box, trachea, esophagus, stomach, liver, pancreas, bladder, kidney, cervix, leukemia, colon, skin, and penis.⁶²

Alcohol, a poison to the cells, is involved in 75% of esophageal cancers, 50% of mouth and larynx cancers, 30% of liver cancers, as well as colon, rectal and breast cancer. All totalled, 60,000 deaths per year are related to, not traffic accidents, domestic violence or homicides, but alcohol related cancer.⁶³

New building materials are a common source of environmental toxins.

Workers in a newly remodelled office were found to have increased chemicals in their blood stream and significant decline in their immune function.⁶⁴ Cancer causing chemicals found indoors include: chloroform, acetaldehyde, formaldehyde, dichlorobenzene, styrene, methylene chloride.⁶⁵

Another source of environmental toxins is the chemicals added to food as preservatives or flavor enhancers.⁶⁶ There are many additives to food for which side effects are unknown. Others are questionable or have produced cancer in

animals such as BHA,^{67,68} BHT,^{69,70,71} and potassium bromate,^{72,73,74,75} etc.

In our modern age of plastics more and more of our food is being presented to us in poly containers. Today we get products such as milk, peanut butter, bottled water, apple sauce, and some jams, just to name a few, in plastic containers. It might cause concern to realize that the people making these containers--workers at plastic factories, have 5x the risk of pancreatic and liver cancer.⁷⁶

A lot of the toxic chemicals in our environment that have carcinogenic potential are halogenated polycarbons. The most common halogens in these substances are fluoride,^{77,78} bromide, or chloride. In these compounds, a halogen such as chloride is attached to a carbon structure, like gasoline, which makes the carbon structure more toxic and poisonous. Should it be any surprise to discover that these halogens are not much better for us if put in our water? A study in Canada revealed that consumption of chlorinated water increases the risk of cancer of the esophagus and stomach and leukemia.^{79,80}

When I was a medical student I did research with the General Surgery Department. I was looking at the previous five years of pancreatic cancer patients. To my surprise, none of them was still alive. All had died, and this usually after several surgeries and much pain. The risk of pancreatic cancer is significantly increased by obesity⁸¹ and high consumption of: salt, smoked meat, fried food, refined sugar, food with preservatives or additives,⁸² and coffee.^{83,84,85} Salt also increases the risk of brain cancer.⁸⁶ Knowing the risk factors helps us understand what lifestyle changes we can make to improve our chances of avoiding this killer disease.

We all have seen a diesel truck grinding its way up a hill belching black smoke from its exhaust pipe. Products of combustion surround us even in our everyday life (exhaust from cars, gas stoves, etc.) all of which have carcinogenic potential.⁸⁷ Railroad workers exposed to diesel fumes have a 40% increase in mortality from lung cancer.⁸⁸

In recent years the phrase "oxidative stress" has become popular. Oxidative stress is merely a measure of the inflammation in the body. Measuring the number of free radicals in the blood often assesses this. Oxidative stress damages DNA that leads to the development of

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cancer. Chronic inflammation increases the risk of cancer in the gastrointestinal tract.⁸⁹ For example gastro-esophageal reflux can cause esophagitis, known as Barrett's Esophagus. In Barrett's Esophagus, cancer develops because the esophagus is constantly healing itself and just can't stop healing.⁹⁰ Cancer is basically cells that are growing or healing out of control.

MELATONIN

Melatonin is a protective, anti-cancer hormone and strong antioxidant.⁹¹ Light at night suppresses melatonin and increases cancer cell growth rates. Evidence now links exposures to light at night to elevated breast⁹² and colorectal cancers in night workers.⁹³

STRESS

Stress and depression increase cancer because they decrease the immune system's ability to find and destroy cancer cells.^{94,95} In a ten year follow up study, in which social coping skills, along with the traditional risk factors; smoking, drinking and medical diseases were considered, people with greater stress from poor interpersonal skills had a 40% higher death rate from cancer.⁹⁶ In another study, divorced or separated women had a 126% higher risk of getting breast cancer, and widowed 100% higher.⁹⁷ Cancer develops more commonly and grows faster in people with suppressed anger.⁹⁸ These mental / emotional causes of cancer are some of the most powerful risk factors known to man.

RADIATION

One threat to DNA integrity is all the modern sources of radiation. Sources of radiation include radioactive elements, X-rays, gamma rays, microwaves, radio transmitters, electromagnetic fields, ultraviolet light, solar radiation, and nuclear radiation. For example, children living within 2 km of an AM radio station have more than double the chances of getting leukemia as those 20 km or more away.⁹⁹

Another modern source of radiation is the cell phone. Cell phones significantly increase astrocytomas (brain cancer) in the temporal area of the brain (right where you hold your cell

phone). There is also an increase in acoustic neurinomas (ear cancer).¹⁰⁰

Electric blankets can also be a significant source of radiation. Breast cancer risk associated with electric blanket use increases with the number of years of use, the number of seasons of use, and the length of time of use each night.¹⁰¹ It has been suggested that if you want your bed warmed, turn on the electric blanket or heating pad until the desired temperature is reached, then unplug it before getting into bed. Breast cancer risk associated with electric blanket use increases with the number of years of use, the number of seasons of use, and the length of time of use each night.

The relation between breast cancer and electromagnetic field exposure has been the object of much study. For women telephone installers, repairers, and line workers, the risk of breast cancer goes up 117%; for system analysts and programmers 65%; for telegraph and radio operators 40%; and for telephone operators 27%.¹⁰²

Children are affected by radiation as well. For example, the risk of leukemia is elevated in: children whose mothers used an electric blanket or an electric mattress pad during pregnancy; children who themselves use electric blankets or electric mattress pads, hair dryers, video machines in arcades, or video games connected to a television.¹⁰³

HEAVY METALS

Elevated levels of heavy metals including: iron, nickel, chromium, zinc, cadmium, mercury, and lead have been found in tumorous tissues of cancer patients.¹⁰⁴ These heavy metals increase oxidative stress and DNA damage, which result in cancer. Mercury, when combined with chloride, produces cancer by acting as a hormone, binding to and activating estrogen receptors.¹⁰⁵

SUMMARY OF CANCER CAUSES

To summarize: each cell in the body is regulated by code (DNA), much like a computer. If the code goes bad, so does the cell. As we've seen, there are a number of things that can derail the DNA code. DNA damage results from: viruses, toxins, oxidative stress, and radiation. Cancer arises when the immune system fails to

identify and deal with cells running on altered DNA. Too many hormones, and chronic healing and inflammation, initiate the development of cancer and accelerate its growth.

THE SOLUTION

“Okay”, you’re thinking, “So what do I do now? Everything causes cancer, I’m doomed!”

Please don’t throw in the towel just yet. Thus far our approach has been to show the avoidable causes of cancer. Now we are going to show you that the answer to the cancer problem.

“The only hope of better things is in the education of the people in right principles. Let physicians teach the people that restorative power is not in drugs, but in nature. Disease is an effort of nature to free the system from conditions that result from a violation of the laws of health. In case of sickness, the cause should be ascertained. Unhealthful conditions should be changed, wrong habits corrected. Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system.”¹⁰⁶

Disease is an effort of nature to free the system from conditions that result from a violation of the laws of health.

“Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power—these are the true remedies”¹⁰⁷, “Gratitude, rejoicing, benevolence, trust in God’s love and care--these are health’s greatest safeguard.”¹⁰⁸

A good understanding of these laws of health is essential to minimizing cancer’s risk factors. Let’s look at each of these principles of health and what their impact is on cancer.

FRESH AIR

Pure, fresh, outdoor air is a wonderful stimulant to the immune system. This is because of the negative ions present in outdoor air, which significantly decrease the incidence of cancer and inhibit tumor growth by the enhancing natural killer cell activity.¹⁰⁹ Some toxins come from mold (mycotoxicosis and aflatoxins).¹¹⁰ Mold toxins are felt to be

responsible for liver¹¹¹ and lung¹¹² cancer growth. Keeping the premises and basement of your homes free from mold help prevent cancer. Outdoor air has much less toxins.

Thrash and Thrash in their book “*Hope For Cancer*” report, “A group of rats with cancer were allowed to breathe negatively charged (outdoor) air, while an equal number breathed common indoor air. After one month the cancer in the rats breathing the indoor air was twice the size of the cancer in the rats breathing the negatively charged air.”¹¹³

“When the weather will permit, all who can possible do so ought to walk in the open air every day, summer and winter. But the clothing should be suitable for the exercise, and the feet should be well protected. A walk, even in winter, would be more beneficial to the health than all the medicine the doctors may prescribe.”¹¹⁴

SUNLIGHT

Sunlight is a precious gift from God, which brings us a sense of wellbeing from the endorphins it creates. We have already mentioned that vitamin D is essential to the prevention of cancer. Everyone should get at least 20 minutes of sunshine a day with at least 25% of their skin exposed to the sun. These 20 minutes should be without sunscreen, (which blocks synthesis of vitamin D). Vitamin D is a potent inhibitor of cancer growth and protects against prostate, breast, pancreas and colon cancer. Colon tumor growth rate increases by 60% when there is a deficiency in Vitamin D.¹¹⁵

TEMPERANCE

Temperance or abstemiousness is avoiding all things that are harmful and using wisely those things that are good.

An example for need for total abstinence would be tobacco or alcohol. Is there any hope for a smoker or drinker? Lung cancer risk decreases and survival improves the moment you quit. But the longer the time since smoking, the better the survival outcome.¹¹⁶ Similarly esophageal cancer risk declines with time since last drinking.¹¹⁷

An example of appropriate moderation is in the area of diet. We all have to eat, but we don’t necessarily have to all eat as much as we are accustomed to. Much research now exists

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pointing to the fact that caloric restriction, (eating less food), actually helps fight disease and promotes better health. Calorie restriction decreases cancer by keeping the normal cell cycle under tight regulation and by keeping in check growth factors, hormones, and stress hormones like cortisol.¹¹⁸ Studies now show that caloric restriction both reduces DNA damage and enhances DNA repair (thus reducing cancer risk).¹¹⁹ Okinawans have taught us a lot in this area. They eat 40% fewer calories than Americans yet they have 80% fewer breast and prostate cancers, and 50% fewer ovarian and colon cancers.¹²⁰ We mentioned that increasing age is associated with a decline in the immune system making cancer more prevalent as people get older. Caloric restriction, while maintaining good nutrition, restores immune function to that found in younger individuals.¹²¹ Obesity also impairs the immune system's ability to find and destroy cancer cells, but again, caloric restriction has been shown to restore immune responsiveness.¹²²

REST

I'm sure we can all testify to the necessity of proper rest. Jesus Christ said, "Come ye yourselves apart into a desert place, and rest a while."¹²³ People who sleep well have significantly better immune function than people with insomnia.¹²⁴ Getting between 7 and 8 hours of sleep each night significantly reduces the risk of dying from cancer and other diseases. Sleeping 6 hours or less, or 9 hours or more, increases the risk of dying by 70%.¹²⁵ Another aspect of rest is regularity. You should go to bed at the same time and get up at the same time every day. It is important not to disturb the sleep wake cycle. Disrupting the sleep wake cycle disrupts your circadian rhythms. Disruption of circadian rhythms is associated with accelerated growth of malignant tumors.^{126, 127}

Yet another aspect of cyclic rest is a weekly rest. A study in Georgia discovered that Seventh-day Adventists have higher levels of immune stimulating antioxidants. The study went on to show that vegetarian Seventh-day Adventists have even higher levels of immune stimulating antioxidants.¹²⁸ While it was interesting that vegetarians have higher antioxidant levels, what interested me was that

even the non-health conscious Sabbath keepers showed health improvements over the general population.

EXERCISE

Now that we've written about rest, we're going to talk about just the opposite—exercise. As individuals age their immune system declines. Being physically fit helps attenuate this decline. The immune system responds positively to moderate exercise. Studies have shown that people who cultivate healthy lungs and hearts, (cardiopulmonary fitness), have one-half the risk of mortality from cancer as people who don't take fitness seriously.¹²⁹ Observe though that over fatigue increases the risk of viral infections, (of which cancer can be one).¹³⁰ Regular moderate exercise reduces risk of breast cancer by up to 66%^{131,132,133,134} and also reduces the risk of cancers of the ovaries,¹³⁵ uterus,¹³⁶ prostate,¹³⁷ colon,^{138,139} and lungs.¹⁴⁰ Exercise minimizes cancer by reducing serum estradiol¹⁴¹ and insulin like growth hormone¹⁴² which, we showed earlier, cause cancer. It has been said that those who can't find time to exercise will have to find time to be sick.

PROPER DIET

We will now discuss proper diet. This is the section that people tend to fixate on, to the exclusion of all others. But let me say right here that while diet is very important, all the other components of a cancer free lifestyle are equally important, and should not be over looked. Your lifestyle should be examined as a whole.

A fresh uncooked fruit and vegetable diet has been shown to invigorate the immune system, reduce inflammation, lessen allergic diseases, heal infections and help fight cancer.¹⁴³ This is partly because fruit and vegetables are filled with micronutrients that help prevent and combat cancer.^{144,145} As constant inflammation often produces cancer, you will be happy to know that naturally occurring flavonoids and phytochemicals found in fruits, vegetables, grains, seeds and nuts contain anti-inflammatory properties. Flavonoids and phytochemicals are micronutrients as important to your body as vitamins.¹⁴⁶

Antioxidants are additional micronutrients found in fruit and vegetables. They help boost

your immune system and restore it if it has gotten out of shape.¹⁴⁷ Oxidation is the word we use to describe what happens when something, (usually a chemical such as a protein or a fat), interacts with oxygen. This oxidized chemical can now oxidize another body part. It's kind of like a game of tag. Tag, you're it! A body part that you definitely do not want to get oxidized is your DNA, because this would lead to the formation of cancer cells. Antioxidants stop the process long before it reaches the DNA. They also promote the repair of oxidized DNA.

FRUIT

Fruit is especially high in antioxidants; vitamin C, flavonoids, limonoids, fiber, pectin and phytochemicals that neutralize cancer-causing agents entering the body.¹⁴⁸

Vitamin C is an antioxidant found in fruit and vegetables that reduces the risk of kidney cancer,¹⁴⁹ breast cancer,¹⁵⁰ and leukemia,¹⁵¹ a type of blood cancer. Oranges, grapefruit, and lemons, are a great source of Vitamin C. Vitamin C also helps neutralize the cancer-causing nitrosamines found in red meats.¹⁵²

Citrus fruits also contain limonene that actually neutralizes cancer-causing substances that cause stomach and breast cancer.^{153,154} Pectin, a soluble fruit fiber, found in citrus and other fruit, prevents the spread or metastases of cancer.¹⁵⁵

If I were looking for a super fruit to help fight cancer I think it might be kiwifruit. Kiwifruit provides protection against DNA damage by enhancing antioxidant levels and actually stimulating the repair of damaged DNA.¹⁵⁶

Pineapple prevents stomach cancer because it inhibits the formation of the nitrosamines that come from meat.¹⁵⁷ Perhaps it would be well to eat a pineapple with each well-done beefsteak in order to be safe!!

Many people eat prunes, or dried plums to help them with their bowel movements because they know these foods are high in fiber. What they may not realize is that the fiber from these plums or prunes decreases colon cancer by mopping up toxins, such as bile acids, coming out of the liver.¹⁵⁸

We've all heard it said, "An apple a day keeps the doctor away." And while that may have been a commercial advertisement by the fruit growers of America for their product, apple

pectin has indeed been discovered to strengthen the immune system and prevent growth of cancerous tumors in the colon.¹⁵⁹

Studies coming out of Italy, (and other countries where the "Mediterranean Diet", high in tomato products, predominates), reveal that high consumption of tomatoes protects against cancers of the mouth, esophagus, stomach, colon, rectum and prostate.^{160,161} This protection may come from the phytochemical lycopene found in tomatoes.¹⁶²

VEGETABLES

High in vitamin A, vitamin C, phytochemicals and fiber, vegetables have the ability to oppose the action of carcinogens,¹⁶³ and are very important in the fight against cancer.¹⁶⁴

Carcinogens are substances that can cause cancer. Powerful anticarcinogens are found in cauliflower.^{165,166} These anticarcinogens inhibit the formation of malignant tumors.¹⁶⁷ High levels of vitamin A and phytochemicals give broccoli high anticarcinogenic properties as well.¹⁶⁸

Cruciferous vegetables, (which include broccoli, cauliflower, Brussels sprouts, and cabbage), are extremely valuable for cancer prevention. They can actually keep cancer-causing toxins from binding to DNA in the cell, thereby reducing DNA damage. What's more they increase the elimination of cancer causing toxins from the liver and intestines.¹⁶⁹ Remember all those hormones and hormonally active substances that cause cancer? Phytochemicals in cruciferous vegetables increase the urinary excretion of estrogens.¹⁷⁰

Phytochemicals found in cruciferous vegetables increase the urinary excretion of hormones and hormonally active substances that promote cancer.

Cabbage is a key food in the prevention of pancreatic^{171,172} breast and ovarian cancer.¹⁷³ Cabbage contains phytochemicals that can reduce the carcinogenic effects of benzopyrene, a cancer-causing chemical found in tobacco smoke.¹⁷⁴ The phytochemicals in cabbage prevent, as well as have a curative effect on, tumor growth.¹⁷⁵

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The bulb foods, (onion and garlic family), are also known to have anti-cancer properties. They lower the risk of stomach cancer,¹⁷⁶ prevent the development of tumor cells,¹⁷⁷ and are helpful in the treatment of cancers of the stomach and colon.¹⁷⁸ Garlic is especially helpful in the prevention of cancer of the stomach,¹⁷⁹ breast,¹⁸⁰ prostate,^{181,182} endometrium,¹⁸³ and bladder.¹⁸⁴ It works to combat cancer by stimulating the immune system, detoxifying carcinogens, and by a direct toxic effect on cancer cells.¹⁸⁵

There are other vegetables which aid in the fight against cancer. Spinach prevents cancer of the throat, breast, colon, and bladder.¹⁸⁶ The vitamin A, carotenoids, and fiber in carrots give them powerful anticarcinogenic effects.¹⁸⁷ Don't be fooled though, taking vitamin A pills does not provide this same protective effect.¹⁸⁸ It's hard to reproduce nature in the laboratory. Eating pellets created in a commercial factory can in no way substitute for good whole food. Yellow orange vegetables all contain beta-carotene, vitamin A and other "carotenoids" which have been shown to reduce the risk of cancer of the lungs, prostate and pancreas.¹⁸⁹

Squash contains beta-carotene, vitamin C, and fiber that counteract the effects of carcinogenic substances on the colon.^{190,191}

Radishes have valuable properties that impede DNA changes that lead to cancer.¹⁹²

Beets have properties that are anticarcinogenic.¹⁹³

Peppers are high in antioxidant vitamins A and C which are powerful anticarcinogens.^{194,195}

Legumes (beans) are good cancer fighters too. Regular consumption of beans is associated with a significant decrease in cancers of the pancreas,¹⁹⁶ prostate,^{197,198} and endometrium,¹⁹⁹ (the lining of the uterus). One legume that has come to special attention is the soybean. Soy has strong antioxidant properties and is a potent immune stimulant.²⁰⁰ It has shown benefits for viral illnesses, particularly cancer.²⁰¹ Soy products also possess anti-inflammatory properties that decrease the potential for cancer development.^{202,203} Soy products have been shown to protect against cancer of the prostate, breast, colon, rectum, stomach and lung.^{204,205,206}

Soy, as well as the common seasoning turmeric, help counteract the estrogenic effects of hormones and hormonally active

environmental toxins on breast tissue.^{207,208} We call the substances in soy and turmeric phytoestrogens. Phytoestrogens, such as those contained in soy, have been shown to counter the carcinogenic effects of estradiol on the cells of the body, reducing not only the risk of breast cancer, but lung,²⁰⁹ prostate,²¹⁰ and endometrial^{211,212,213} cancer as well. Since soy phytoestrogens only weakly stimulate the estrogen receptor they are not cancer-causing.²¹⁴ And since they bind the estrogen receptor, other estrogens cannot bind to the receptor. Thus, the weak phytoestrogens replace the strong estrogens, (such as estradiol), protecting the cells from being stimulated to cancer formation.²¹⁵ It's like having a weak politician in public office rather than a strong one who can get things done. Whereas in politics this would not be desirable, in the body is preferable.

FIBER

Research indicates that diets high in fat and meat, and low in fiber, markedly increase oxidative stress in the digestive system, which in turn increase the risk of colorectal cancer.²¹⁶ High fiber intake effectively reduces the oxidative stress caused by high-fat and high-cholesterol intake.^{217,218} Grains, (such as wheat, rye, and oats), are a good source of this fiber.²¹⁹ Rye helps reduce the carcinogenic effect on the intestines of toxins processed by the liver.²²⁰ Wheat and wheat bran have antioxidant and anticarcinogenic properties.^{221,222} One way fiber prevents cancer is by acting as a sponge to mop up and remove excess hormones from the body.^{223,224} As a result, diets high in fiber can reduce the risk of breast cancer.²²⁵

While diets high in animal, trans, and oxidized fats cause cancer, natural fats high in omega-3s are anti-inflammatory, and have anticarcinogenic properties.²²⁶ In addition to promoting blood flow, omega-3 fatty acids, found in walnuts, flax and olives, have anti-inflammatory properties.²²⁷ Olive products have been shown to reduce the risk of breast cancer by up to 33%.²²⁸

There is abundant research that a diet of fresh fruit, grains, nuts and vegetables provides the best protection against cancer. Some may be wondering why meat is not as beneficial. The cow, for example, consumes wheat grass and

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barley green so that he will not get heart disease, cancer, diabetes and arthritis, but she does not pass these benefits along to the consumers of her body. Meat has very little in the way of nutrition capable of cancer prevention. When you come down to it, the biggest reason people come down with cancer is because they fail to eat enough fresh fruits and vegetables.²²⁹ Should it be any surprise that what we have been talking about is the original, Creator's diet,

"Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." "And thou shalt eat the herb of the field".²³⁰

WATER

Water is the fluid life sails on. Water carries nutrition from the blood to the cells. It then carries waste products from the cells to the blood for excretion by liver, kidneys, lungs, and sweat glands. Daily water needs including drinking water, water in beverages, and water in food. You need between 8 and 12 eight-ounce glasses of water a day. Strenuous physical exercise and heat can greatly increase daily water needs, and there is substantial variability between individuals.²³¹

In modern times, with the advent of convenience machines and antiperspirants, perspiration has been nearly eliminated from our societies. As a consequence, more stress is placed on the kidneys, liver and lungs to eliminate cancer-causing toxins from the body. If we know what toxins are involved in our particular cancer, we should make every effort to eliminate it. One useful way to accomplish this by sweating. Drinking water, exercising, and taking saunas to produce sweat, expel toxins from the body.²³²

TRUST IN GOD

Trust in God's love and care, can have a positive effect in several ways.

Trust in God is a part of good spiritual health. Those with good spiritual health, have longer life expectancy, greater well-being and life satisfaction. They deal better with illness,

have fewer hospitalizations and shorter hospital stays. They suffer less anxiety and depression, and enjoy better immune system function that helps in the fight against cancer.²³³

God has said that all healing comes from Him and that listening to His voice and obeying His commands brings health. Trusting Him is part of the healing process.

"And said, If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the LORD that healeth thee."²³⁴

Trusting God brings the benefit of social ties at church. On the other hand, socially isolated people are more likely to die of cancer.²³⁵

Studies reveal that giving support to friends, relatives, neighbors, and family, significantly reduces mortality, while merely receiving support does not improve mortality.

Most people who enter into a full trusting relationship with God are led to a life of service to others. Studies reveal that giving support to friends, relatives, neighbors, and family, significantly reduces mortality, while merely receiving support does not improve mortality.²³⁶ A study from the university of Michigan revealed that volunteers of community organizations are 2-1/2 times less likely to die than those who do not become involved in volunteer work. voluntary work, more than any other activity, dramatically increased life expectancy.²³⁷ Haven't we always known that, "It is more blessed to give than to receive."²³⁸ Although merely attending religious services is beneficial, one surprising study showed that among religious people, volunteers, had 60% less mortality.²³⁹

GRATITUDE

Studies show that gratitude--an attitude of thankfulness, significantly improves long-term

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breast cancer survival.²⁴⁰ Our health would be greatly improved if we made a list of ten things for which we are thankful every day of our lives.

REJOICING

Research confirms that happy people have better physical health, increased longevity, and fewer illnesses. If they do get sick, they have less pain.²⁴¹ Happy people have more IgA, (an immune system antibody), in their saliva and less cortisol in their blood.²⁴²

SUMMARY

In summary: cancer is most often the result of a failure of the immune system to destroy bad cells. Bad cells are created by viruses, toxins, oxidative stress, hormones, poor nutrition and/or radiation. Once cancer begins it is often driven on by hormones or inflammation.

The solution is to maximize our health and expel toxins through the natural remedies: pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, gratitude, rejoicing, benevolence, and trust in God's love and care.

Take advantage of all the benefits:

- Eat foods as grown.
- Exercise in the open air and sunshine.
- Drink plenty of pure water.
- Rest in bed at night and in the love and providence of God.
- Avoid animal products high in protein, fat, viruses, toxins and growth hormones.
- Avoid foods and substances that damage DNA and suppress the immune system; like sugar, animal products, tobacco, alcohol, caffeine, heavy metals and pesticides.
- Choose a lifestyle and diet which expels toxins from your body, invigorates your immune system and keeps you at peak physical, mental and spiritual performance.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life".

“The importance of regularity in the time for eating and sleeping should not be overlooked. Since the work of building up the body takes place during the hours of rest, it is essential, especially in youth, that sleep should be regular and abundant.”ⁱ

– E. G. White

ⁱ White, E. G. (1903). Education. Mountain View, CA: Pacific Press Publishing Association. p. 205.

CHAPTER 16

HOW CAN I APPLY HEALTHY PRINCIPLES IN MY DAILY LIFE?

Do you need a simple lifestyle plan to improve your health? Many people have requested a personal protocol to help them recover excellent health, which is totally possible by God's grace. This chapter gives you the tools to incorporate into a daily schedule all the principles outlined in detail in the other chapters related to specific diseases. First, I will outline some general health principles followed by a line-by-line explanation of the exact schedule I use at health institutes.

GUIDELINES FOR LIFE

Did you notice the hand of God in your life today? When you look outside at the wonders of nature, the stars, the mighty sea, the fields, the lofty trees, God keeps them all in perfect order. He keeps the earth going around the sun. As the Bible says, "For in Him we live, and move, and have our being;"¹. If ever you wonder whether God is still there, then check your pulse. Every beat of your heart, your very breath, is continual evidence of the power of an ever-present loving and intimate Creator.

If God is keeping me alive every minute, and everything about me is under His control, wouldn't it make sense for Him to keep me alive healthy rather than to allow me to be sick?

So, the question arises, if God is keeping me alive every minute, and everything about me is under His control, wouldn't it make sense for

Him to keep me alive healthy rather than to allow me to be sick?

Then what would make the difference in Him being able to sustain me in vibrant health versus in sickness? That is a good question, because we all believe that God would want everybody to be well and healthy. So, something must be limiting His power--keeping Him from giving us the kind of health He would want us to have. What could limit God from being able to give me perfect health all the time?

"The Creator of man has arranged the living machinery of our bodies. Every function is wonderfully and wisely made. And God has pledged Himself to keep this human machinery in healthful action if the human agent will obey His laws and cooperate with God. Every law governing the human machinery is to be considered just as truly divine in origin, in character, and in importance as the word of God. Every careless, inattentive action, any abuse put upon the Lord's wonderful mechanism by disregarding His specified laws in the human habitation, is a violation of God's law."²

As I studied the results of obedience or disobedience to the laws of health, I discovered that in the early days of our church, before our health message was given, a lot of our ministers were dying in middle age. They were eating pork and doing a lot of things that the Bible teaches to be harmful and their poor health testified to the truth of God's Word.

Didn't God need those ministers? Couldn't He have kept them alive to do His gospel work? Perhaps there's somewhat of a contract involved in the Great Controversy between God

and Satan, whereby when people don't follow the will of the Lord, Satan might object by saying, You can't keep them well God, You can't protect them, You can't take care of them, because they aren't following Your will--they're not really Yours; they're mine.

God says in Exodus 15:26, "If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the LORD that healeth thee." The success of God's purpose to make us healthy is limited if we are out of harmony with the laws of good health.

Sickness may be a sign that we are knowingly or unknowingly out of harmony with one or more of the laws of health.

"Those who perceive the evidences of God's love, who understand something of the wisdom and beneficence of His laws, and the results of obedience, will come to regard their duties and obligations from an altogether different point of view. Instead of looking upon an observance of the laws of health as a matter of sacrifice or self-denial, they will regard it, as it really is, as an inestimable blessing."³

HOW TO GO ABOUT REGAINING LOST HEALTH

So what is disease, and what can we do to regain health? Its definition and the exact steps to be followed for recovery are outlined in this quote from the pen of inspiration:

"Disease is an effort of nature to free the system from conditions that result from a violation of the laws of health. In case of sickness, the cause should be ascertained. Unhealthful conditions should be changed, wrong habits corrected. Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system."⁴

What a perfect prescription for the recovery of health. All we must do is follow these simple steps. God is seeking to bless us by giving us a blueprint for wellness so we know exactly what to do.

We see amazing results when people follow a simple lifestyle schedule based on God's principles.

PRACTICAL APPLICATION: SCHEDULING HEALTH

The success of the program relies on strict adherence to a very specific and tight schedule, especially regarding the timing of meals, bedtime, and exercise. Rather than leaving it to circumstances, we schedule life's activities where they will have the most powerful beneficial impact on your health.

Life's activities are scheduled to give each its most powerful beneficial impact on health.

In nature we can see some of the most striking examples of scheduling. The sun, moon, and stars all run on a clock. We can set our watches by them. Do you know that even soybeans show evidence of an internal clock? A group of scientists headed off to a patch of soybeans at 3:00 a.m. and shined on them a high intensity light mimicking sunlight. The soybeans responded by turning their leaves upward to catch the light. Each morning at 3:00 a.m. for the next week the scientists returned to observe the soybeans, and what they discovered astonished them. The soybeans continued turning their leaves up at 3:00 a.m. every morning for a whole week expecting the bright light, even though there was no bright light present. This was because, just like us, soybeans run on an internal clock.

Let me share an example from one of my patients: An individual with back pain studied our website material on spine health and followed it without achieving the results for

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which they had hoped. They contacted me and I discovered that they were inconsistent in their schedule. Once we got them scheduled with regular daily mealtimes and sleep times, the results they sought were realized.

Our internal body clock is called the circadian rhythm. The better we stay on time the better health we will enjoy. The circadian clock malfunctions and becomes imbalanced when meals are off schedule or eaten late in the evening,^{5,6} when sleeping times vary,⁷ are insufficient, or shifted to a late bedtime and/or late rise time.⁸ Regular exercise and sun exposure times are also beneficial for regulating the body clock.

For example, the anti-inflammatory / inflammatory balance is tied to your circadian rhythms.^{9,10} A big cause of rheumatoid arthritis is a mismatch in the circadian rhythm clocks controlling the body's regular surges of cortisol and melatonin. The only cure then is not methotrexate or some other drug, but rather it is to get the timing of the circadian rhythms all in order by adopting exact mealtimes, exact bedtimes, and even exact exercise and sun exposure times. These need to be consistent on every day of the week, including on weekends.

A 21 year old young lady with a long history of advanced psoriasis came to see me and I set up a health program for her. The biggest part of her program involved putting her on a regular schedule. When she closely followed the schedule, she reported that her psoriasis was the best it had ever been in her entire life. Timing makes a huge difference!

We are given the following insights about how keeping to a tight schedule during camp meetings benefits health, "Brethren and sisters must not be sick upon the encampment. If they clothe themselves properly in the chill of morning and night, and are particular to vary their clothing according to the changing weather, so as to preserve proper circulation, and strictly observe regularity in sleeping and in eating of simple food, taking nothing between meals, they need not be sick. They may be well during the meeting, their minds may be clear,

and able to appreciate the truth, and they may return to their homes refreshed in body and spirit."¹¹

TIMING OF MEALS

When we understand how the human body is designed to process food, we will see the necessity of paying close attention to when and what we put into our mouths. Of all the activities of daily life, scheduling and planning meals seems to be one of the most neglected. Many people these days are so busy that often they don't take time to have a decent breakfast. When they get hungry they grab a snack here and there, or nibble all day, until they get home to a big evening meal. People eat at just about any time of day or night with no regard to any specific mealtime. They do not realize that by neglecting to take care of their bodies' needs, they are sabotaging their physical, mental, and emotional health. They are lethargic, have aches and pains, brain fog, are grumpy and depressed, and are susceptible to catching every disease that is going around. They often end up on medication and even in the hospital, all for the want of a few simple lifestyle changes.

People who eat their meals at the exact same time every day consume fewer calories, have better insulin sensitivity, and have lower cholesterol levels and therefore less diabetes and heart disease.

It is important to schedule and eat both breakfast and lunch at exactly the same time to the minute every day of the week including on weekends, not varying the start time by more than 5 minutes either earlier or later.

Inspiration backs this up, "If it falls to your lot to prepare the meals, make careful calculations, and give yourself all the time necessary to prepare the food, and set it on the table in good order, and on exact time. To have the meal ready five minutes earlier than the time you

have set is more commendable than to have it five minutes later.”¹²

My advice to people who are serious about living life to the fullest, maximizing their potential, and achieving vibrant health is to treat their meal schedule like an airport schedule. Planes take off at a given time; passengers who show up late and miss their flight are obliged to wait for the next scheduled flight. If your meal is late, it is better to skip it than to eat at the wrong time. Skipping a meal once in a while can be a blessing. Just drink a glass of cool water, which will quench the appetite, and take a walk, far, far away from the beckoning refrigerator, fast food joint or snack vending machines and let your stomach experience a much-deserved rest.

If you are late for a meal, it is better to skip it than to upset your circadian rhythms by eating at an unscheduled time; occasionally skipping a meal can be beneficial as well.

“Intemperate eating is often the cause of sickness, and what nature most needs is to be relieved of the undue burden that has been placed upon her. In many cases of sickness, the very best remedy is for the patient to fast for a meal or two, that the overworked organs of digestion may have an opportunity to rest. A fruit diet for a few days has often brought great relief to brain workers. Many times a short period of entire abstinence from food, followed by simple, moderate eating, has led to recovery through nature's own recuperative effort. An abstemious diet for a month or two would convince many sufferers that the path of self-denial is the path to health.”¹³

Sobering medical observations show that when mealtimes are varied the body is not ready with insulin to meet the sugar from the meals which come at irregular and unpredictable times. This results, among other things, in insulin resistance which leads to elevated blood sugars and diabetes.¹⁴ People

who eat their meals at the exact same times every day have better insulin sensitivity.^{15,16} A regular schedule lowers both total and LDL cholesterol, and raises the good HDL cholesterol, thereby lowering the risk of heart disease.¹⁷ Keeping to regular mealtimes significantly lowers the risk of adolescent obesity.¹⁸ Irregularity of schedule, on the other hand, such as encountered in shift work, raises both cholesterol,¹⁹ and triglycerides, and increases abdominal and adolescent obesity, all of which have a detrimental effect on heart health.²⁰

It is most healthful to skip the evening meal. A third meal is rarely necessary except in cases of hard physical labor, and even then, it needs to be carefully planned for. If included, it is very difficult to make a schedule work, because you need 5 hours between the end of the last meal to the start of the next and a minimum of 3 hours between the end of an evening meal and going to bed. The schedule for a three meal a day program is quite challenging; breakfast would need to be at 6:00 a.m., lunch at noon and supper at 5:30 p.m. If an evening meal is eaten, it should be light and easily digestible such as fruit and grains (like toast or crackers), because you want your stomach to be completely empty by your bedtime of 9:00 p.m. Otherwise you set yourself up for slow digestion of food, less than refreshing sleep and the horrors of Alzheimer's disease. The inspired counsel is, “If you feel that you must eat at night, take a drink of cold water, and in the morning, you will feel much better for not having eaten.”²¹

The Israelites only ate two meals a day until the time of Solomon, who with all his heathen wives brought in the pagan custom of a third meal with late night feasting. This, to a large degree, contributed to the demoralisation of society and the eventual demise of his kingdom.²²

“Regularity in eating is of vital importance. There should be a specified time for each meal. At this time let everyone eat what the system requires and then take nothing more until the

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next meal. There are many who eat when the system needs no food, at irregular intervals, and between meals, because they have not sufficient strength of will to resist inclination.”²³

SNACKING

Unlike animals that graze continually or eat when they see or find food, humans are designed to run best on two meals a day with no snacking between. Having only two meals a day lowers the risk of many diseases, including cancer. But, having three meals a day increases colon cancer risk by 70% and eating four meals by 90%.^{24,25} Except for the two regular meals taken at the exact, same scheduled time every day, nothing must pass the lips or enter the stomach except pure water with the occasional lemon juice in it if desired. As you will find in the other chapters of this book, snacking increases blood pressure, reflux, obesity, cholesterol, diabetes, heart disease, and cancer, just to name a few. For each time you snack throughout the day your risk of colon cancer goes up by an additional 60%!²⁶

“The importance of regularity in the time for eating and sleeping should not be overlooked. Since the work of building up the body takes place during the hours of rest, it is essential, especially in youth, that sleep should be regular and abundant.”²⁷

“But I’m hungry, I don’t want to wait till mealtime,” you may say. Hunger, other than at mealtimes, usually signals thirst and can be quenched with a glass of pure water.

People who don’t snack, eating only at mealtimes, sleep better at night. Strick mealtime regularity pays off in improved sleep. This may be the missing link for people who are battling insomnia.

REST

Another way to improve your health is to observe regularity in sleeping. As with the timing of meals, keeping to a regular sleep time is often considered a luxury, totally dispensable when work is pressing, social events extend late into the evening, or entertainment is on. Often the weekend is spent, “sleeping in”, trying to make up for the deficit. The result is often the “Monday morning blues” as your body tries to reset its circadian clock back to your weekday schedule.

Sleeping regular hours has anti-inflammatory benefits and improves overall sleep quality. A strict schedule with a set nightly bedtime no later than 9:00 p.m., and a set wake up time 7.5 or 8 hours later, on all days of the week, including the weekends, will make a huge difference in how you feel.²⁸ Research shows that compared to sleeping too little (less than 6 hours) or too much (more than 9 hours) getting between seven and a half to eight hours of regular sleep significantly reduces the risk of dying from cancer and other diseases.²⁹ People who sleep well have significantly better immune function than people with insomnia.³⁰

“Make it habit not to sit up after nine o’clock. Every light should be extinguished. This turning night into day is a wretched, health-destroying habit, and this reading much by brain workers, up to the sleeping hours, is very injurious to health. It calls the blood to the brain and then there is restlessness and wakefulness, and the precious sleep, which should rest the body, does not come when desired.”³¹

One reason for an early bedtime is to enable the body to produce melatonin. Melatonin is a protective, anti-cancer hormone with strong antioxidant activity.³² People who go to bed by 9:00 p.m. have a much higher surge of health promoting melatonin in the early hours of the morning. High levels and predictable timing of melatonin are associated with lower cancer and autoimmune disease rates. So, the timing of your sleep is very important. People who go to bed later, for example around 11:00 p.m., have

much lower melatonin levels, and the time of its surge varies widely. This upsets your body clock.

Thus, it is beneficial to go to bed and get up at the same time every day of the week so as not to disrupt the sleep-wake cycle.

“Two hours' good sleep before twelve o'clock is worth more than four hours after twelve o'clock.”³³

It is best not to have any lights on at night while you are sleeping because it suppresses melatonin production resulting in increased cancer cell growth rates. Disruption of circadian rhythms is associated with accelerated growth of cancerous tumors.³⁴ Evidence now links exposures to light at night to elevated breast³⁵ and colorectal cancers.³⁶ Even a nightlight or a bright alarm clock can be detrimental.

Rest and relaxation also encompass mental and spiritual rejuvenation. I'm sure we can all testify to the necessity of proper mental rest. Jesus Christ said, “Come ye yourselves apart into a desert place, and rest a while.”³⁷ We are also benefited by a weekly mental rest—an escape from the daily grind. Historically, whenever the weekly cycle has been changed or work has been required seven days a week, humans have experienced poor health and decreased productivity. Research shows that Seventh-day Adventists, who observe the weekly rest according to the Bible Sabbath, have significantly higher plasma levels of immune stimulating antioxidants, which increase longevity, slow aging, and reduce the risks of cancer, autoimmune disease, heart disease and arthritis.³⁸

EXERCISE

Regularity in daily exercise also helps to keep your circadian rhythm on track.³⁹

People who regularly engage in vigorous exercise have significantly lower total cholesterol and better HDL cholesterol.⁴⁰ In fact, vigorous exercise lowers the risk of

hypertension, high cholesterol, and diabetes.⁴¹ Choosing the stairs over an elevator 5 times a day can lower LDL cholesterol by 8%.⁴² Walking for exercise, 30 minutes a day, significantly lowers triglycerides and total cholesterol and increases HDL cholesterol.⁴³ Walking 6,000 or more steps per day has been shown to lower triglycerides 10 mg/dL and raise HDL 3 mg/dL. This means exercise can make you healthier, feel younger, more energetic and lower your risk of dying of a heart attack.

“Walking, in all cases where it is possible, is the best exercise, because in walking, all the muscles are brought into action.... There is no exercise that can take the place of walking. Want of exercise causes the bowels to become enfeebled and shrunken. Exercise will strengthen these organs that have become enfeebled for want of use. The circulation of the blood is greatly improved by the act of walking. The active use of the limbs will be of the greatest advantage to invalids.”⁴⁴

Did you know that perfect health depends on perfect circulation? A lot of people suffer from poor circulation. Most people realize that if circulation stops, so does life. But not everyone realizes that compromised circulation leads to compromised health and sickness.

Inflammation increases when blood flow is congested and slowed.^{45,46,47,48} A sedentary lifestyle, tight clothing and/or cold extremities make autoimmune inflammatory diseases more likely to occur. On the other hand, when circulation is quickened by exercise, and supported by unrestrictive, sufficiently warm, evenly distributed clothing, inflammation decreases.⁴⁹

So, pay attention to dress. The purpose of clothing is to maintain your blood at an even, balanced temperature throughout your whole body. When clothing is insufficient as it is when short sleeves or short pants are worn, the blood is chilled back from the extremities to the trunk where it becomes congested. This increases inflammation throughout the whole body,^{50,51} disrupts the circadian rhythms,⁵² and raises the risk of many diseases.

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“In order to follow the fashions, mothers dress their children with limbs nearly naked; and the blood is chilled back from its natural course and thrown upon the internal organs, breaking up the circulation and producing disease. The limbs were not formed by our Creator to endure exposure, as was the face. The Lord provided the face with an immense circulation, because it must be exposed. He provided, also, large veins and nerves for the limbs and feet, to contain a large amount of the current of human life, that the limbs might be uniformly as warm as the body. They should be so thoroughly clothed as to induce the blood to the extremities. Satan invented the fashions which leave the limbs exposed, chilling back the life current from its original course. And parents bow at the shrine of fashion and so clothe their children that the nerves and veins become contracted and do not answer the purpose that God designed they should. The result is, habitually cold feet and hands. Those parents who follow fashion instead of reason will have an account to render to God for thus robbing their children of health. Even life itself is frequently sacrificed to the god of fashion.”⁵³

Too tight clothing, wherever it is worn, has a negative effect on the health of that part of the body. Tight bands should leave no marks on the skin. For example, studies show that too tight clothing around the waste slows the digestion of food, increases inflammation and increases one’s risk of disease.^{54,55}

“Tight bands or waists hinder the action of the heart and lungs and should be avoided. No part of the body should at any time be made uncomfortable by clothing that compresses any organ or restricts its freedom of movement. The clothing of all children should be loose enough to admit of the freest and fullest respiration, and so arranged that the shoulders will support its weight.”⁵⁶

While these quotes speak of children, the principles apply to adults too.

HEALTH BY FAITH

When you do your part by putting into practice these good lifestyle habits, God is able to do His part in protecting you from disease. Following the health laws is what makes the difference as outlined in this quote,

“We ask to be kept from the pestilence that walketh in darkness, that is stalking with such power through the world; we are then to cooperate with God, observing the laws of health and life. Having done all that we possibly can, we are to keep asking in faith for health and strength. We are to eat that food which will preserve the health of the body. God gives us no encouragement that He will do for us what we can do for ourselves. Natural laws are to be obeyed. We are not to fail of doing our part. God says to us, ‘Work out your own salvation with fear and trembling. For it is God which worketh in you both to will and to do of His good pleasure’ (Philippians 2:12, 13).”⁵⁷

AND NOW THE SCHEDULE

We start people on this schedule at health institutes and it is important, for the full recovery of health, to persevere and continue on it at home. Below I am going to explain the schedule line-by-line in detail. I have put a star (*) by each item where you need to check in the disease specific chapters for recommendations for it. Initially you will need to adjust the times to fit your job or weekend obligations, but once you establish it, be careful not to let trivial things upset it. Make it a point to be regular in your daily habits and once you get settled in the new pattern, see if you don’t notice a difference in your life. It takes at least three weeks to establish a new habit, so be patient and persistent. As you see your health improve it will inspire you to carry on.

Blue Print for Health and Healing

Line (#)	SCHEDULE
(1) <u>5:00 a.m.</u>	<u>Rising Time.</u>
(2)	Take a cool sponge bath or shower, scrub skin.
(3)	Drink 32 oz/1L of warm water with the juice of one lemon.
(4)	Take a 10-15 minute outdoor walk and breathe deeply.
(5)	Personal devotional time.
(6)	Gratitude journaling: list 10 things for which you are thankful.
(7) <u>6:30 a.m.</u>	Herbal Tea: 1-2 cups, taken one half hour before meals.*
(8) <u>7:00 a.m.</u>	<u>Breakfast</u> 65-70% fresh fruit.* 10-15% Nuts and seeds.* 20% cooked foods.*
(9)	Supplements.*
(10)	After breakfast walk: 10-15 minutes.
(11)	<u>Stress Management.</u>
(12) <u>10:00 a.m.</u>	Routine Hydration: Drink 32 oz/1L water with one teaspoon of activated charcoal powder added.
(13)	Walk 10-15 minutes outdoors.
(14) <u>1:00 p.m.</u>	Second herbal tea of the day: 1-2 cups.*
(15) <u>1:30 p.m.</u>	<u>Lunch</u> 65-70% Fresh Vegetables Or Savory Fruits (raw if possible). 10-15% Nuts and Seeds 20% cooked (at most)
(16)	Supplements.*
(17)	After lunch walk: 10-15 minutes.
(18) <u>4:00 p.m.</u>	Drink 32 oz/1L of water and take a 10-15 minute walk outdoors.
(19) <u>6:30 p.m.</u>	Hydrotherapy.*
(20) <u>9:00 p.m.</u>	<u>Bedtime</u>
(21)	Charcoal poultice as needed overnight.*
* Look in the disease specific chapters for recommendations regarding this scheduled item.	

LINE (#) BY LINE (#) SCHEDULE EXPLANATION

Line (1) GETTING OUT OF BED

Notice the rising time of 5:00 a.m. It's good to have regular hours for rising, praying, and eating. Remember how important it is to do this every day of the week to avoid the Monday morning blues. But why 5:00 a.m.? This is largely dictated by your predetermined bedtime schedule, because you need eight hours of sleep. I have 9:00 p.m. on the schedule for

optimal melatonin as explained earlier in this chapter.

Line (2) MORNING ROUTINE

I have people get up in the morning and take a cool, not necessarily cold, shower, or sponge bath, with vigorous scrubbing and stimulation of the skin.

"Most persons would receive benefit from a cool or tepid bath every day, morning or evening. Instead of increasing the liability to

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take cold, a bath, properly taken, fortifies against cold, because it improves the circulation; the blood is brought to the surface, and a more easy and regular flow is obtained. The mind and the body are alike invigorated. The muscles become more flexible, the intellect is made brighter. The bath is a soother of the nerves. Bathing helps the bowels, the stomach, and the liver, giving health and energy to each, and it promotes digestion.”⁵⁸

“Persons in health should on no account neglect bathing. ...The bath is a soother of the nerves. It promotes general perspiration, quickens the circulation, overcomes obstructions in the system, and acts beneficially on the kidneys and urinary organs. Bathing helps the bowels, stomach, and liver, giving energy and new life to each.

“It also promotes digestion, and instead of the system's being weakened it is strengthened. Instead of increasing the liability to cold, a bath, properly taken, fortifies against cold because the circulation is improved and the uterine organs, which are more or less congested, are relieved; for the blood is brought to the surface, and a more easy and regular flow of the blood through all the blood vessels is obtained.”⁵⁹

People who boost their immune system with a cool bath have higher white cell counts and a more energetic immune system which prepares them for any cold weather disease exposures.⁶⁰ And so, start off your day with a good cool sponge bath.

Line (3) PRO-ACTIVE HYDRATION

It is time to hydrate the body by drinking warm water with some lemon in it. The closer the temperature of the water is to that of the body the more easily will it absorb.

“In the morning I take lemon and water. I drink nothing between meals unless it be occasionally some lemon and water.”⁶¹

People generally drink way too little water and are dehydrated. Why are they dehydrated when they have a cup of something in their hand all day long? It is the result of competing drinks. Any drink with sugar or caffeine in it tends to dehydrate our bodies rather than to hydrate them. Also, if you consume products with refined sugar in them, you will only be

thirsty for half as much water as what you really need.”⁶²

“Thousands have died for want of pure water and pure air who might have lived. And thousands of invalids, who are a burden to themselves and others, think that their lives depend upon taking medicines from the doctors. They are continually guarding themselves against the air and avoiding the use of water. These blessings they need in order to become well. If they would become enlightened and let medicine alone, and accustom themselves to outdoor exercise and to air in their houses, summer and winter, and use soft water for drinking and bathing purposes, they would be comparatively well and happy instead of dragging out a miserable existence.”⁶³

“Thousands have died for want of pure water and pure air who might have lived.”⁶⁴

We recommend proactive hydration. By the time you feel thirsty for water, you are already 30% behind on your hydration. Regularly scheduled water consumption keeps you ahead of the game. On the chart we have scheduled three quarts/litres of water a day, this may need to be adjusted depending on your size. Having your water portioned out, for example, in 3 one quart/Litre bottles, and drinking one at each designated time can be a big help to keeping up with your water needs.

Line (4) MOVEMENT IN THE MORNING

We recommend taking a walk in the early morning.

“Morning exercise, in walking in the free, invigorating air of heaven, or cultivating flowers, small fruits, and vegetables, is necessary to a healthful circulation of the blood. It is the surest safeguard against colds, coughs, congestions of brain and lungs, inflammation of the liver, the kidneys, and the lungs, and a hundred other diseases.”⁶⁵

An early morning outdoor walk especially when there is dew on the ground helps you to breathe in more negative ions which boost your immune system. Overnight the trees make oxygen out of carbon dioxide that has accumulated during the day. There are fewer

pollutants in the morning air; people haven't had a chance to drive their cars around which suck in fresh air and blow out dirty exhaust. There are many reasons why an early morning walk is most beneficial.

Line (5) MAKING CONTACT WITH THE GREAT PHYSICIAN

We recommend scheduling time for morning devotions to better acquaint yourself with the Great Physician. All healing ultimately comes from God. Some diseases are the result of being out of harmony with Him. If we are going to be healed, it is important to know, trust, and follow the one that says, "I am the LORD that healeth thee."⁶⁶ If someone is unsure whether or not they have a good relationship with God, we highly recommend reading a small but powerful and profound book called "Steps to Christ", by Ellen G. White.⁶⁷

"The burden of sin, with its unrest and unsatisfied desires, is the foundation of their maladies. They can find no relief until they come to the Healer of the soul. The peace which He alone can give, would impart vigor to the mind, and health to the body."⁶⁸

For some people, even when they are doing all the right things we have recommended here, healing will not come until their mind and heart are at peace with God.

"The love which Christ diffuses through the whole being is a vitalizing power. Every vital part--the brain, the heart, the nerves--it touches with healing. By it the highest energies of the being are roused to activity. It frees the soul from the guilt and sorrow, the anxiety and care, that crush the life forces. With it come serenity and composure. It implants in the soul, joy that nothing earthly can destroy,--joy in the Holy Spirit,--health-giving, life-giving joy."⁶⁹

Nothing tends more to promote health of body and of soul than does a spirit of gratitude and praise.

Line (6) Gratitude Therapy

Gratitude journaling (writing) is very helpful. We have scheduled devotional time, and part of that time includes being thankful.

"Nothing tends more to promote health of body and of soul than does a spirit of gratitude and praise. It is a positive duty to resist melancholy, discontented thoughts and feelings--as much a duty as it is to pray. If we are heaven-bound, how can we go as a band of mourners, groaning and complaining all along the way to our Father's house?"⁷⁰

It is a positive duty to resist melancholy, discontented thoughts and feelings--as much a duty as it is to pray.

Line (7) HERBAL REMEDIES (TEA TIME)

The next thing we recommend is that people drink their medicinal herbal teas half an hour before meals.

"The herbs that grow for the benefit of man, and the little handful of herbs kept and steeped for sudden ailments, have served tenfold, yes, one-hundred-fold better purpose, than all the drugs hidden under mysterious names and dealt out to the sick."⁷¹

Herbs are beneficial; the different herbs for specific ailments can be found in the respective chapters on disease conditions.

Line (8) BREAKING THE FAST

Next comes breakfast.

First a word of caution about drinking with meals. The stomach needs at least two hours after a meal for the uninterrupted digestion of food. It is also important that you stop drinking water at least 30 minutes before a meal so as not to dilute the digestive juices and hinder the process of digestion.

"Many make a mistake in drinking cold water with their meals. Food should not be washed down. Taken with meals, water diminishes the flow of saliva; and the colder the water, the greater the injury to the stomach. Ice water or ice lemonade, taken with meals, will arrest digestion until the system has imparted sufficient warmth to the stomach to enable it to take up its work again. Masticate slowly, and allow the saliva to mingle with the food.

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"The more liquid there is taken into the stomach with the meals, the more difficult it is for the food to digest; for the liquid must first be absorbed."⁷²

A lot of people are not hungry at breakfast time. For most people, this is because they ate their breakfast the night before, and in the morning, they are still not hungry.

"It is the custom and order of society to take a slight breakfast. But this is not the best way to treat the stomach. At breakfast time the stomach is in a better condition to take care of more food than at the second or third meal of the day. The habit of eating a sparing breakfast and a large dinner is wrong. Make your breakfast correspond more nearly to the heartiest meal of the day."⁷³

For abundant health and healing the best plan is to aim for around 80 percent of the food eaten as created, raw and uncooked. This was the historical diet followed at the very successful early Adventist sanitariums.

"Let our people discard all unwholesome recipes. Let them learn how to live healthfully, teaching to others what they have learned. Let them impart this knowledge as they would Bible instruction. Let them teach the people to preserve the health and increase the strength by avoiding the large amount of cooking that has filled the world with chronic invalids. By precept and example make it plain that the food which God gave Adam in his sinless state is the best for man's use as he seeks to regain that sinless state."⁷⁴

"The food provided for the patients is wholesome and palatable. The diet is composed of fruits and grains and nuts."⁷⁵

To be healthy you need to have a good breakfast. "Of what?", you may ask. "It would be well for us to do less cooking and eat more fruit in its natural state. Let us eat freely of fresh grapes, apples, peaches, oranges, blackberries, and all other kinds of fruit which can be obtained."⁷⁶

There are benefits to each of these foods, for example grapes and apples help the lungs to fight viral illnesses. Would you believe, scientist have discovered that if you eat an apple a day it

makes you breathe in an extra 138 millilitres of air (20% more) with each breath."⁷⁷

At breakfast, for optimal health, we aim for 80 percent raw fruit, nuts, seeds, and 20% cooked grains and pulses. As you plan your menus look at the other relevant chapters in this book for specific guidelines and recommendations; including not drinking smoothies and juices, avoiding fermented foods, processed foods (such as refined bottled oils), chocolate, vinegar, sourdough bread, etc.

Nuts and seeds boost the immune system. Pecans are particularly good because they're the highest in antioxidants, about twice as high as walnuts. Walnuts on the other hand are rich in anti-inflammatory omega-3 fatty acids. Sunflower seeds are high in vitamin E, folate and selenium, pumpkin seeds are especially high in zinc, and Brazil nuts have the highest amount of selenium.

Make breakfast simple. You do not have to balance your entire life's nutrition at this one meal.

"Do not have too great a variety at a meal; three or four dishes are a plenty. At the next meal you can have a change. The cook should tax her inventive powers to vary the dishes she prepares for the table, and the stomach should not be compelled to take the same kinds of food meal after meal."⁷⁸

You may be wondering why 20% cooked. After all there are people out there who go to academic extremes to figure out how to make every meal 100% raw, including things that are not palatable, and not good for you eaten raw. So, why 20%? It is because some things such as beans and grains (except for some that are sprouted), and some vegetables, that are very beneficial for your health, absolutely must be cooked. You also do not want to eat everything cold.

"I would advise all to take something warm into the stomach every morning at least. You can do this without much labor.... I do not approve of eating much cold food, for the reason that the vitality must be drawn from the system to warm the food until it becomes of the same temperature as the stomach before the work of digestion can be carried on. Another very simple yet wholesome dish is beans boiled or baked."⁷⁹

Beans make a good warm breakfast dish, especially for diabetics and people wanting to improve brain health. Their high fiber helps blood sugar control, and their high concentration of select amino acids provides the building blocks for abundant neurotransmitters for the brain.

Line (9) SHALL I SUPPLEMENT

What about supplements—all those over-the-counter products, such as vitamins, minerals, and enzymes, that claim to promote wellness? In the following quote you will see that historically they were called “patent nostrums”, because they were a wellness product you could patent and market.

“When attacked by disease, many will not take the trouble to search out the cause of their illness. Their chief anxiety is to rid themselves of pain and inconvenience. So they resort to patent nostrums, of whose real properties they know little, or they apply to a physician for some remedy to counteract the result of their misdoing, but with no thought of making a change in their unhealthful habits. If immediate benefit is not realized, another medicine is tried, and then another. Thus the evil continues.”⁸⁰

Where in the Bible does it recommend oral medication? Where does it say, “Swallow this and you'll get better.”? In the Bible it was commanded to lay hands on the sick, put a poultice of figs on a boil, or go dip in the Jordan River, and there were several times where the balm of Gilead and other poultices were used, but oral medication was never mentioned.

Where in the Bible does it recommend oral medication? Where does it say, “Swallow this and you'll get better?”

HERBS OR SUPPLEMENTS

When used medicinally, we recommend taking herbs as teas to address specific health issues in conjunction with adopting a healthy lifestyle.

There is a difference between herbs and supplements. Herbs are preparations where you can see what the product is such as a leaf, flower, or bark, etc. Supplements are pills, liquids or powders that have been concocted in

some laboratory and manufactured in a factory. We previously referred to these as patent nostrums.

When the Bible talks about the building of the earthly temple, God gave very specific instructions that there was to be no tool of iron used upon the stones of the altar.⁸¹ Our bodies are likened to the temple of the Holy Spirit. We are what we eat. The foods--fruits, nuts, seeds, grains, vegetables, etc.--that we eat are perfectly designed and are used by the Creator to sustain and energize the body and keep it in perfect health. Man tries to improve on God's design, but any interference, whether by processing, altering, extracting, etc., only makes the food inferior and harder for the body to utilise.

The manufacturing of vitamin and mineral supplements is just such an example. Science suggests vitamin A is beneficial to health, so people extract it from carrots as beta carotene. But the fact is that carrots have been found to have 273 different active forms of vitamin A, not just beta carotene. So, what happened to the other 272 forms of vitamin A? When you settle for a pill in the place of eating carrots, you miss out on quite a few important forms of vitamin A. It is best to eat natural foods in their entirety—whole foods as grown, rather than parts in the form of supplements. What's more, vitamin A supplement pills are detrimental and have been found to increase the risk of death from lung cancer by 46%, And of heart disease by 26%.⁸²

Line (10) THE AFTER MEALS DIGESTIVE WALK

Next on the schedule is a therapeutic walk right after the meal.

“But a short walk after a meal, with the head erect and the shoulders back, exercising moderately, is a great benefit. The mind is diverted from self to the beauties of nature. The less the attention is called to the stomach, the better. If you are in constant fear that your food will hurt you, it most assuredly will. Forget your troubles; think of something cheerful.”⁸³

This idea concerning your ability to control your thoughts leads us to our next point, in Line (11).

How Can I Apply Healthy Principles in My Daily Life?

Line (11) SRESS MANAGEMENT

I noticed that a lot of my patients, especially the cancer patients, experienced life as stressful leading up to their diagnosis. Biblical stress management may be the key to your health recovery.

“Sickness of the mind prevails everywhere. Nine tenths of the diseases from which men suffer have their foundation here. Perhaps some living home trouble is, like a canker, eating to the very soul and weakening the life forces. Remorse for sin sometimes undermines the constitution and unbalances the mind. There are erroneous doctrines also, as that of an eternally burning hell and the endless torment of the wicked, that, by giving exaggerated and distorted views of the character of God, have produced the same result upon sensitive minds. Infidels have made the most of these unfortunate cases, attributing insanity to religion; but this is a gross libel and one which they will not be pleased to meet by and by. The religion of Christ, so far from being the cause of insanity, is one of its most effectual remedies; for it is a potent soother of the nerves.”⁸⁴

“Worry is blind, and cannot discern the future; but Jesus sees the end from the beginning.” “Those who accept the one principle of making the service and honor of God supreme will find perplexities vanish, and a plain path before their feet.” {DA 330.1}

You may be thinking, as many do, “I have real symptoms, I have a diagnosis, my doctor has a treatment plan, my issues are not mental or mind related.” Sometimes people get very offended if you infer that their illness is not only physical, but that it is their mind that is making them sick. We just read above that nine tenth or 90% of diseases have their foundation in the mind. If you were betting, would you put your money where you would have only one in ten, or nine out of ten chances of winning? It makes absolutely no sense at all to start focusing on the physical without any reference to the mental.

For example, if your stomach occupies your thoughts too much—as to whether it hurts or

not—it will probably start hurting. This reminds me of when I was on “foot service” in my residency. There was one doctor that did nothing but see and treat patients with foot problems. We residents followed him around learning how to treat patients. While seeing all these foot pain patients for three months, my feet began to hurt for no apparent reason. That was a little embarrassing. About a year later I was sitting down with my fellow residents when one of them mentioned, “Yeah, when I was on the foot service, and all those patients were coming in with their feet hurting, my feet started to hurt too”. Several others also chimed in, “Yeah, right, my feet too.” We all had a good laugh.

Since the mind has such power over the body, we have included three chapters in the book to help you deal with psychological stress; “Stress Management God’s Way”, “If We Would Be but More Grateful: The Power and Science of Gratitude”, and “Health by Faith: Whole Person Healing”.

“When trials come to us, let us not dwell upon the greatness of the difficulties and feel that we cannot have joy in the Lord. It is true we will have changes of feelings. There will come to us times of discouragement and depression. But shall we live by feeling or by faith? When our brethren and friends speak unadvisedly, and cause us grief, let us not be cast down. Let us remember that we are in a world of trial and grief, of sorrow and disappointment. When these experiences come to us, they should drive us to Christ. If they do not, we meet with loss.”⁸⁵

Line (12) ROUTINE HYDRATION AND CHARCOAL

“In health and in sickness, pure water is one of Heaven's choicest blessings. Its proper use promotes health. It is the beverage which God provided to quench the thirst of animals and man. Drunk freely, it helps to supply the necessities of the system, and assists nature to resist disease.”⁸⁶

We recommend adding one teaspoon of charcoal powder, which is a powerful internal cleanser, to the scheduled mid-morning quart/litre of water. This can be beneficial to remove unwanted toxins and inflammation from your system, whether you are sick or not.

Blue Print for Health and Healing

Our recipe is to take a one quart/litre jar, fill it with water while leaving room for a little air and charcoal, add the charcoal, put on the lid and shake it till the charcoal is well mixed, and drink it. At no other place in your body can you get charcoal so close to the bloodstream to pull out toxins and inflammation as in the intestines where the vessels are right beneath the surface.

"I send you at this time pulverized charcoal. Let him drink the water after it has stood a while to extract the virtue. This should be cold when used." {20MR 280.4}

The charcoal can be taken with meals or separately. If taken with a meal, it might be better to add it to food rather than adding more liquid to the meal. Charcoal does not tend to pull out necessary nutrients, it only tends to adsorb toxins. For example, kidney dialysis patients have their blood filtered across charcoal three times a week, but don't experience subsequent nutritional deficiencies. A word of caution, don't take charcoal within two hours of taking any medication as charcoal could make it ineffective.

Line (13) ROUTINE EXERCISE

Regular outdoor walk in the fresh air and sunshine is therapeutic.

A walk, even in winter, would be more beneficial to the health than all the medicine the doctors may prescribe.

"When the weather will permit, all who can possibly do so ought to walk in the open air every day, summer and winter. But the clothing should be suitable for the exercise, and the feet should be well protected. A walk, even in winter, would be more beneficial to the health than all the medicine the doctors may prescribe. For those who can walk, walking is preferable to riding. The muscles and veins are enabled better to perform their work. There will be increased vitality, which is so necessary to health. The lungs will have needful action, for it is impossible to go out in the bracing air of a winter's morning without inflating the lungs."⁸⁷

Now that's a strong statement, isn't it? Have you ever seen a PDR (Physicians' Desk Reference of all the available drug medications)? It has about 5,000 drugs in it, and all the explanations

describing what symptoms they are prescribed for. Well, you can either take one of those 5,000 drug medications or you can choose to take an outdoor walk. Which one do you prefer?

Line (14) SECOND HERBAL TEA OF THE DAY: 1-2 CUPS

Look in the disease specific chapters for recommendations. See comments under Line (7).

Line (15) LUNCH TIME

Diet is the main emphasis of a good health program. Hydrotherapy is useful too, but the food really is the most important, because very few people eat the right things. Even people who think they have been eating healthy can be misled by erroneous teachings that are in exact opposition to the Creator's designs. You are made up of what you eat. If you are sick and want to change and get healthy, you will need to change your eating habits. Improving your diet makes a powerful difference.

"More can be accomplished for sick people by regulating their diet than by all the baths that can be given them."⁸⁸

We recommend you aim to for 80% raw, or lightly steamed vegetables and herbs for lunch, in combination with 20% cooked food. The more your meal consists of raw, lightly steamed or lightly cooked vegetables the better will be your health.

The 20% warm, or cooked part of the meal may consist of such items as brown rice, beans, lentils, whole grain pasta, potatoes, bread, etc.

"Many are debilitated from disease and need nourishing, well-cooked food. Health reformers, above all others, should be careful to avoid extremes. The body must have sufficient nourishment."⁸⁹

We generally have to encourage people to eat some vegetables, as not everybody naturally relishes them--they have to learn to enjoy them. Fruit goes down much easier, but they are less enthusiastic when it comes to such delicacies as

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greens and roots, until their palate has acquired a taste for them.

We generally have to encourage people to eat some vegetables, as not everybody naturally relishes them-- they have to learn to enjoy them.

"In a medical institution there are varied appetites to satisfy. Some require well-prepared vegetables to meet their peculiar needs. Others have not been able to use vegetables without suffering the consequences. The poor, sick dyspeptics need to be given many words of encouragement. Let the religious influence of a Christian home pervade the sanitarium. This will be conducive to the health of the patients. All these things have to be managed carefully and prayerfully. The Lord sees the difficulties to be adjusted, and He will be your helper."⁹⁰

Line (16) AFTER LUNCH SUPPLEMENTS

See Line (9).

Line (17) AFTER LUNCH DIGESTIVE WALK

After lunch, we recommend you go out for a walk, just like you did after breakfast. The walk does not have to be long.

"Walking, in all cases where it is possible, is the best remedy for diseased bodies, because in this exercise all the organs of the body are brought into use.... In some cases want of exercise causes the bowels and muscles to become enfeebled and shrunken, and these organs that have enfeebled for want of use will be strengthened by exercise. There is no exercise that can take the place of walking. By it the circulation of the blood is greatly improved."⁹¹

Line (18) WATERING THE CELLS (see also Lines #3 and #12)

Mid-afternoon, drink more water, remembering the two-hour after-meal gap (see line #8).

This is the third prescribed quart/L of water of the day. People can drink more water if they desire. How much water can you safely drink? Most people can drink a gallon/4L per day

without any worry of washing out their electrolytes (salt) and without needing to take additional salt.

"Drink freely of pure, soft water. If this course should be followed perseveringly, resisting the inclination to do otherwise, it would work wonders in the recovery of health."⁹²

(Also see section, "Line (3) PRO-ACTIVE HYDRATION", above.)

Line (19) HYDROTHERAPY FOR THE SICK

Water is wonderful, used on the inside as well as on the outside. When used on the outside it is called hydrotherapy.

External application of water can be used for cleansing as well as for improving the healthy action of the organs and cells. Hydrotherapy needs to be applied correctly, specific to your disease condition, so please refer to the prescribed method in the relevant chapters.

Because these treatments can be exhausting for the patient, we have found that applying hydrotherapy before retiring for the night is both convenient and beneficial. Thus, we like to administer them right before bedtime. Hydrotherapy should always be followed by a 30-minute (minimum) rest, so the body can most fully respond to the treatment.

There are many unexpected benefits to simply bathing as a preventive measure.

"Frequent bathing is very beneficial, especially at night, just before retiring, or upon rising in the morning. It will take but a few moments to give the children a bath, and to rub them until their bodies are in a glow. This brings the blood to the surface, relieving the brain; and there will be less inclination to indulge in impure practices. Teach the little ones that God is not pleased to see them with unclean bodies and untidy, torn garments. Tell them that he wants them to be pure without and within, that he may dwell with them."⁹³

Line (20) MAKING IT TO BED ON TIME

Bedtime should be no later than 9:00 p.m. as we described at the beginning of this chapter under the heading "REST".

Line (21) BENEFITS OF CHARCOAL

Charcoal's medicinal value lies in its ability to pull toxins, excess fluids and inflammation out of the body.⁹⁴ Bedtime is a good time to apply a charcoal poultice if needed, so it can work overnight. Here are some examples of how to use charcoal and an actual experience on how effective charcoal can be.

"I send you at this time pulverized charcoal. Let him drink the water after it has stood a while to extract the virtue. This should be cold when used. When used for fomentations over the bowels, the coal should be put into a bag, sewed up, and dipped in hot water. It will serve several times. Have two bags; use one and then the other."⁹⁵

"On one occasion a physician came to me in great distress. He had been called to attend a young woman who was dangerously ill. She had contracted fever while on the campground and was taken to our school-building, near Melbourne, Australia. But she became so much worse that it was feared she could not live. The physician, Dr. Merritt Kellogg, came to me and said, 'Sister White, have you any light for me on this case? If relief cannot be given our sister, she can live but a few hours.' I replied, 'Send to a blacksmith's shop and get some pulverized charcoal; make a poultice of it, and lay it over her stomach and sides.' The doctor hastened away to follow out my instructions. Soon he returned, saying, 'Relief came in less than half an hour after the application of the poultices. She is now having the first natural sleep she has had for days.'"⁹⁶

Notice that this advice was given purely on the basis of the symptoms without any elaborate investigation or diagnosing of a disease condition with a specific intricate name. The simple natural charcoal poultice remedy was applied, not to mask the symptoms, but to work with the laws of nature by relieving the load of toxins and inflammation so the body could heal. No matter what your condition is, go to God, then treat the illness with the best natural remedy to which He directs your mind.

"Natural means, used in accordance with God's will, bring about supernatural results. We ask for a

miracle, and the Lord directs the mind to some simple remedy."⁹⁷

The way we make a charcoal poultice is to boil one cup of water, add 3 tablespoons of activated charcoal, and 3 tablespoons of ground flax seeds. Simmer for 5 minutes and let cool. What you will have after cooking this mixture is a gel that is easy to work with. You can apply it directly to the skin or wrap it in one layer of damp paper towel and apply the damp paper towel to the skin over the area to be treated. Then wrap the applied poultice with plastic wrap and an elastic bandage, to hold it in place, and leave it on overnight. The same poultice can be used the following night, by flipping it over and reapplying as above.

Also check out line(14) for taking charcoal orally.

CONCLUSION

When you go with God's plan for your lifestyle, following a regular schedule, disease recovery is more certain. With time it will get easier and become a joy.

We haven't touched on all the health principles that we could have, but we did touch on the ones that pertain to a good, health promoting daily schedule.

Following is a blank form where you can plan your own schedule according to the recommendations for your condition. Then pray for God's power to follow it through.

"Let pupils be impressed with the thought that the body is a temple in which God desires to dwell, that it must be kept pure, the abiding place of high and noble thoughts. As in the study of physiology they see that they are indeed "fearfully and wonderfully made" (Psalm 139:14), they will be inspired with reverence. Instead of marring God's handiwork, they will have an ambition to make all that is possible of themselves, in order to fulfill the Creator's glorious plan. Thus they will come to regard obedience to the laws of health, not as a matter of sacrifice or self-denial, but as it really is, an inestimable privilege and blessing."⁹⁸

This has been the experience of those who have put the above principles into practice. Our prayer is that it will be yours also.

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Fill in your own schedule

Line (#)	SCHEDULE
(1) : a.m.	<u>Rising Time.</u>
(2)	Take a cool sponge bath or shower, scrub skin.
(3)	Drink 32 oz/1L of warm water with the juice of one lemon.
(4)	Take a 10-15 minute outdoor walk and breathe deeply.
(5)	Personal devotional time.
(6)	Gratitude journaling: list 10 things for which you are thankful.
(7) : a.m.	Herbal Tea: 1-2 cups, taken one half hour before meals.*
(8) : a.m.	<u>Breakfast</u> 65-70% fresh fruit.*
	10-15% Nuts and seeds.*
	20% cooked foods.*
(9)	Supplements.*
(10)	After breakfast outdoor walk: 10-15 minutes.
(11)	Stress Management.
(12) : a.m.	Routine Hydration: Drink 32 oz/1L water with one teaspoon of activated charcoal powder added.
(13)	Walk 10-15 minutes outdoors.
(14) : p.m.	Second herbal tea of the day: 1-2 cups.*
(15) : p.m.	<u>Lunch</u> 65-70% Fresh Vegetables or Savory Fruits (raw if possible).
	10-15% Nuts and Seeds
	20% cooked (at most)
(16)	Supplements.*
(17)	After lunch outdoor walk: 10-15 minutes.
(18) : p.m.	Drink 32 oz/1L of water and take a 10-15 minute walk outdoors.
(19) : p.m.	Hydrotherapy.*
(20) : p.m.	<u>Bedtime.</u>
(21)	Charcoal poultice as needed overnight.*
* Look in the disease specific chapters for recommendations regarding this scheduled item.	

Section Two:

Frequently Requested Health Topics

“Wherever the last message of warning is given combined with medical missionary work and lessons on the right principles of living, wonderful results are seen. Our sanitariums are to be the means of enlightening those who come to them for treatment. The patients are to be shown how they can live upon a diet of grains, fruits, nuts, and other products of the soil. I have been instructed that lectures should be regularly given in our sanitariums on health topics. People are to be taught to discard those articles of food that weaken the health and strength of the beings for whom Christ gave His life. The injurious effects of tea and coffee are to be shown. The patients are to be taught how they can dispense with those articles of diet that injure the digestive organs. These things are to be treated from a health standpoint.”ⁱ

- E.G. White

ⁱ White, E. G. (1990). Manuscript Releases, vol. 7 [Nos. 419-525]. Silver Spring, MD: Ellen G. White Estate. p. 380.

CHAPTER 17

COFFEE ANYONE?

Having trouble “breaking the ice”? Interesting fact: people in social situations holding a hot cup of coffee perceive their social interactions as warmer.¹ Just meet up with your friends at the local coffee shop, or invite friends over and serve the best freshly brewed coffee and watch the ice melt away.

POPULARITY

Seriously, coffee is the most popular beverage in the world, with more than 400 billion cups being consumed each year.² Why do so many people like coffee? Is it just the energy they get--the boost that keeps them fueled for the rest of the day? Yes, but there’s more. It is “conversational”; people feel there is nothing more inviting and comforting than conversations over coffee. They love coffee because it can be shared and it's usually a catalyst for great discussions! For some it helps them relax and de-stress. Then there is the aroma, and people like the aroma so well, that coffee even gets added to other things just for the olfactory appeal. Although it may be an acquired taste, many love the flavor of coffee. And there are just so many different brewing methods and flavors, the exploration can be boundless. Everyone seems to have their own favorite latte, brew or brand.³

Americans consume 400 million cups of coffee per day making the United States the leading coffee consumer of the world. Among coffee drinkers, the average consumption in the United States is 3 cups a day.⁴

ECONOMICS

To illustrate the economic impact of coffee, it is the second most globally traded commodity

behind crude oil.⁵ The advertising budget alone of coffee is more than the entire yearly research budget of the National Institute of Health.

With such wide popularity, and economic power, is it any wonder that the news is replete with health and psychological accolades for this simple bean beverage. And just like wine, chocolate, tobacco⁶ and organic unfiltered apple cider vinegar, journalism has magically transformed these dubious health tonics into wonderful perpetuators of eternal youth. Don’t we all have itching ears for tales expounding the virtues of our pet vices?

Interesting fact: people in social situations holding a hot cup of coffee perceive their social interactions as warmer.

DEPENDENCE

But let’s face it; one day without coffee and proof of your dependence and addiction will emerge in symptoms of headache, fatigue, decreased energy/activeness, decreased alertness, drowsiness, decreased contentedness, depressed mood, difficulty concentrating, irritability, and feeling foggy/not clearheaded.⁷ So, if it feels so good, then why does it bite so hard and hang on so tenaciously?

The secret lies in what it shares with cocaine, nicotine, amphetamines and heroin^{8,9}, the ability to stimulate you physically and psychologically. Stimulants are habit forming, addictive and foster enslaving dependence. You’ll find yourself doing anything to have just one more sip, even if you have to take it out of the sight of prying eyes.

"Tea and coffee produce an immediate effect. Under the influence of these poisons the nervous system is excited; and in some cases, for the time being, the intellect seems to be invigorated, the imagination more vivid. Because these stimulants produce such agreeable results, many conclude that they really need them; but there is always a reaction. The nervous system has borrowed power from its future resources for present use, and all this temporary invigoration is followed by a corresponding depression. The suddenness of the relief obtained from tea and coffee is an evidence that what seems to be strength is only nervous excitement, and consequently must be an injury to the system."¹⁰

You might ask, "Doesn't everyone need a little pep now and then to get the brain going and the ambition in gear?" Well, if it is the brain you're trying to rouse, I have news for you; early functional gains soon disappear,¹¹ and over time, especially as you get older, performance suffers with losses in executive function and slowing of mental processing speed.¹² In the end coffee really does not improve net alertness, it merely returns addicts to the original baseline from which they first started, if and only if they keep using, and using, and using....¹³

MENTAL PERFORMANCE

To assess mental performance in an animal model, NASA researchers treated spiders, which normally spin very symmetrical webs, with various chemicals and drugs. Test chemicals included: marijuana (street drug), Benzedrine (an amphetamine), caffeine (of coffee fame), and chloral hydrate (sleeping medication). Web symmetry and completeness deteriorated dramatically with each substance. What may surprise you, as it did me, was that spiders spun worse webs on caffeine than they did on marijuana and amphetamines. Only chloral hydrate came close to equaling caffeine's impact on web degeneration.¹⁴ Subsequent studies have shown that it takes spiders four (4) whole days to return to normal web building after caffeine dosing. What does that say for coffee users and mental performance for the four days following use?

Did you know that the caffeine in just one cup of coffee will shut down the blood flow to your

brain by 30%?^{15, 16, 17} Especially to the frontal lobes?¹⁸ The frontal lobes of your brain are where people do their higher thinking; where they discriminate right from wrong; where their conscience resides; and without them they lose their moral compass. Our frontal lobes are what distinguish us from a monkey: it's a distinction we want to maintain. Just one cup of coffee can make a person more likely to share information with others (gossip) that they would otherwise have been careful to keep confidential.¹⁹ The moral of that story is: don't let coffee make a monkey out of you.

"The brain nerves which communicate with the entire system are the only medium through which Heaven can communicate to man, and affect his inmost life. Whatever disturbs the circulation of the electric currents in the nervous system, lessens the strength of the vital powers, and the result is a deadening of the sensibilities of the mind."²⁰

This dampening effect on higher mental function has huge impacts on teenagers, where caffeine significantly increases violent behaviors and conduct disorders for both girls and boys.²¹ What does this say for the modern rise in Attention Deficit Hyperactivity Disorder and school dropout rates?

Did you know that the caffeine in just one cup of coffee will shut down the blood flow to your brain by 30%?

SLEEP AND FATIGUE

Short on sleep? Tired all the time? Caffeine consumption results in decreased sleep quantity and quality.^{22, 23} Coffee also decreases the secretion of melatonin, the principal hormone that regulates sleep.²⁴ Melatonin is also an important hormone for a strong immune system, for the fight against cancer and autoimmune diseases.

ADDICTIONS

For those aware of their addictive weaknesses, tea and coffee foster the appetite for stronger stimulants. Caffeine, as found in coffee, is referred to as a "gateway drug",

Coffee Anyone?

meaning that the breakdown of the barriers to addictive behaviors in caffeine dependence opens the way for the breakdown of barriers to addictive behaviors leading to alcohol and tobacco dependence or worse.²⁵ The reverse is also true, if you are trying to rid yourself of some other enslaving habit such as smoking, also stopping caffeine use is important in your quest for recovery.^{26, 27, 28}

VITAMINS AND MINERALS

Doesn't coffee possess dietary benefits? Is there some nutrient you need that only coffee is really good at fulfilling? Not for vitamins and minerals. Consumers of caffeinated beverages have long been associated with deficiencies of calcium,²⁹ B vitamins,³⁰ and Iron^{31, 32, 33}. Maybe this is also why they are not good blood builders. People consuming them have been known to become anemic.³⁴

CALCIUM, BONE LOSS AND HORMONES

An apple a day may keep the doctor away, but a cup of coffee a day certainly won't. One caffeinated drink increases the urinary excretion of calcium for at least 3 hours.³⁵ In one study, calcium loss doubled in almost everyone who used caffeine.³⁶ Therefore, it should not surprise you that caffeine is associated with increased calcium loss from the bones, an important risk factor for osteoporosis.³⁷ Perhaps you are thinking, "I'll just drink decaffeinated coffee instead". Studies show no benefit for the decaffeinated option, osteoporosis still occurs.³⁸ For men, caffeine decreases bone-preserving testosterone.³⁹ So, if you're not feeling like a man anymore, or you just don't seem to be able to get her pregnant, tip the cup.^{40, 41}

PREGNANCY AND FERTILITY

Caffeine and reproductive health don't mix. Caffeine consumption during pregnancy can result in a lower birth weight,⁴² childhood bone complications, slower fetal growth,⁴³ miscarriages^{44, 45} stillbirth and infant death.^{46, 47} What's more, moms consuming caffeine during pregnancy could come up short on future

grandchildren, coffee impacts their children's fertility too.⁴⁸

REFRESHING?

Some people believe that when they are thirsty any drink will suffice, but scientific studies show that caffeine is a diuretic and actually has the opposite effect of producing dehydration.⁴⁹

In the processing of coffee, from the bean to the brew, the beans are fermented.⁵⁰ This makes coffee another one of those foods which has been touched by spoilage and carries with it the elements of rot (aflatoxins and mycotoxins) that provokes inflammation and disease.^{51, 52} This is one of the reasons why coffee increases the risk of autoimmune inflammatory diseases such as rheumatoid arthritis^{53, 54} and psoriasis.⁵⁵ It would be much better to obtain fresh products (fruits, vegetables, nuts, seeds, beans and grains) because they are usually anti-inflammatory and more nutrient dense.

Caffeine, as found in coffee, is referred to as a "gateway drug", meaning caffeine dependence opens the way for addictive behaviors leading to alcohol and tobacco dependence or worse.

BLOOD PRESSURE

The impact of caffeine consumption on blood pressure is dose dependant; the more caffeine you consume, the higher your blood pressure goes.^{56, 57} What actually happens is that caffeine acutely raises blood pressure by raising circulating concentrations of the stress mediators epinephrine and norepinephrine. In addition, caffeine increases arterial stiffness and inhibits the relaxation of blood vessels both of which increase the risk of high blood pressure.⁵⁸

STROKE

The effect of coffee on the body is rapid and sudden and the consequence of its use can be very abrupt. For example, during the first hour after consuming coffee, while your blood pressure is up, your risk of stroke doubles.⁵⁹

DIABETES

Diabetes is at an all-time high with many people suffering from it and its complications. For the diabetic trying to maintain moderate blood sugars on lifestyle changes, they need to know that caffeine increases diabetic blood sugars by 28%^{60, 61} and decreases the effectiveness of exercise in lowering blood sugar.⁶² So if you are a diabetic or have a high risk of being one, cutting coffee is just one more step on the road to health.

CANCER

Of all the diseases experienced by man, none seems to create more fear and trepidation than does cancer. Cancer is often the result of unwanted changes in the DNA code of your cells. I am happy to say that your Creator foresaw this and included in your cells machinery which proof reads and corrects DNA errors. Sad to say, caffeine counteracts this provision by preventing the repair of damaged DNA, making cancer more likely.⁶³ This may explain why one of the reasons coffee increases the risk of pancreatic cancer is that coffee drinkers experience and retain far more cancer-causing gene (DNA) mutations.⁶⁴ There is an 80% higher risk of pancreatic cancer in coffee drinkers.⁶⁵

The risk of other cancers also increases with coffee use. Two or more cups of coffee per day more than doubles the risk of ovarian cancer.⁶⁶ When caffeine is combined with a high fat diet, it significantly increases breast cancer risk.⁶⁷ For women, the more coffee you drink in a day the higher your risk of ovarian cancer. The risk of ovarian cancer increases 31% for one cup of coffee per day and 81% for 5 or more cups per day.⁶⁸ This is compared to non-drinkers of coffee whose risk was very low. So, pick which risk you

are willing to tolerate and drink the appropriate amount of coffee to achieve that risk.

Four or more cups of coffee per day doubles the risk for non-Hodgkin's lymphoma.⁶⁹ Compared to non-drinkers, men who drank one cup of coffee per day had a 150% higher risk of Stomach cancer.^{70, 71} Compared to those who reported no coffee drinking, men who averaged more than 250-ml per day experienced a 40% increase in risk of prostate cancer.⁷² Coffee increases the risk for small cell carcinoma of the lung by 250%.⁷³ What comes in must go out, and maybe this explains the increase of bladder cancer for coffee drinkers.^{74, 75} Bottom line, if you are planning to avoid becoming a cancer statistic, coffee is not the best beverage for helping you achieve that goal.

Caffeine in coffee counteracts the repair of damaged DNA, making cancer more likely.

HEARTBURN AND REFLUX DISEASE

I have had many people approach me about their concern for all the reflux pills they are taking and their side effects. Little do they realize that the real cause of their reflux and heartburn symptoms may be coming from coffee. Certain stimulants are known to increase stomach acid and the burn.⁷⁶ These include tea, coffee, and caffeine.⁷⁷ Coffee has a relaxing effect on the valve at the top of your stomach (lower esophageal sphincter).⁷⁸ That valve is there to stop food and acid from returning back up your throat. Coffee is a drink that a large percentage of people with reflux and heartburn report causes them symptoms of pain.⁷⁹

HEART ATTACKS!

Coffee can have an impact on the heart that is not desirable. Daily caffeine consumption increases LDL,⁸⁰ sometimes referred to as "bad" cholesterol. It also can increase triglycerides,⁸¹ and the risk of heart attack.⁸² HDL is sometimes

Coffee Anyone?

referred to as “good” cholesterol, but sadly coffee decreases HDL.⁸³ What is its impact on total cholesterol? Two-hundred milligrams of caffeine per day, (about 2 cups of coffee) can increase total cholesterol by 11 mg/dL.^{84,85} Other lab values adversely affected by caffeine include homocysteine.⁸⁶ When homocysteine is elevated it increases the likelihood of a heart attack. Maybe that is one of the reasons why coffee consumption is a potential trigger for sudden cardiac death in persons with other risk factors for ischemic heart disease.⁸⁷

THE DARK SIDE OF COFFEE

The production of that wonderful brew that people so love has been linked to slavery and child labor in many countries (Brazil, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Guinea, Honduras, Kenya, Mexico, Nicaragua, Panama, Sierra Leone, Tanzania, Uganda, Vietnam, Côte d’Ivoire).⁸⁸ “In that ye have done it unto one of the least of these, ye have done it unto Me.”⁸⁹ What’s more; many of the beans you buy are grown in countries that under-regulate the use of toxic cancer causing chemicals and dangerous, health destroying pesticides.^{90, 91, 92}

REPELLENT

So why do so many plants in nature produce caffeine? What is the function of caffeine in nature? Many experts feel that caffeine is a natural pesticide. Caffeine is actually poisonous

to herbivores and insects. It is also toxic to plants and is stored in special vacuoles or specialized plant compartments, which protect the plant from this toxic stimulant.⁹³ In God’s ecology, it is produced by the plant in response to the nibbling stimulus of herbivores to prevent over-grazing. The grazing animals taste the caffeine poison and are smart enough to move on and leave the plants behind, are we?

Summary

- Coffee is a popular beverage worldwide with an addictive quality.
- Coffee has been pushed by its dealers to be a health beverage, when in reality it is quite the opposite.
- Caffeine is a mind-altering drug that affects the frontal lobes of the brain, where your conscience resides and through which God wants to communicate with people.
- Coffee negatively impacts people’s health in many documented ways.
- When drinking coffee, people are aiding and abetting those who engage in the violation of human rights.
- In nature, caffeine signals animals not to over graze on certain plants.
- If you drink coffee, are you ready to turn your life around and switch to a healthier alternative?

“Away with cake. Persons may kill themselves with sweets. More harm is done to children by sweets than by anything else.”ⁱ

– E. G. White

ⁱ White, E. G. (1990). Sermons and Talks, vol. 1. Silver Spring, MD: Ellen G. White Estate. p. 12.

CHAPTER 18

THE COCOA ROMANCE

LOW ON LOVE?

Chocolate is a key romance ingredient in many of Michael Webb's recommendations in his book: *101 Romantic Ideas*.¹ Owner of the website TheRomantic.com, Michael devotes a whole page to romantic chocolate ideas.² And why shouldn't he? Isn't chocolate the most craved food by females?³ Indeed, 45% of American women *regularly* crave chocolate.⁴ Thanks to Phenethylamine (PEA),⁵ the "love hormone", and other psychoactive substances, cocoa is a powerful stimulator of the sexual pleasure center of the brain⁶ and is a driver of erotic behavior.⁷ As could be expected, women indulging in more cocoa products score higher points on the Female Sexual Function Index.⁸

FOOD OF THE GODS

Is chocolate's addictive power limited to its role as icon of America's love affair with sex or does it have a magic all its own? The most active ingredient in chocolate is theobromine; its name is taken from the Greek name of the plant from which this product is derived *Theobroma Cocoa*, which literally means, "cocoa—food of the gods".⁹ Complemented, as it is in chocolate, with caffeine,¹⁰ theobromine is responsible for much of the addictive power of your favorite cocoa product.¹¹ This "food of the gods" may be more addictive than you bargained for.^{12, 13}

HEROINE OR HEROIN

Studies show that chocolate trumps hot chili pepper on food, people's favorite alcoholic beverage, video games, coffee, tea, cola beverages, gambling, and even cigarettes in its addictive power.¹⁴ People with a lack of control around chocolate are called "Chocoholics".¹⁵ Could chocoholics really be closet heroin addicts? That may be stretching it a bit, but humans and animals given a drug which blocks their body's opioid receptors (receptors activated by drugs such as heroin, morphine and opium) virtually lose their addictive attraction to chocolate.^{16, 17} Thus, chocolate's addictive power lies in its ability to stimulate the same opioid receptors in the brain as morphine. Maybe this explains the pervasiveness of this annual \$17 billion, 3.5 million ton industry from which the average American obtains around 22 pounds of cocoa per year.¹⁸ And why isn't morphine allowed as an ingredient in candy? Narcotics enfeeble and degrade the intellect, lower the morals and cause a person to lose the power to resist temptation.

MARY JANE ON THE BRAIN

But what of the euphoria well known to chocolate devotees? While you won't turn positive for cannabinoids on a urine drug screen, chocolate is like marijuana. There are

three substances in chocolate that activate cannabinoid receptors in the brain and mimic the psychoactive effects of marijuana.¹⁹ Is it any wonder that chocolate is widely believed to enhance the effect of marijuana?²⁰ SPECT scan studies of the brains of cannabis users reveal an appalling lack of neural activity in the frontal lobes. The frontal lobes are where your conscience is located—where you discriminate between right and wrong and make important moral decisions. Paul declares, “All things are lawful unto me, but all things are not expedient: all things are lawful for me, but I will not be brought under the power of any.” 1Corinthians 6:12 A Christian should never use a product that will bring them under its power. “Know ye not, that to whom ye yield yourselves servants to obey, his servants ye are to whom ye obey; whether of sin unto death, or of obedience unto righteousness?” Romans 6:16.

Christian should never use a product that will bring them under its power.

IF YOU LIKE IT, WHY NOT CLAIM IT'S HEALTHY?

In her article published in the journal *Dimensions of Critical Care Nursing*, “Chocolate: the health food”, Vickie A. Miracle states, “Then there are times I believe I was born too early. I have been proclaiming chocolate as a health food since I was 6 years old! I do confess to being a chocoholic and proud of it. Now science has caught up with my theory. Chocolate does have health benefits. These benefits have been reported in the literature for more than 10 years. While the history of the cacao plant and chocolate is very interesting, it is not the intent of this editorial to discuss this. Rather, this

editorial will explain why chocolate may have health benefits, some of its benefits, its disadvantages, and current recommendations for those who enjoy eating chocolate.”²¹ I have no grumble with the trend in our society to elevate the value of health to an all-time high. And maybe we should be happy that this author does not live in a culture where some practices offensive to our thinking reigns supreme, else we might be obliged to read editorials touting chocolate as just the thing to make primitives better head hunters, Eskimos better whalers, and French better.... You get the idea. This elevating of substances of questionable nutritional value includes such delicacies as rotten apples sold as “organic apple cider vinegar”, inebriating red wine touted as good for your heart, medicinal marijuana—the legalization of a brain destroyer and formerly discarded whey powder as good to build your muscles. It seems that chocolate is so subtly destructive to your intellect and morals as to make its promulgation as a health product seem plausible. If you like it, why not just claim you like it, why purport to have discovered medicinal properties for it?

WEIGHT LOSS WONDER

With obesity at an all-time high and the existence of a \$60 billion per year weight loss market why not sponsor a weight loss study? According to Carol E. O’Neil, Victor L. Fulgoni III and Theresa A. Nicklas, in their article of June 2011, which appeared in *Food & Nutrition Research*, “Total, chocolate, and sugar candy consumption was not associated with weight/adiposity variables and candy consumers were less likely to be overweight or obese than non-candy consumers.” “Current levels of candy consumption were not associated with adverse health parameters in

children or adolescents.” One is called to wonder how these things can be so. Doesn’t this go against conventional wisdom? But further investigation reveals that under the heading “Conflict of interest and funding” it is admitted, “Partial support was also received from the National Confectioners Association.”²² Research has become merely a line item in an advertising budget. Many of these commercial enterprises have research funding that far exceed the entire yearly budget of the National Institute of Health. Imagine the economic value of a scientific discovery. “Science” discovers that chocolate cures some disease, news agencies spread the story, and people opt for one more scoop of chocolate ice cream at the dairy stand.

HAIR ON BALD HEADS AND FEELING IN PEG LEGS

The list of medicinal properties for chocolate is growing. Researchers reach for the dark, flavonoid rich vial marked cocoa and test subjects turn up healthier.²³ But where did this nasty tasting laboratory version of the common candy bar come from? These specially prepared cocoa samples are not the same as the readily available commercial products people buy in the store.²⁴ The street variety tends to be loaded with fat and sugar and only overthrows a person’s resistance to indulgence of appetite.²⁵ Indeed, up to 98% of calories in chocolate preparations comes from fat and sugar.^{26, 27} Sugar, by itself, is a drug of addiction. The addictive nature of sugar generates phenomenally high levels of obesity.²⁸ Sugar surpasses cocaine in its ability to elevate the addiction hormone dopamine in the brain making sugar more addictive than some street drugs.²⁹ And why all the fat in this product? The sensory experience of tasting fat overpowers self-control and increases food intake even in

people who are usually restrained eaters.³⁰ Taken in combination, fat and sugar work to weaken food satisfaction signals to the brain and activate hunger signals driving excessive food consumption.^{31, 32}

If you like it, why not just claim you like it, why purport to have discovered medicinal properties for it?

EASTER BUNNY OR TROJAN HORSE?

Taste good? Yes! But not all chocolate’s effects generate good health:

- The amount of cocoa contained in one half ounce of chocolate when taken daily is enough to double the risk of prostate cancer.³³
- Chocolate is a significant risk factor for colorectal cancer in both men and women.³⁴
- Chocolate and other desserts increase the risk of breast cancer by 60%.³⁵
- Daily chocolate consumption lowers bone density and strength,³⁶ due in part to increasing the volume of precious bone calcium lost in the urine.³⁷
- Sweet tooth? Will your teeth appreciate cocoa suspended in creamy milk? No, dental cavities multiply with such concoctions.³⁸
- That burn in the chest, is it heart troubles? Not likely, chocolate is billed as heart healthy.³⁹ Try heartburn!⁴⁰

Chocolate relaxes the lower esophageal sphincter causing reflux and pain symptoms.^{41, 42}

- Romantic dreams or nightmares? A disorder that gives people nightmares and makes them move violently in their sleep could be aggravated by eating chocolate.⁴³
- Constipation complicates the treatment of hospital patients on morphine. Chocolate is perceived by many people as a constipating food, possibly by the same opioid receptor stimulating mechanism as morphine.⁴⁴
- Chocolate on the brain? Foods more commonly reported as headache triggers include: alcoholic drinks, chocolate and cheese.^{45, 46, 47}

And why does chocolate share disease triggering properties with cheese? Both are fermented products! Fermentation, like the rotting of apples to make vinegar, contaminates products with toxins known to cause illnesses. What happens to a box of good apples when you throw a rotten one in the batch? They all rot. What happens when you eat rotten foods? You rot—otherwise known as oxidative stress, free radical formation, and lipid peroxidation. People consuming aged, rotted, fermented, spoiled foods suffer the consequences. Maybe this is why chocolate is a huge red flag for autoimmune inflammatory conditions.

- Inflammation is the key ingredient in inflammatory bowel disease. Cocoa products increase the risk of ulcerative colitis and Crohn's disease by a whopping 150%.^{48, 49}
- And what of rheumatoid arthritis? Chocolate aggravates the symptoms of inflammatory arthritis making it harder to bear.^{50, 51}

- Are worms the only instigator of an itchy anus? Think chocolate. Cocoa products are among the top 6 foods causing "Pruritus Ani"⁵²
- Chocolate increases the risk of acne by 40% in teenage boys.⁵³
- The psychoactive components of chocolate are concentrated in breast milk,⁵⁴ and infants breastfeeding on mothers eating chocolate are more likely to experience allergic dermatitis.⁵⁵

Don't be fooled, not everything made out to be pure gold is really gold at all.

DARK CHOCOLATE

"Hey Clark, you're going to love this one," David was animate, "they (the TV) just exposed the west Africa slave trade in the production of half the world's chocolate. Teenagers are stolen from places like Togo and taken to Ivory Coast chocolate plantations where they are literally worked to death in 4 years." Shocking, I thought, but at the time, not being a TV watcher and having no way to verify the account, I shuffled the information to the back of my mind. Then, when conducting this current chocolate investigation, I decided to explore the story. Factual beyond controversy, it's now all over the internet.⁵⁶ Chocolate, due to its addictive nature, is one of those products, along with sugar, opium and other drugs, coffee, tea, tobacco, and other cash crops that have helped create the poverty-stricken third world. Man's insatiable desire for something stimulating, and the greed of the empires, have synergized to plunder the economies and ecologies of the poorer agrarian nations.⁵⁷

An older Jamaican related to me his experience on the coffee plantations of their island nation. The English started Jamaica

The Cocoa Romance

growing cash crops, then pitted them against Guyana, who they had also started growing these crops. When the English traders lowered the price they offered for coffee to the point that the Jamaicans would lose money, the president of Jamaica was forced to plead with them to raise the going price. The English just stated that they could get the coffee cheaper from Guyana. My Jamaican friend was still incensed that the president of his country should be so humiliated. Such are the atrocities that reduced stable agricultural based nations to poverty, subservience, and near starvation.

HOME TO ROOST

How many weeks would you be willing to have one of your family members go and labor on a chocolate plantation to obtain your precious “food of the gods”? It would be a most

memorable experience. They’d lose weight; have scars all over their backs in testimony to the appreciation they were shown, and perhaps be grateful to just escape with their lives. Next time you sink your teeth into a luscious bar of rich tasty chocolate pause to consider how many teenage Africans gave their lives for your excess.

THE BIGGEST LOSERS

Who are the greatest slaves here, the unpaid child laborers who have no say in the matter, the greedy unscrupulous plantation owners who organize such crimes against humanity, or the addicted product users who for a moment of pleasure are willing to brush over their accountability in this whole drama? There is no more subtle form of slavery than when the captives will their own captivity.

*“More die by eating decayed fruit
and decayed vegetables which
ferment in the stomach and result in
blood poisoning, than we have any
idea of.”ⁱ*

– E. G. White

ⁱ White, E. G. (1938). Counsels on Diet and Foods. Washington, D.C.: Review and Herald Publishing Association. p. 309.

CHAPTER 19

FERMENTED FOODS?

“The Health Benefits of Fermented Foods Are Astounding”, acclaimed a recent health article. It made me ponder, how is it that fermented foods are touted to be the answer to peoples more complicated health issues—foods that Adam, before the fall in Eden, would never have eaten? What could there be about some other organism digesting a meal before I do, that could improve its nutritional/health quality?

In a way, fermented food increases entropy (The idea of entropy comes from a principle of thermodynamics dealing with energy. It usually refers to the idea that everything in the universe eventually moves from order to disorder, and entropy is the measurement of that change).¹ Entropy would be like baking a birthday cake, setting it on your dining table overnight and in the morning discovering that three rats had eaten tunnels through it; your cake would have increased in entropy. In my estimation, the farther you eat down the food chain the more entropy you introduce. The three rats would represent fermentation, if they were bacteria or yeast, we would just call the disaster fermentation.

A colored electron microscope picture of mature cheese struck me. What originally started out as the white product of a cow’s udder, now appeared as a dull yellow/orange sponge whose cavitory recesses brimmed to the full with the dead bodies of bacteria. What turned the white milk to yellow cheese? What

turns your clear drinking water to yellow urine? And to think that this process is prized by cheese connoisseurs the world over! Eating fermented food would be like telling the above-mentioned rats in the birthday cake story, please eat the cake and I’ll just enjoy having your precious droppings.

I decided to look more thoroughly into this fermentation process and discovered that there is more art in it than science. While it is true that a lot is known about the basics of the fermentation process, and it is replicable, there is also a lot about fermentation that is unknown.

When your apple has a bruise and starts to turn rotten, not only do moulds, fungi and bacteria invade, but also a host of previously unrecognized viruses. That means that there are a lot of viruses in fermented foods which have never been identified or studied before.

Now, to give an example, we do know that the fermentation process is encumbered with unhealthy byproducts such as acetic acid (vinegar) and ethanol (alcohol)². Incidentally, Kimchi (fermented cabbage) is alcoholic, meaning the fermentation creates alcohol!² Take care not to eat sauerkraut before you give

a urine sample or you could fail an employment sobriety test.³ Have you ever heard of Kombucha? Kombucha competes with light beer on alcohol content.⁴ In addition there are toxic byproducts of metabolism from bacteria, molds⁵ and fungi (including mycotoxins such as aflatoxin⁶) which are responsible for illnesses like autoimmune diseases and cancer. For example, replacing unfermented soy foods with fermented soy products increases the risk of cancer by 58%.⁷

So that is what we do know, but what about the unknown in fermentation? Recently, I was shocked by the findings of a new science applied to fermented foods. It is the science of metagenomic analysis. Metagenomic analysis identifies sequences of DNA in food samples that can be used to identify specific organisms. It's like identifying a thief by their fingerprints. For example: Scientists analysed a sample of sauerkraut (fermented cabbage) and discovered 69,464 viral DNA sequences, 50% of which were from previously unidentified viruses.⁸ That means that there are a lot of viruses in fermented foods which have never been identified or studied before. When your apple has a bruise and starts to turn rotten, not only do moulds, fungi and bacteria invade, but also a host of previously unrecognized viruses. That's right! And if you want some of them just purchase some organic apple cider vinegar with the mother. Oh, and I forgot to mention; it will also come swimming with vinegar eels.⁹ So what happened to putting biohazard warning labels on such products?

But why worry about a few viruses in your food? Scientists did metagenomic analysis of cheese and discovered many viruses which carry genes for antibiotic resistance.¹⁰ What is the significance of that? You eat the cheese and the bacteria responsible for disease in your gut are transformed so that they can no longer be

controlled with the most common antibiotics. One virus, the norovirus, which is responsible for nausea, diarrhea and vomiting, has been found in Kimchi (fermented cabbage).¹¹ Could it be that it is the viruses and mycotoxins that make certain foods leave evil traces behind? "The patients must not be given alcohol, tea, coffee, or drugs; for these always leave traces of evil behind them".¹² "Nicely prepared vegetables and fruits in their season will be beneficial, if they are of the best quality, not showing the slightest sign of decay, but are sound and unaffected by any disease or decay. More die by eating decayed fruit and decayed vegetables which ferment in the stomach and result in blood poisoning, than we have any idea of."¹³ Viruses are responsible for many diseases, not the least of which is cancer.¹⁴

Many people are in the dark in regard to the processes that many foods have gone through before they put them in their mouth. Are you eating fermented (rotted, spoiled, aged) foods? Who eats decayed fruit and vegetables? "The salads are prepared with oil and vinegar, fermentation takes place in the stomach, and the food does not digest, but decays or putrefies. As a consequence the blood is not nourished, but becomes filled with impurities, and liver and kidney difficulty appear. Heart disturbances, inflammation, and many evils are the result of such kind of treatment, and not only are the bodies affected, but the morals, the religious life, are affected."¹⁵

Common fermented foods to watch out for are: alcoholic beverages, kombucha, vinegar, cheese, sour cream, yogurt, soy sauce, tempeh, miso, sourdough bread, pickles, coffee, tea, kimchi, sauerkraut, salami, chocolate, vanilla, brown rice syrup, Worcestershire sauce, Tabasco sauce, nutritional yeast flakes, Vegemite, Marmite, and Promite.

As I see it, if the sin of Adam, in preparing the way for the introduction of fermentation into our world, has proven a benefit to people's health, then we owe a debt of gratitude to sin (no, sin is the source of sickness and death). I think there are many viruses and toxins in fermented food that we would do well to avoid. I do not believe we owe a debt of gratitude to sin. Much better to eat fresh whole foods than rotted (fermented) foods infested with a multitude of mysterious organisms.

The unleavened bread is the only correct representation of the Lord's Supper. Nothing fermented is to be used.

Jesus was careful to avoid anything fermented. "They gave him vinegar to drink mingled with gall: and when he had tasted thereof, he would not drink."¹⁶ At the last supper only unfermented wine was present. Fermentation is a symbol of sin and its consequences. "Christ is still at the table on which the paschal supper has been spread. The unleavened cakes used at the Passover season are before Him. The Passover wine, untouched by fermentation, is on the table. These emblems

Christ employs to represent His own unblemished sacrifice. Nothing corrupted by fermentation, the symbol of sin and death, could represent the 'Lamb without blemish and without spot.'" 1 Peter 1:19.¹⁷

"The broken bread and pure juice of the grape are to represent the broken body and spilled blood of the Son of God. Bread that is leavened must not come on the communion table. The unleavened bread is the only correct representation of the Lord's Supper. Nothing fermented is to be used -- only the pure fruit of the vine and unleavened bread are to be used."¹⁸

What should we eat? What will be the most healthful? "Care should be taken to have all food in as good condition as possible. In the end, good food is the cheapest. Vegetables that are stale or of poor quality are likely to be unpalatable and unwholesome. So, with fruits. Ripe and fresh, they are as wholesome as they are delicious; but green, partly decayed, or overripe fruit should never be eaten raw. When cooked, unripe fruit is less objectionable. So far as possible, however, we should use fruit in its natural state. The more we accustom ourselves to use it fresh from the tree, the greater will be our enjoyment of fruit, and the more benefit we shall receive from its use."¹⁹

Blue Print for Health and Healing

My sister:

I have just read your letter. You seem to have an earnest desire to work out your salvation with fear and trembling. I encourage you to do this. I counsel you to discard everything that would cause you to do half-way work in seeking the kingdom of God and His righteousness. Put away every indulgence that would hinder you in the work of overcoming. Ask for the prayers of those who can comprehend your need of help.

There was a time when I was in a situation similar in some respects to yours. I had indulged the desire for vinegar. But I resolved with the help of God to overcome this appetite. I fought the temptation, determined not to be mastered by this habit.

For weeks I was very sick; but I kept saying over and over, The Lord knows all about it. If I die, I die; but I will not yield to this desire. The struggle continued, and I was sorely afflicted for many weeks. All thought that it was impossible for me to live. You may be sure we sought the Lord very earnestly. The most fervent prayers were offered for my recovery. I continued to resist the desire for vinegar, and at last I conquered. Now I have no inclination to taste anything of the kind. This experience has been of great value to me in many ways. I obtained a complete victory.

I relate this experience to you for your help and encouragement. I have faith, my sister, that you can come through this trial and reveal that God is the helper of His children in every time of need. If you determine to conquer this habit, and will fight it perseveringly, you can obtain an experience of the highest value. When you set your will resolutely to break off this indulgence, you will have the help you need from God. Try it, my sister.

As long as you acknowledge this habit by indulging it, Satan will retain his hold on your will and bring it into obedience to himself. But if you will determine to overcome, the Lord will heal you and will give you strength to resist every temptation. Ever remember that Christ is your Saviour and Keeper.

I have not strength to write you a longer letter today, but shall hope to write again. I shall wait to hear from you, to learn that you have gained the victory.

In love,ⁱ

E.G. White

ⁱ White, E. G. (1938). *Counsels on Diet and Foods*. Washington, D.C.: Review and Herald Publishing Association. {Lt 70, 1911, par. 2}.

CHAPTER 20

VINEGAR VIGNETTE

“Dr. Clark, What about ‘Apple Cider Vinegar with the Mother’? How can you ignore all the health benefits and stories of recovery from its use?” This is a question I frequently encounter and will answer it as best I can in this article.

Let’s take a look at the big picture.

“God made man perfectly holy and happy; and the fair earth, as it came from the Creator's hand, bore no blight of decay or shadow of the curse. It is transgression of God's law--the law of love--that has brought woe and death.”¹

Adam never put Balsamic Vinegar on his dinner fare, and Eve never used mayonnaise to flavor her creations. They would never have known what decay or vinegar was, but sin changed all this. After the entrance of sin, food could spoil and vinegar could be produced. Rotten food was never God’s plan. With sin and decayed food came disease, pain and death.

What about foods used for medicine, which are decayed, fermented, rotted, spoiled, aged, etc, or show any other of the effects of sin in our deteriorating world, which is wearing old like a garment? Could we imagine that we are in a position to leverage sin and that these putrefying processes which entered our world after Eden can even elevate food until it possesses medicinal properties? This seems questionable to me. Personally, I prefer food

that has not had anyone or anything else eating on it before I get to it, especially if they are going to leave behind their waste products in it (smile). I do not believe that God is indebted to where sin and Satan have led the way for our healing.

It is true that vinegar has come to be quite widely used as a health tonic with many advertisements for it’s supposed medicinal qualities.

People ask me if it would be to their health advantage to take organic apple cider vinegar internally. I usually ask them why they wouldn’t like to be more natural and just eat the decaying rotten apples.

You do not find vinegar naturally, except as something has been fermented. It is the end product of fermentation. Few organisms can break it down any farther, so they stop with vinegar and excrete it. Because of this it is quite widely used in foods as a preservative. Bacteria seem to be turned off at finding their own waste products mixed in with what they thought was food.

How is vinegar made? In the US most vinegar is made from apples and is created by the degradation of these by yeasts and bacteria. That is correct, most vinegar *is* apple cider vinegar.

“Vinegar is the product of a mixed fermentation of yeast followed by acetic

acid bacteria. Vinegar, literally translated as sour wine, is one of the oldest products of fermentation used by man. It is the acetic acid produced by the fermentation of alcohol (ethanol) which gives the characteristic flavour and aroma to vinegar.”

“It can be made from almost any fermentable carbohydrate source, for example fruits, vegetables, syrups and wine. The basic requirement for vinegar production is a raw material that will undergo an alcoholic fermentation. Apples, pears, grapes, honey, syrups, cereals, hydrolysed starches, beer and wine are all ideal substrates for the production of vinegar. To produce a high quality product, it is essential that the raw material is mature, clean and in good condition.”²

“There is danger to health in the use of even sweet cider as ordinarily produced. If people could see what the microscope reveals in regard to the cider they buy, few would be willing to drink it. Often those who manufacture cider for the market are not careful as to the condition of the fruit used, and the juice of wormy and decayed apples is expressed. Those who would not think of using the poisonous, rotten apples in any other way, will drink the cider made from them, and call it a luxury; but the microscope shows that even when fresh from the press, this pleasant beverage is wholly unfit for use.”³

Vinegar contains the seeds of rot and spoilage which can contaminate and spoil other foods.

“Nicely prepared vegetables and fruits in their season will be beneficial, if they are of the best quality, not showing the slightest sign of decay, but are sound and unaffected by any disease or decay. More die by eating decayed fruit and decayed vegetables which ferment in the stomach and result in blood poisoning, than we have any idea of.”⁴

“The salads are prepared with oil and vinegar, fermentation takes place in the stomach, and the food does not digest, but decays or putrefies. As a consequence the blood is not nourished, but becomes filled with impurities, and liver and kidney difficulty appear. Heart disturbances, inflammation, and many evils are the result of such kind of treatment, and not only are the bodies affected, but the morals, the religious life, are affected.”

“I told them that unless they should change their diet, physical, mental, and moral degeneracy would surely be the result. Plain, good, substantial food must be given to our bodies, else there will be a poverty of the blood.”⁵

Many foods contain vinegar and include: bread, dressings, condiments, mayonnaise (regular and all the “vegan” ones too), ketchup, mustard, BBQ sauce, hot sauce, pickles, baked beans, potato salad, just to name a few.

Vinegar actually interferes with protein digestion making malnutrition a real risk with its use.⁶

Because vinegar is a product of fermentation it is full of toxic waste products of putrefaction such as aflatoxins⁷ and ethyl carbamate⁸, which can cause inflammation and cancer.

Aflatoxins, formed in the process of aging or fermenting,⁹ are a source of inflammation.¹⁰

Vinegar Vignette

Dietary sources of aflatoxins include: cheese,¹¹ wine, vinegar, and any food created by rotting or fermentation.

“Aflatoxin contamination can occur very widely. They can be found in over a hundred kinds of agro-products and foods, such as peanut, corn, rice, soy sauce, vinegar, plant oil, pistachio, tea, Chinese medicinal herb, egg, milk, feed etc.”

“Aflatoxins are highly toxic, mutagenic, teratogenic, and carcinogenic compounds.... Aflatoxin B1, for example, its toxicity is ten times of potassium cyanide, 68 times of arsenic and 416 times of melamine. Furthermore, their carcinogenicity is over 70 times than that of dimethylnitrosamine and 10,000 times that of Benzene Hexachloride (BHC). And International Agency for Research on Cancer (IARC) of the World Health Organization (WHO) accepted that aflatoxin should be classified as a Group 1 carcinogen in 1987, and then AFB1 is classified as Group 1 (carcinogenic to humans) by the WHO– IARC in 1993. According to the nearest researches by University of Pittsburgh, aflatoxin may play a causative role in 4.6–28.2% of all global Hepato Cellular Carcinoma cases (liver cancer cases).”¹²

Vinegar causes inflammation and undesirable vascular permeability.¹³ It also causes increased intestinal permeability sometimes referred to as leaky gut.¹⁴ Scientists use weak vinegar solutions to cause inflammatory bowel disease in rats as a model for studying ulcerative colitis and Crohn's disease in humans.^{15,16,17}

Vinegar treated cucumbers (pickles), contain harmful carcinogenic nitrates that cause stomach¹⁸ and colorectal cancer.¹⁹ Other chemicals formed when foods are pickled²⁰ increase oxidative stress, inflammation,²¹ autoimmune disease and cancer.^{22,23}

Since vinegar is metabolized in the liver, liver cancer increases with its inclusion in the diet.²⁴

Vinegar increases the risk for bladder cancer.²⁵

We do not have an enzyme in the digestive tract that breaks down vinegar, so it goes straight into the blood stream²⁶ and is an acidifier of the blood and it causes cellular acidosis.²⁷ And because it is an acid, it can erode your teeth²⁸ and when it hits the stomach, it can cause ulcers.²⁹

Vinegar is used to demineralize bone so it can be sliced and studied under a microscope. To be legal, vinegar must contain a minimum of 4% acetic acid; calcium is taken from bone to buffer and remove this acid from the body and this causes osteoporosis.³⁰

The real down side is the effect of vinegar on the whole body.

“The mince pies and the pickles, which should never find a place in any human stomach, will give a miserable quality of blood.”³¹

Just as an illustration of how vinegar affects the blood, it raises a person's cholesterol.³²

If attempting to optimize thyroid activity or treat hypothyroidism, vinegar³³ would be counterproductive, it could cause thyroid function deterioration.

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In helping to recover from illnesses, returning to the natural, as could have been found in the Garden of Eden is very helpful. This means returning to a lifestyle free from the effects of sin as much as possible. This would include avoiding all the products of fermentation.

“In the country the sick find many things to call their attention away from themselves and their sufferings. Everywhere they can look upon and enjoy the beautiful things of nature--the flowers, the fields, the fruit trees laden with their rich treasures, the forest trees casting their grateful shade, and the hills and valleys with their varied verdure and many forms of life. And not only are they entertained by these surroundings, but at the same time they learn most precious spiritual lessons. Surrounded by the wonderful works of God, their minds are lifted from the things that are seen to the things that are unseen. The beauty of nature leads them to think of the matchless charms of the earth made new when there will be nothing to mar the loveliness, nothing to taint or destroy, nothing to cause disease or death.”³⁴

Vinegar, the result of sin, does not improve your good fresh food, your brain, your thinking or your judgment. One of the effects of vinegar is to dull the mind. This is the reason Jesus refused it.

“In another prophecy the Saviour declared, ‘Reproach hath broken My heart; and I am full of heaviness: and I looked for some to take pity, but there was none; and for comforters, but I found none. They gave Me also gall for My meat; and in My thirst they gave Me

vinegar to drink.’ Psalm 69:20, 21. To those who suffered death by the cross, it was permitted to give a stupefying potion, to deaden the sense of pain. This was offered to Jesus; but when He had tasted it, He refused it. He would receive nothing that could becloud His mind. His faith must keep fast hold upon God. This was His only strength. To becloud His senses would give Satan an advantage.”³⁵

But people have acquired a taste for this product of putrefaction. It makes the food exciting, because it usually contains excitotoxins like mono-sodium glutamate. Once the taste is acquired the substance becomes addictive.

“In this fast age, the less exciting the food, the better. Condiments are injurious in their nature. Mustard, pepper, spices, pickles, and other things of a like character, irritate the stomach and make the blood feverish and impure. The inflamed condition of the drunkard's stomach is often pictured as illustrating the effect of alcoholic liquors. A similarly inflamed condition is produced by the use of irritating condiments. Soon ordinary food does not satisfy the appetite. The system feels a want, a craving, for something more stimulating.”³⁶

Beware, vinegar can be addictive and it can be a real struggle to recover from its use.

“There was a time when I was in a situation similar in some respects to yours. I had indulged the desire for vinegar. But I resolved with the help of God to overcome this appetite. I fought

Vinegar Vignette

the temptation, determined not to be mastered by this habit.”

“For weeks I was very sick; but I kept saying over and over, The Lord knows all about it. If I die, I die; but I will not yield to this desire. The struggle continued, and I was sorely afflicted for many weeks. All thought that it was impossible for me to live. You may be sure we sought the Lord very earnestly. The most fervent prayers were offered for my recovery. I continued to resist the desire for vinegar, and at last I conquered. Now I have no inclination to taste anything of the kind. This experience has been of great value to me in many ways. I obtained a complete victory.”

“I relate this experience to you for your help and encouragement. I have

faith, my sister, that you can come through this trial, and reveal that God is the helper of His children in every time of need. If you determine to conquer this habit, and will fight it perseveringly, you can obtain an experience of the highest value. When you set your will resolutely to break off this indulgence, you will have the help you need from God. Try it, my sister.”³⁷

Are there any healthy alternatives to vinegar? Lemon juice is very healthy, containing citric acid as opposed to acetic acid, and can be used in most recipes with good result in place of vinegar. Give it a try.

Vinegar may delight your senses and increase your appetite for certain foods, but don’t let the pleasure of taste allure you to spoil your health.

*“Bread should be light and sweet.
Not the least taint of sourness should
be tolerated.”ⁱ*

– E. G. White

ⁱ White, E. G. (1905). The Ministry of Healing. Mountain View, CA: Pacific Press Publishing Association. p. 301.

CHAPTER 21

WHAT ABOUT SOURDOUGH BREAD?

“But, what about sourdough bread, Dr. Clark, we’ve heard it’s better and has beneficial probiotics? A friend with irritable bowel says they tolerate it better than yeast breads.”

Responses to our article on, “Fermented Foods” varied, and among them were these questions about the much acclaimed “sourdough” bread.

Why is sourdough bread “sour”? It is because of its production of, among other things, vinegar (acetic acid)¹ as a byproduct of fermentation (see our chapter on Vinegar).

How is sourdough bread made? In sourdough bread making, the yeast raising agent of non-sourdough bread is replaced with “starter”.

What is starter, and where does it come from? The internet is replete with instructions on making your own starter from scratch. Suffice it to say that the process involves preparing a media on which organisms will grow, exposing that media to organisms from the air, etcetera, and growing them.

What organisms? That depends on what was around in the air when you exposed

your media to it. The Bible says “And every open vessel, which hath no covering bound upon it, is unclean.”²

What organisms are considered desirable for starter in sourdough bread. Well, obviously, ones that make the bread rise; ones that make gas. So, if you are looking for a probiotic from bread, you will get a probiotic that makes gas. Do you need a probiotic that makes gas growing in your bowels? Oh, excuse me! Usually the gas formers are also alcohol formers, as well as formers of other toxic by-products of fermentation.³

Sourdough starter is not a yeast raising agent. The predominant organism in sourdough starter is really bacteria. In fact, 99% of the organisms in sourdough starter are bacteria.

In common with most fermentation processes, sourdough increases the foods content of glutamate, yes free glutamate; the glutamate of “mono sodium glutamate” or MSG. Free glutamate is a neurotoxin responsible for an increase of some cancers.⁴ The free glutamate in fermented foods (and otherwise) is addictive to our taste buds, so most people prefer foods with it in it. But the

MSG problem in processed foods is a whole other topic on its own.

Sourdough bread(s) have drawbacks; it is after all “sour” bread. “Bread should be light and sweet. Not the least taint of sourness should be tolerated. The loaves should be small and so thoroughly baked that, so far as possible, the yeast germs shall be destroyed. When hot or new, raised bread of any kind is difficult of digestion. It should never appear on the table. This rule does not, however, apply to unleavened bread. Fresh rolls made of wheaten meal without yeast or leaven, and baked in a well-heated oven, are both wholesome and palatable.”⁵

Some cooks don’t give up easily on the making of sourdough bread in preference to yeast breads.

“In regard to your not giving satisfaction, I told you all I had to tell. I can say nothing new. You were as an iceberg in my family. You gave me no confidence, no chance to understand you from the beginning to the close of your staying with me. If you would have taken it kindly, you could have, in some little matters, been helped. But you felt jealous of any suggestions made to improve in some things. In the bread line our family had sour bread a large part of the time, and I, at least, when you returned from Sydney, gave you the privilege of having nothing to do in the kitchen. I would freely give you your board, and you could have your time to prepare for your journey. But you chose to continue in the kitchen.”

“But the breadmaking I transferred to Sara, and then Sister Lucas had it given to her. All have felt much better satisfied. We have had good, sweet bread. All that I

condemn myself (for) in this matter is that, to save your feelings, I allowed the sour bread to come on my table so long. It was doing injustice to a large family of workers in order to save you from having sensitive feelings on this subject. I am sure that all that was done in this line to suggest to you improvement was not always done. When I should have done it in justice to my family of boarders. When Sara has, by my request made suggestions about the dough rising, that you should have better bread when the yeast was used, you said it was too much trouble; you would go back to the old practice.”⁶

Fresh raised (leavened) bread, including yeast bread, should not be eaten fresh. “Bread should be light and sweet. Not the least taint of sourness should be tolerated. The loaves should be small, and so thoroughly baked that, as far as possible, the yeast germs shall be destroyed. When hot, or new, raised bread of any kind is difficult of digestion. It should never appear on the table.”

“Zwieback, or twice-baked bread, is one of the most easily digested and most palatable of foods. Let ordinary raised bread be cut in slices and dried in a warm oven till the last trace of moisture disappears. Then let it be browned slightly all the way through. In a dry place this bread can be kept much longer than ordinary bread, and if reheated before using, it will be as fresh as when new.”

“Bread which is two or three days old is more healthful than new bread. Bread dried in the oven is one of the most wholesome articles of diet.”⁷

Most commercial bread is baked and then packaged into airtight plastic bags as soon as possible, thus giving no time for the off-gassing of its toxic products and trapping them in the bread.

Is sourdough bread really better tolerated by people suffering with Irritable bowel disease? Not so according to recent scientific studies.⁸ This same study also discovered

that people preferentially choosing sourdough breads experience significantly more feelings of tiredness, joint symptoms, and decreased alertness. So, if you want to avoid feeling tired, having aches and pains in your bones, joints and muscles, having gas, and having difficulty with mental processing, then avoid having sourdough bread as a regular part of your diet.

“Natural means, used in accordance with God’s will, bring about supernatural results. We ask for a miracle, and the Lord directs the mind to some simple remedy.”ⁱ

– E. G. White

ⁱ White, E. G. (1958). Selected Messages Book 2. Washington, D.C.: Review and Herald Publishing Association. p. 346.

CHAPTER 22

MEDICAL INTERVENTIONS: ARE YOU FOLLOWING THE BLUEPRINT?

"I went to her because the church members said she was good and now I have found out I have a heart problem so I have not been doing my hydrotherapy treatments you gave me for fear of exacerbating my heart problems."

A patient I was working with was taking hydrotherapy treatments that I recommended for a life-threatening disease, but had suspended the treatments after visiting someone who examined her *feet* and told her she had a heart problem.

It seems that in the area of health care there are as many variations of winds of doctrine blowing as in the area of Bible doctrine. Paul warns: "That we henceforth be no more children, tossed to and fro, and carried about with every wind of doctrine, by the sleight of men, and cunning craftiness, whereby they lie in wait to deceive;"¹

So how do we judge the validity of a proposed medical intervention in light of God's wisdom and counsel? (Intervention is anything a health practitioner does or prescribes)

(1) DOES IT FIT THE BLUEPRINT?

A good question to ask is: Does the intervention fit the blueprint? And if not, we are told: "To the law and to the testimony: if they speak not according to this word, it is because there is no light in them."²

ARE WE DEISTS?

Paul lets us know that we are all God dependant, sustained every micro-second by His personal intervention: "He giveth to all life, and breath, and all things;" "For in him we live, and move, and have our being;"³ Therefore one is given pause to wonder, 'if God sustains us every moment of our lives, why couldn't He just as well sustain us healthy as sick'? And what would make the difference? I look to Exodus 15:26 to help me with this: "And said, If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I (am) the LORD that healeth thee." God being able to work miracles for you is proportionate to your adherence to His injunctions. God is only limited in His ability to work miracles for you by your straying from His will to the follow the will of His enemy. Therefore, it behooves us to be well acquainted with the care of our bodies from the divine perspective.

STATISTICAL ANALYSIS

What if you have leprosy and God asks you to go dip seven times in a muddy river,⁴ when

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others were told to respect quarantine,⁵ or told to take a walk,⁶ or were touched?⁷

In my working with God in health care I have come to adopt as my motto this very helpful quotation: "Natural means, used in accordance with God's will, bring about supernatural results. We ask for a miracle, and the Lord directs the mind to some simple remedy. We ask to be kept from the pestilence that walketh in darkness, that is stalking with such power through the world; we are then to cooperate with God, observing the laws of health and life. Having done all that we possibly can, we are to keep asking in faith for health and strength."⁸

NATURAL OR SUPERNATURAL

Do natural means bring about supernatural results in and of themselves? No, they don't. Only God brings miraculous results. And if (in and of themselves) natural means do not work miracles, could we expect that artificial or synthetic means could work miracles? No.

The passage above says that if we want miracles, we pray to a miracle working God and that the channel chosen by Him for miraculous interventions involves our engagement in simple remedies, not mega human remedies. And, God will work when we adopt and practice all His good admonitions on healthful practices and not until such. If He healed us in disobedience to His stated health laws He would trivialize the instructions given and become a minister to sin.

ONLY HOPE!

While the above quotation has become my motto, the following has arisen as my aim: "The only hope of better things is in the education of the people in right principles. Let physicians teach the people that restorative power is not in drugs, but in nature. Disease is an effort of nature to free the system from conditions that

result from a violation of the laws of health. In case of sickness, the cause should be ascertained. Unhealthful conditions should be changed, wrong habits corrected. Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system." "Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power--these are the true remedies."⁹

We are quick to quote Paul when he says, "One Lord, one faith, one baptism,"¹⁰ but did we ever stop to think that there might also be only one medical approach approved by God? "There are many ways of practicing the healing art, but there is only one way that Heaven approves. God's remedies are the simple agencies of nature, that will not tax or debilitate the system through their powerful properties....Fresh air, exercise, pure water, and clean, sweet premises, are within the reach of all with but little expense; but drugs are expensive, both in the outlay of means and the effect produced upon the system."¹¹

ONLY TWO HEALTHCARE OPTIONS

If you are going to violate the tenets of God's health reform model, to whom are you going to turn to for healing? And do you really want to be under their power? Paul warns, "Know ye not, that to whom ye yield yourselves servants to obey, his servants ye are to whom ye obey; whether of sin unto death, or of obedience unto righteousness?"¹² In other words, whoever's system of healing we turn to is the one of whom we worship.

(2) BE 100% COMMITTED TO BEING HEALED GOD'S WAY

If we turn to God for healing we need to be resigned to the will of God, regardless whether His plan for us is the same as our plan for

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ourselves. "God knows the end from the beginning. He is acquainted with the hearts of all men. He reads every secret of the soul. He knows whether those for whom prayer is offered would or would not be able to endure the trials that would come upon them should they live. He knows whether their lives would be a blessing or a curse to themselves and to the world. This is one reason why, while presenting our petitions with earnestness, we should say, 'Nevertheless not my will, but Thine, be done.' Luke 22:42." "The consistent course is to commit our desires to our all-wise heavenly Father, and then, in perfect confidence, trust all to Him. We know that God hears us if we ask according to His will. But to press our petitions without a submissive spirit is not right; our prayers must take the form, not of command, but of intercession."¹³

Our will is not always the best to follow; remember Hezekiah?¹⁴ God shared with Hezekiah that he was going to die and that he was to get his house in order. Wouldn't it be nice to know when you were going to pass away, and also be assured that you would be able to get your house in order to meet such an event? Not Hezekiah, he turned his head to the wall and begged and pleaded until God gave him 15 more years. And what did Hezekiah do with 15 more years? He sold his kingdom out to the Babylonians, and gave life to his son Manasseh, one of the worst kings ever to reign. Now, I am not making a case for dying, but in my estimation, Hezekiah just did not know when to die.

ONLY 100% BRINGS HEALING

In seeking God's intervention in health, we need to be unwilling to do anything that would displease the Lord. "Those who decide to do nothing in any line that will displease God, will know, after presenting their case before Him, just what course to pursue. And they will receive

not only wisdom, but strength. Power for obedience, for service, will be imparted to them, as Christ has promised."¹⁵

(3) WHO RECEIVES ALL THE GLORY, HONOR, AND WORSHIP

Of utmost consideration as to whose healing method you are evaluating is the question, who receives the glory? At the end of the day, and the patient seems to have netted a positive result from the intervention and they are singing praises, who or what receives the praise, honor and glory? When Jesus heals, He receives the praise, honor, and glory. "I say unto thee, Arise, and take up thy couch, and go into thine house. And immediately he rose up before them, and took up that whereon he lay, and departed to his own house, glorifying God." He was healed of the leprosy of sin, healed of the maladies that had afflicted his body, healed every whit. "And they were all amazed, and they glorified God, and were filled with fear, saying, we have seen strange things today."¹⁶

It really is a matter of worship. "When sickness is the result of their transgression of natural law, they do not seek to correct their errors and then ask the blessing of God, but they resort to the physicians. If they recover health they give to drugs and doctors all the honour. They are ever ready to idolize human power and wisdom, seeming to know no other God than the creature--dust and ashes."¹⁷

Sometimes the processes are so disguised that we miss the significance, but worship is invoked all the same. "The history of King Ahaziah's sin and punishment has a lesson of warning which none can disregard with impunity. Though we do not pay homage to heathen gods, yet thousands are worshipping at Satan's shrine as verily as did the king of Israel. The very spirit of heathen idolatry is rife today, though under the influence of science and

education it has assumed a more refined and attractive form.”¹⁸

Ultimately the destiny of each person hinges on worship. “If any man worship the beast and his image,...”¹⁹ Are our health care patronages establishing our worship loyalties?

(4) IS IT SIMPLE, NATURAL, AND OF UNIVERSAL ACCESS?

Is it simple? (As opposed to complex). “God's remedies are the simple agencies of nature that will not tax or debilitate the system through their powerful properties.”²⁰

Is it natural? (As opposed to manufactured or synthetic). “Natural means, used in accordance with God's will, bring about supernatural results.”²¹

Is it of universal access? (As opposed to limited access, or proprietary). “Fresh air, exercise, pure water, and clean, sweet premises are within the reach of all with but little expense, but drugs are expensive, both in the outlay of means and in the effect produced upon the system.”²²

(5) IS IT EXPENSIVE?

The forgoing quote also brings up financial considerations: to follow the money trail, as is said. Is it expensive? An example in the Bible we read of the story of a woman who found some vendors of health exorbitantly expensive, “And a woman having an issue of blood twelve years, which had spent all her living upon physicians, neither could be healed of any, Came behind him, and touched the border of his garment: and immediately her issue of blood stanchèd.”²³ God's remedies are “within the reach of all.”

(6) HAVE WE EXHAUSTED ALL GOD'S RECOMMENDED INTERVENTIONS?

Have we exhausted all God's recommended interventions? Has the patient renounced all health destroying practices or is our intervention a sneaky way to acquire health while remaining in defiance of our Creator's plain commands? “Nature will want some assistance to bring things to their proper condition, which may be found in the simplest remedies, especially in the use of nature's own furnished remedies--pure air, and with a precious knowledge of how to breathe; pure water, with a knowledge how to apply it; plenty of sunlight in every room in the house if possible, and with an intelligent knowledge of what advantages are to be gained by its use. All these are powerful in their efficiency, and the patient who has obtained a knowledge of how to eat and dress healthfully may live for comfort, for peace, for health, and will not be prevailed upon to put to his lips drugs, which, in the place of helping nature, paralyzes her powers. If the sick and suffering will do only as well as they know in regard to living out the principles of health reform perseveringly, then they will in nine cases out of ten recover from their ailments.”²⁴

Sometimes people will approach you with requests for prayers when they are sick, but without the slightest intent to follow the recommendations of the God to which you will be praying. God does not want these kind of prayers, neither will the Lord hear your prayers. “To those who desire prayer for their restoration to health, it should be made plain that the violation of God's law, either natural or spiritual, is sin, and that in order for them to receive His blessing, sin must be confessed and forsaken.”²⁵

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(7) ANOINTING IN HEALING

Prayer is good when we and the patient are ready and it can be accompanied by anointing. "When human help fails, God will be the helper of His people. 'Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord: and the prayer of faith shall save the sick, and the Lord shall raise him up.' If the professed followers of Christ would, with purity of heart, exercise as much faith in the promises of God as they repose in satanic agencies, they would realize in soul and body the life-giving power of the Holy Spirit."²⁶

Again, the question needs to be asked; 'Is the use of medical interventions or even anointing, our effort to circumvent God?' Have you prepared for anointing by heart searching and doing all God has said to do? Anointing comes largely from James where it says, "Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord: And the prayer of faith shall save the sick, and the Lord shall raise him up; and if he have committed sins, they shall be forgiven him."²⁷ But I was surprised to discover that anointing was one of the ways that the early disciples engaged in the healing ministry of Christ, "And they cast out many devils, and anointed with oil many that were sick, and healed them."²⁸

When human help fails, when all the natural simple remedies God brings to mind are not working, do we turn from God to someone else or do we turn to God and anoint the patient, and trust them to God's love and care? "God and Satan never work in copartnership.... A good tree cannot bring forth corrupt fruit, neither can a corrupt tree bring forth good fruit. By their fruit ye shall know them. God has spoken. Who has trembled at His word?"²⁹

(8) WHAT IS ITS ORIGIN OR HISTORY?

In analyzing the acceptability of an intervention under consideration it is important to assess its Origins. Who are its advocates? What is its origin or parentage; commercial greed or of God? Does it have pagan or mystical history? Eastern religion? Satan? New Age? "Not a few in this Christian age and Christian nation resort to evil spirits rather than trust to the power of the living God. The mother, watching by the sickbed of her child, exclaims: 'I can do no more. Is there no physician who has power to restore my child?' She is told of the wonderful cures performed by some clairvoyant or magnetic healer, and she trusts her dear one to his charge, placing it as verily in the hands of Satan as if he were standing by her side. In many instances the future life of the child is controlled by a satanic power which it seems impossible to break."³⁰ God is not indebted to interventions of Satanic origin for your healing.

(9) ARE UNACCEPTABLE REAGENTS USED IN ITS PREPARATION?

Are unacceptable reagents used in its preparation? Is God obligated to Satan and sin for a little alcohol in order that we can make a tincture considered necessary to the healing of a certain disease? "Patients are to be supplied with good, wholesome food; total abstinence from all intoxicating drinks is to be observed; drugs are to be discarded, and rational methods of treatment followed. The patients must not be given alcohol, tea, coffee, or drugs; for these always leave traces of evil behind them. By observing these rules, many who have been given up by the physicians may be restored to health."³¹ We could go on to explore modalities such as mold (PCN, nutritional yeast, mushrooms), vinegar, alcohol, vaccines with unclean animal ingredients, etc. but the point is: if the preparation necessitates the use of things

otherwise condemned in holy writ, why would disease sanctify their use?

(10) IS THE INTERVENTION A KNOWN COMMODITY?

Is the intervention a known commodity? Is it known what the intervention really is and what it actually does? Has it been studied? Is it physiological? Do you know what you are doing? "A practice that is laying the foundation of a vast amount of disease and of even more serious evils is the free use of poisonous drugs. When attacked by disease, many will not take the trouble to search out the cause of their illness. Their chief anxiety is to rid themselves of pain and inconvenience. So they resort to patent nostrums, of whose real properties they know little, or they apply to a physician for some remedy to counteract the result of their misdoing, but with no thought of making a change in their unhealthful habits. If immediate benefit is not realized, another medicine is tried, and then another. Thus the evil continues."³² {MH 126.2}

"Were I sick, I would just as soon call in a lawyer as a physician from among general practitioners. I would not touch their nostrums, to which they give Latin names. I am determined to know, in straight English, the name of everything that I introduce into my system."³³ What does Prozac, CoQ10, or monoglycerides mean?

(11) IS THE INTERVENTION ILLEGAL?

Ready to face jail if you try this? Is it illegal? Now this is a relative contraindication. But you better believe whole-heartedly in an intervention that the government has outlawed if you are going to presume to use it, especially if they are prosecuting those who do. "Let every soul be subject unto the higher powers. For there is no power but of God: the powers that

be are ordained of God. Whosoever therefore resisteth the power, resisteth the ordinance of God: and they that resist shall receive to themselves damnation. For rulers are not a terror to good works, but to the evil. Wilt thou then not be afraid of the power? do that which is good, and thou shalt have praise of the same:"³⁴

(12) FIRST DO NO HARM

Every health care practitioner is taught, "first do no harm". Which leads to the question is it free from possible adverse side effects? "When drugs are introduced into the system, for a time they may seem to have a beneficial effect. A change may take place, but the disease is not cured. It will manifest itself in some other form. In nature's efforts to expel the drug from the system, intense suffering is sometimes caused the patient. And the disease, which the drug was given to cure, may disappear, but only to re-appear in a new form, such as skin diseases, ulcers, painful diseased joints, and sometimes in a more dangerous and deadly form. The liver, heart and brain are frequently affected by drugs, and often all these organs are burdened with disease, and the unfortunate subjects, if they live, are invalids for life, wearily dragging out a miserable existence. There are more who die from the use of drugs, than all who could have died of disease had nature been left to do her own work."³⁵ Is this true? "There are 225,000 deaths annually from medical errors including 106,000 deaths due to 'non-error adverse events of medications'"³⁶

Some of these questions are on the order of Heaven versus Hell, "Those who make a practice of taking drugs sin against their intelligence and endanger their whole after life.... if all would seek to become intelligent in regard to their bodily necessities, sickness would be rare instead of common. An ounce of prevention is worth a pound of cure."³⁷

Medical Interventions: Are You Following the Blueprint?

(13) WAS I LED OF GOD TO USE THIS INTERVENTION?

Was I led of God to use this intervention? This begs you experience in following the will of God. We seek: "We ask for a miracle, and the Lord directs the mind to some simple remedy."³⁸ We wait: "Rest in the LORD, and wait patiently for him: fret not thyself because of him who prospereth in his way, because of the man who bringeth wicked devices to pass."³⁹ We check everything out with the Bible: "God reveals His will to us in His word, the Holy Scriptures." We determine if providence is at work, "His voice is also revealed in His providential workings; and it will be recognized if we do not separate our souls from Him by walking in our own ways, doing according to our own wills, and following the promptings of an unsanctified heart, until the senses have become so confused that eternal things are not discerned, and the voice of Satan is so disguised that it is accepted as the voice of God." Our leading to a certain natural remedy may also come through impressions. "Another way in which God's voice is heard is through the appeals of His Holy Spirit, making impressions upon the heart, which will be wrought out in the character. If you are in doubt upon any subject you must first consult the Scriptures."⁴⁰ Some of how God leads a certain person can be learned from how the Lord has led in their past experience. "We have nothing to fear for the future, except as we shall forget the way the Lord has led us, and His teaching in

our past history."⁴¹ God tends to use a similar way of leading over time with a given individual. And lastly, we must not forget that we are not the only ones who have had to consider these options. Only a fool has to learn everything by his own experience. There are people willing and ready to share their personal experience in these things, "Where no counsel is, the people fall: but in the multitude of counsellors there is safety."⁴²

A MATTER OF FAITH

In looking to God for His leading we have to remember that, "whatsoever is not of faith is sin."⁴³ And, "That which we lack in faith we make up by the use of drugs."⁴⁴ Any intervention not founded upon genuine faith cannot be of God. There is no way you can have faith in an intervention if it proceeds from God's adversary.

Medical Interventions: are they of God? We need to know. "There is a way that seemeth right unto a man, but the end thereof are the ways of death."⁴⁵ We are told, "Except the LORD build the house, they labour in vain that build it: except the LORD keep the city, the watchman waketh but in vain."⁴⁶ To extrapolate we might also say that unless the Lord heals a person, are they really healed at all? And if it was not the Lord who healed a person, under whose healing power have they come?

If or when I become sick, I want to be healed by the Lord. How about you?

“The paralytic found in Christ healing for both the soul and the body. The spiritual healing was followed by physical restoration. This lesson should not be overlooked. There are today thousands suffering from physical disease, who, like the paralytic, are longing for the message, "Thy sins are forgiven." The burden of sin, with its unrest and unsatisfied desires, is the foundation of their maladies. They can find no relief until they come to the Healer of the soul. The peace which He alone can give, would impart vigor to the mind, and health to the body.”ⁱ

– E. G. White

ⁱ White, E. G. (1898). *The Desire of Ages*. Mountain View, CA: Pacific Press Publishing Association. p. 270.

CHAPTER 23

HEALTH AND SPIRITUALITY: THE MIND BODY CONNECTION

TIME CAPSULE

I received an email in the mail from my professional society. They wanted to put together a time capsule to be opened at the hundred and fiftieth anniversary of the association in the year 2083. I thought, what should I suggest to have put in that time capsule? Then I thought, wait a minute, 2083! Where will I be in 2083? Then I thought, how old am I now, and if time would continue, where would I be then? I probably would not be around by then and, so I wrote back and told them to put some asbestosis in that box, so it will survive hell because it will have happened by then. Now some of you theologians out there are saying, hell doesn't happen till after the thousand years, but we know that Peter says that when the Lord returns the elements will melt with fervent heat, and so in essence it happens then.

There was a time capsule placed by Lakefield elementary school in the year 2000 to be opened a hundred years later. We tend to like time capsules, sometimes we make the cornerstone of a building into a time capsule by hollowing it out and putting into it a newspaper of the day it was built. Then when the building is demolished the newspaper is found telling the news about the time it was built.

I remember back when I was in elementary school NASA sent out a space voyager with a space capsule and they were talking about all the stuff they were going to put on this space probe in case "somebody out there" discovered it. I wasn't personally impressed with some of the things they selected to put on that space probe to represent us, but, just to illustrate that we like time capsules.

TIME CAPSULE OPENING

You know, there are 66 books in the Bible; can you think of one of those books that was in essence put into a time capsule? Daniel! Daniel was sealed wasn't it? "But thou, O Daniel shut up the words, and seal the book, even to the time of the end: many shall run to and fro, and knowledge shall be increased."¹ Don't publish it, don't send it to your mother, you won't understand it yourself, just put it in a time capsule, prepared for a time when knowledge shall increase. Has knowledge increased? It's hard to keep up in any field! They say knowledge doubles every few years and when you look at the Internet now we have more and more access to a lot of this knowledge.

"And I heard, but I understood not:" said Daniel, "then said I, O my Lord, what shall be the end of these things?" And He said, "Go thy way Daniel: for the words are closed up and sealed till the time of the end."² Do we live in the time of the end? How do you know? Signs are all around you say. But how does this verse say we would know that we're in the time the end? We would understand Daniel! So, I'm going to have a little quiz here, Daniel 2, what's the head of gold? Babylon! All right, what are the arms of silver? Medo-Persia! The brass is Greece, the iron Rome, and how about the toes of iron and clay? I'm going to call it modern Babylon, or our day. What is restored at the end of Daniel to God's kingdom? That's correct, "and in the days of these kings shall the God of heaven set up a kingdom which shall never be destroyed."³ The point is, we understand Daniel so we must be in the time of the end.

And, that stone that is cut out without hands,⁴ isn't that the hope of every Christian, where there'll be a kingdom where God reigns,

where His servants do not fight, as he told the Jews. Yes, we hope for that stone, but I'm not here to talk to you about prophecy. The question I have for you is this, why does this book, sealed until our time, commence with a cute little human-interest story about a dietary experiment?

THE CHALLENGE: BRAINWASHING

"King Nebuchadnezzar of Babylon attacked Jerusalem and surrounded the city, the Lord let him capture King Joachim. The King then ordered Aspen, as his chief official, to select from among the Israelites exile some young men of the royal family and of the noble families."⁵ Daniel was among the best, he must either have been of royalty or of the noble families. He must have been a good scholar and very special. Aspen must have been able to identify him when they came into Jerusalem and picked him and then carted him off to Babylon. What was he going to do in Babylon? Be brainwashed! They needed some Jews to look like Babylonians and to go back home and rule the country. Aspen was to teach them to read and write the Babylonian language.⁶ Now can you think of any times in American history when we've brought people in here and we've told them, okay, you're not to speak whatever language you know at home, you're only supposed to speak English. Don't speak Swahili, German, Navajo, Spanish; whatever... you're supposed to all speak English. It's brainwashing and enculturation, trained to become Babylonians. We want you to forget your past, we want you to become like us--we want you to think like we think!

Is the brainwashing going on today? What is the biggest tool of brainwashing today? Television! Some professors from the local university came to my meetings when I was doing a series in upstate New York. After the meetings I was speaking with one of them and we got to talking about television. At one point he said, "I am a professional hypnotist, and on that television, they use every technique of hypnotism I ever learned, and they use it constantly."

FOOD ON THE LESSON PLAN

Part of Daniel's training involved food, "and the King appointed them a daily provision of the King's meat, and of the wine which he drank: so, nourishing them three years, that at the end thereof they might stand before the king."⁷ Three years training, three years on a certain diet, three years of brainwashing, and then they're supposed to stand before the king. And what was the food like? High in saturated fat and cholesterol, inebriating, nothing but what the King would have. Is this the best food for young men who are going to school?

Very interesting is the effect of rich food on the brain. You'd like the oxygen in your brain to be fairly high, maybe somewhere around ninety five percent. This helps you study better, to be able to do your taxes. But do you know what happens when we eat a high fat meal? Within six hours the oxygen in the brain falls below seventy percent, what's more it does not return to normal for three whole days!⁸ Wow! That's a long time. Better not eat a high fat meal within three days of taking a test, you won't perform your best. But who only eats one high fat meal a day? The next day another high fat meal is eaten, and you just went back down again and it's going to be yet another day before you return to normal. What is the moral of the story? Some people have never had a fully functioning brain! Be careful, don't point any fingers, and don't name any names.

"GIVE ME MY BRAIN BACK!"

I shared this topic as a talk at my local church. One of the ladies sitting in the back said to herself, "That's me!" Right then and there she decided to go on Daniel's diet. Six weeks later she pulled on my sleeve, and said, "I'd like to tell you something, when I heard you give that talk, you know, about the brain not functioning well on certain foods, I decided right then and there that I would go on Daniel's diet. I've lost 30 pounds, and as much as that is wonderful, what I'm even happier about is that I now have my brain back. Now when you and the others are out there preaching I don't go to sleep I listen and I learn. Thank you for giving me my brain back!"

CAMPOREE GONE TOO FAR

How far is it from Jerusalem to Babylon as the crow flies? I have pulled it up on Google Maps and it's 554 miles. But Daniel and his friends did not fly like birds straight across that distance, they went up the sea shore, up the Fertile Crescent, as they call it, where there's green plants and came down the river to Babylon. Historians tell us they probably walked 1,400 miles! That's a long trek and it wasn't exactly a Boy Scout outing, this was more or less a death march. Now I got a question for you, what do you think a bunch of Pathfinders or Boy Scouts would do to a table loaded with deserts and other unhealthy foods after a 1,400-mile trek? They'd devour it, wouldn't they?! But not Daniel! When he got to Babylon and he saw all the food, he "purposed in his heart that he would not defile himself with the portion of the Kings meat nor with the wine which he drank."⁹ Daniel had a purpose, he knew who he was, and since he knew who he was and had an inkling of his commission he felt it was more important to take care of himself than to indulge appetite. A lot of people don't know who they are, they eat to feel good about themselves, they eat just because they're worried, they're sad, they're happy, they become emotional eaters, they've lost their purpose and they end up defiling themselves.

THEY DRINK AND FORGET THE LAW

Maybe Daniel had been reading proverbs 31, "It is not for Kings to drink wine, nor for Prince's strong drink, lest they drink, and forget the law, and pervert the judgment of any of the afflicted."¹⁰ Now, can you think of somebody in the Bible who drank alcohol and did pervert the judgment of the afflicted? King Herod! That's correct. Herod had a birthday party where all his guests drank wine and when they drank wine their minds were not working very well, and while their minds were not working very well, he had a young lady come out and dance before them, and then he offered the lady half of his kingdom. She came back and said, I want the head of John the Baptist in a platter. At that point Herod should have said, "Well, it's not mine to give, you must go ask him." But instead, because he had made this promise, and because

all his guests were drunk and didn't protest, he went out and had that head removed and given to the lady, and he regretted it the rest of his life. Now can you think in modern times of somebody who drinks the wine and forgets the law? Have we heard of the wine of Babylon? Does Babylon forget the law? They certainly do.

"NONE OF THESE DISEASES"

There is a book on the market that talks about the benefits of following Biblical health principles, it's called, "None of These Diseases."¹¹ On the back cover it has this to say, "With over 1 million copies sold, 'None of These Diseases' has become a classic, now completely revised and updated for a new generation it shows how to obtain extra ordinary medical benefits simply by heeding the word of God." Daniel followed these and he benefited! It's because everything follows the law of the universe and that is "cause and effect", "be not deceived God is not mocked for whatsoever a man soweth that shall he also reap."¹² Oh, now sometimes we sow things we don't want to harvest, and we pray for crop failure, and God is sometimes very kind and gives us crop failure, but all in all we reap what we sow. A lot of times we have something bad happen to us, "oh I got sick," "well it just happened to me", but in reality, if we looked at the true law of cause and effect we'd find that there was something that actually started the ball rolling, something we did to bring it on ourselves.

HEALTH VERSUS DISABILITY SCALE

An understanding that helps us to realise what we can do to solve the problem more readily I call the health versus disability scale. Every decision we make in lifestyle puts us somewhere on this continuum, increased indulgence at one end, at the other end increased health, at this end increased strength, at the other end increased disability, every decision we make puts us somewhere along the scale. When I was in medical school the dean came out and wanted to encourage all the students, he told us a little bit about when he was a medical student. He said he made sure that every decision he made supported his goal of being a good student and if the decision came

to go play tennis or to go and study books and he needed to study, right then and there he would make the decision to study, that way every decision put him somewhere closer or further away from his goal. The same is true of every diet or lifestyle decision we make in life. If we want to be free of disease, every decision we make must support that goal.

TONGUE TIED

Have you ever heard of the musical group, Canadian Brass? They are one of the best brass groups in the world. Imagine how fast their tongues go when they play classical pieces! They're often featured on the front of important magazines like "The Brass Herald". They came to Andrews University one year and when they arrived there was a reception in progress in their honour. Before the concert they were to give, they were offered punch and cookies and other sweets, but they turned it all down. They said, "If we drink your sugary punch, and eat your sugary sweets, we will not be able to tongue our notes like you'd like to hear them tongued, and our concert will be a disaster!" If sugar does that to their tongues, just think what that kind of diet does to the sensitive nerves of the brain!

Sugar has also been shown, in research, to really affect the brain of children. Children who eat more sugar have less function of the frontal lobes of their brains.^{13,14} The frontal lobes are where we make important decisions, like decisions about salvation and decisions about good and bad. Your frontal lobes are what distinguish you from a monkey; it's a distinction you want to maintain! Studies show that children eating more sugar demonstrate more behaviour problems;¹⁵ they also discovered that children eating more sugar usually had one grade letter lower in their grades than those who didn't eat high sugar foods and soft drinks.¹⁶

Sugar affects the brain, so does meat for that matter, "eating much flesh will diminish intellectual activity. Students would accomplish much more in their studies if they never tasted meat."¹⁷ Daniel must have known something about this. It would seem, that Daniel had insights that go far beyond the average.

BABYLONIAN CAPTIVES

You know, Daniel was a captive of the Babylonians. Babylon has always been the arch typical enemy of God. It came in from the north and invaded Jerusalem. Babylon has always been the headquarters for false religions as well and it takes that role in Revelation. Daniel was a captive of the Babylonians, the question we have to ask ourselves is, are we captives of the Babylonians today, in philosophy, or in our lifestyle and diets? You see there's the perverted diet of rebellious Babylon, and then there's the Biblical diet. "Thousands are continually selling mental and moral vigour for the pleasure of taste."¹⁸ How do you decide how much food you should eat? Oh, if it tastes good, eat more! Right? On the other hand, we have the Biblical diet, "then God said, I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it they will be yours for food and you will eat chocolate bars,"¹⁹ Oh, wait a minute, did I misquote? "And you'll eat the plants of the field."²⁰ God gave us an excellent diet in the beginning, you see, our brains have to be clear, our brains have to be able to receive the signal from God, that's the way God speaks to us. "The brain nerves which communicate with the entire system are the only medium through which heaven can communicate with man and affect his innermost life.... To make a success of the Christian life, the development of sound minds and sound bodies is of the greatest importance."²¹ Daniel was known for his connection with God. God was able to speak to him as we see in some of those prophecies we cited at the beginning.

ESSENTIAL BLOOD FLOW

Now let's talk a little bit about the heart. You have many arteries in your heart which need to stay wide open. If these stay wide open, then you can have good blood flow to the heart muscle and it stays healthy. If the coronary arteries, start to get blocked, say eighty percent, and you go running somewhere you might feel some heaviness in your chest. If they get ninety percent blocked, the pain will come sooner, if they're ninety-five percent blocked, you might feel heaviness in your chest with just walking

around your house. Ninety-nine percent blocked and you might feel heaviness in your chest just thinking stressful thoughts. Well, I have lots of reserve, 80% blockage before you get symptoms. Incidentally, we cannot detect blockages in your heart blood vessels on a simple electric heart monitor (ECG or EKG) till the blockage has exceeded 75% occlusion!²²

That's the heart, what about the brain? Well, you know if you have atherosclerotic plaque in your heart you probably have it in your brain and other places as well. There're certain blood vessels that are very important to the brain, like the anterior cerebral artery, the artery that comes up in the front of your brain and feeds those important frontal lobes. What is so important about the frontal lobes? The frontal lobes of your brain are where you do your higher thinking, where you distinguish right from wrong, where your conscience resides. Without them you lose your moral compass. Now there is something very important you are going to want to know about the arteries feeding your frontal lobes. If these arteries get blocked by just 20% percent, then your frontal lobe function starts to suffer.²³ The frontal lobes will no longer be working like they're supposed to. We need to make very sure we keep our arteries clean. Did you know that the caffeine in just one cup of coffee will shut down the blood flow to your brain by 30%?²⁴ What is the effect of that? Just one cup of coffee can make you more likely to share information with others that you would otherwise have been careful to have kept confidential.²⁵ What's the moral of that story? Don't let coffee make a monkey out of you!

SCIENTIFIC VALIDATION OF DANIELS DIET

"Yes, but what can I do now?" you may be asking yourself. I've spent my whole life eating high cholesterol and high fat foods, not exercising and I do all kinds of stuff that will destroy my body, so what do I do now? Is it reversible? Do I need a bypass in my head? Well, it's interesting; we think that with our modern medicine that all we need is a bypass! Oh, my doctor, he's the best in the world, and my insurance has no deductible. All I have to do is to show up there and they usher me right into surgery. Well it's good to have insurance, but we

have a duty to take care of ourselves. Dr. Caldwell Esselstyn Jr. M.D. of the Cleveland Clinic has shown on angiography, x-rays of the blood vessels, that these blood vessels can be opened back up with lifestyle changes alone, no angioplasty, no stent, no bypass surgery, simply good lifestyle changes. What's his diet and what does he do? Well, he's written a whole book on this called, 'Prevent and Reverse Heart Disease' but he says the optimal diet consists of grains, legumes (that's beans), vegetables and fruit, with less than ten to fifteen percent of its calories coming from fat—a fairly low-fat diet. Does this sound like Daniel's lifestyle? Yes indeed, Daniel's diet would keep the blood vessels of the brain and of the heart wide open! Dr. Caldwell Esselstyn goes on to say that this diet minimizes the likelihood of stroke, obesity, hypertension, type 2 diabetes, and cancers of the breast, prostate, colon, rectum, uterus, and ovaries!²⁶ Wow, did Medicare ever promise anything like that? How about private insurance? No, this is really the best insurance program, isn't it? We take care of ourselves and then we don't need to show up at the hospital to get work done on our blood vessels or anything like that.

PILLS ARE NOT THE ANSWER

Probably two-thirds of the western world have high blood pressure or hypertension as it is called. Some diagnosed, and some not. The majority of them are on some kind of pill to try to fix the problem. They did a study on people with hypertension. They decided to scan the brains of people coming down with high blood pressure to see what they would find. They compared people with hypertension to ones who were not having high blood pressure problems. The researchers discovered that the ones with high blood pressure had 10 times the incidence of Alzheimer's lesions in their brains—white matter lesions, 10 times the incidents.²⁷ They followed them over time, and said okay, let's see if we can stop this accumulation of white matter lesions and so they gave them pills to bring their blood pressure down, and then they scanned their brains again. The researcher discovered something very interesting, fixing the blood pressure with pills did absolutely nothing to slow the rate at which white matter

lesions were accumulating in their brains!²⁸ In order to stop that process, you'd have to change the lifestyle that was causing both the high blood pressure and causing the white matter lesions. Taking good care of ourselves is the very best way to keep our brains clear and so this is of utmost importance.

THE LIGHT ON HEALTHFUL LIVING HELPS CLEAR THE LENS

In the Christian walk, it is by beholding that we become like Jesus.²⁹ We have a problem though, we see through a glass darkly.³⁰ I am here to testify that the light on healthful living helps clear the lens a bit.

HEALTH FOR SPIRITUALITY, AND SPIRITUALITY FOR HEALTH

So, what we've been talking about thus far is how the health of your body affects your spirituality, mostly through the health of your brain. Now we're going to turn it around and talk about how spirituality affects your health.

They've done studies on people who go to church in the Carolinas. They looked at those who weekly attended religious services, versus those who did not. The researchers discovered that people who do not attend religious services have an eighty-seven percent higher risk of dying of all causes.³¹ Those who went to church lived longer, to 83 years; those who didn't go to church lived to be only 75 years old. Another study looked at blood pressure. They discovered people who go to church regularly have consistently lower blood pressure than those who do not.³²

BLUE ZONES

Have you seen the November 2005 National Geographic article entitled, "How They Live Longer"? The magazine took up the question of what makes people live longer, they looked around the world for groups of people who had exceptional longevity and they found the Sardinians in Italy, the Okinawans in Japan, and the Adventists in southern California all lived longer. They noted that only the Adventists were not losing their longevity edge, meaning, it seemed like the others were not going to live as

long a time. They came to this conclusion when they saw the younger generation of Sardinians and Okinawans eating out of crinkly bags. They looked at what they felt were the reasons these people were living longer. For the Adventist, this was their list: they don't smoke, they put family first, they're active every day, keep socially engaged, eat fruits, vegetables, whole grains, nuts and beans, observe the Sabbath, and have faith. I thought that was an interesting list for this magazine to come up with. In one of their articles they mentioned that, "Adventists also observe Sabbath on Saturday socializing with other church members and enjoying a sanctuary in time that helps relieve stress."³³ What an interesting comment by a worldly magazine.

FORGIVE TO LIVE

Down in Florida, at the Florida Hospital, there's a group that does a seminar on forgiveness. The seminar lasts about 6 weeks and during this seminar people learn how to receive and give forgiveness. It's a workshop. They found people were feeling so much better after this workshop they wanted to study it in terms of its impact on their physical health, and so they studied their blood pressure. They found that people who came in to this seminar with high blood pressure were very likely to have their blood pressure returned to normal after the seminar.³⁴ It's interesting how forgiveness relates to health, even Isaiah points this out, "the inhabitants shall not say I'm sick, the people that dwell therein shall be forgiven their iniquity."³⁵ Interesting the connection between forgiveness and being well!

In another study they looked at death after surgery, not a desirable outcome, but they found that elderly patients were 14 times less likely to die after heart surgery if they found comfort in their religious faith, and were socially active. On the other hand, those who did not find any strength or comfort from religion were three times more likely to die after surgery.³⁶ Sounds like, before surgery, they better screen people and find out what their religion is like, well, that probably wouldn't be ethical, but is very interesting to note the impact and for elective surgery maybe a course in faith in God or forgiveness would be a good prerequisite, that is if we are going to be truly scientific.

Health and Spirituality: The Mind Body Connection

Well, that brings up an important point, that if religion helps dramatically in medical care it would be wise to identify the best religion, right? The religion that has the greatest impact or has the best outcomes, that brings the longest, happiest life, that gives the best health! How would we know? How do we know what is the best religion, that gives the best results? Well, here's an interesting comment from James, "Pure religion", that sounds good, "and undefiled before God and the Father is this, to visit the fatherless and widows in their affliction, and to keep himself unspotted from the world."³⁷ A religion that helps others, not a self-centered religion—don't spend time studying your navel, spend time helping others. Does it work? Did the studies show any benefit from this? They sure did. We call it, "living to give". Mortality was significantly reduced for individuals who provided support to friends, relatives, neighbors, and their spouse, on the other hand, receiving support had no effect on mortality.³⁸ Just sitting back and taking it all in doesn't help. Helping others has the biggest benefit. We need to reach out of ourselves, even in the time of our own difficulty perhaps, remember Elijah? He came to the woman who was out gathering sticks for her and her son's last meal and he asks her if she had anything to eat. She tells Elijah that she and her son are about to eat their last meal. He tells her to feed him first and then everything will be ok. And when she fed him first, reaching out in the time of her own great need, she was benefited!

THE ULTIMATE LAW OF THE UNIVERSE

You know, this is all about the ultimate law of the universe. There are different levels of detail of the law. Remember, one time when Jesus was walking among men, they asked Him about the law, and he said that the law is, love the Lord your God with all your soul and your neighbours as yourself. Another time they got on him saying, you're making yourself God, and He said haven't you read in your law, ye are all gods?³⁹ Wait a minute, that's from Psalms not from the "law". Actually, the Jews thought of the whole Old Testament as the law, so yes, it was the law! So there are different sized definitions of the law, but if we get down to the most basic definition, it would be "the law of self-

renouncing love is the law of life for earth and heaven;"⁴⁰, that's the ultimate law, it's expressed a number of ways, "God loveth a cheerful Giver"⁴¹, "it's more blessed to give than to receive"⁴², "the Son of man came not to be ministered unto but to minister and give his life a ransom for many"⁴³, "For whosoever will save his life shall lose it; but whosoever shall lose his life for my sake and the gospel's, the same shall save it."⁴⁴, it's the law of life for the universe.

"In heaven itself this law was broken, sin originated in self-seeking. Lucifer the covering cherub desired to be first in heaven,"⁴⁵ and we know the result, sin! Selfishness, Insensitivity Neglect--SIN! And these return upon the actor with more force than upon the receiver. When we are selfish and insensitive, when we neglect, we suffer worse health, it affects our whole being, for, again, whosoever will save his life, will lose it, but whosoever shall lose his life for my sake in the Gospels the same shall save it.

LIVE TO GIVE

This is talked about in Isaiah 58 where we find that God tells us what to do to have good health. Does it say run a marathon? No. It says some interesting things like... "deal thy bread to the hungry" and "bring the poor that are cast out to thy house". Wait a minute God, I haven't vacuumed yet, they haven't either, don't worry, "when thou seest the naked cover him, then thine health shall spring forth speedily." Our health is dependent on helping others. Any amount of volunteering, in one study, reduced mortality by sixty percent, even among weekly attendees at religious services.⁴⁶ While we pointed out that it is good to come to church every week, and it shows up in benefits in blood pressure and in mortality, coming to church is not where we should stop, we also need to help other people. Do things for others, and then the mortality drops even further. People who get involved benefit even more, because, "it is more blessed to give than to receive"⁴⁷. "The pleasure of doing good to others imparts a glow to the feelings which flashes through the nerves quickens the circulation of blood and induces mental and physical health."⁴⁸ You want to know what to do for your nerves; do you want energy to flash through your nerves? How about if you have congestive heart failure? Doing good

to others has a dramatic impact on our own health, it's part of the prescription for recovery.

PURPOSE IN HIS HEART

Well, back to Daniel, "Then said Daniel to Melzar, prove thy servants, I beseech thee, ten days, and let them give us pulse to eat, and water to drink, then let our countenances be looked upon before thee and the countenances of the children that eat of the portion of the Kings meat, and as thou seest, deal with thy servants."⁴⁹ Let's have a case control study here, let's just do a comparison, 10 days, you guys eat what you're going to eat, and we will eat pulse and drink water. Well! Would you be willing to risk your future on a 10-day experiment? ... a 10-day trial of your diet, your lifestyle for 10 days? What would your diet do for someone with diabetes, heart disease or high blood pressure? Would it cure them or give them diabetes, heart disease or high blood pressure? And whom do you think looked better, or worse in 10 days; you think Daniel really looked better? Or do you think all the others looked a lot worse? Or both?

Why only 10 days? Why not one hundred days? It would be three years before he'd stand before the King. Well, in a lot of programs, 10 days is definitely enough to make a dramatic difference! Reversing diabetes, reversing coronary artery disease, especially angina, 10 days can make a dramatic difference! I've seen a difference in three days in some people.

DETAILS OF DANIELS DIET

What kind of diet was Daniel asking for anyway? What is pulse? Well, if we look in today's English version it says, "test us 10 days he said give us vegetables to eat and water to drink." Vegetables and water! Back to the original diet! Good food!

I have a picture of a banner sign I saw on the internet with somebody in a local parade marching down the street with their poster, "16 Reasons to Be A Vegetarian." Can you think of 16 reasons to be a vegetarian? This is just the public parading this; they're out there marching. The question I have is this, has Daniel been unsealed to the general public? At one time a French politician was reviewing his army, which was marching off, and all of a sudden, I guess he

must have been daydreaming or something, he popped up and said, oh, I better catch up with my army, after all I am their leader! Has the world passed us by, while we sleep?

Daniel, did he do well on his tests at the end of three years? Have you ever been graded on the curve? In medical school we were basically graded on the curve, if somebody did really, really well, it kind of pushed the rest of class down in their grades. Daniel scored ten times wiser, ten times better, I mean, this blows the curve. I wonder if anybody else got any grade.

Was Jesus tested on diet and appetite? Well, remember He was led out in the wilderness after His baptism, and after fasting for forty days, Satan comes to Him all hungry and looking Him over says, "If thou be the Son of God, command that these stones be made bread."⁵⁰ It sounded like a good idea, except for the little "if" in there. And Jesus caught that, of course. Jesus wasn't there to use His power to take care of Himself. A lot of times we use our power to indulge self.

Now in the Bible, we recognize that all have sinned and fall short of the glory of God,⁵¹ but there was not a lot to write about Daniel's short comings, about all his faults, I mean, he's one of the few people about whom no sin is recorded. Do you suppose his diet had something to do with his integrity, with this standing up against the devil, even when the Babylonians were trying to brainwash him?

BOOT CAMP

"The controlling power of appetite will prove the ruin of thousands, when, if they had conquered on this point they would have had moral power to gain the victory over every other temptation of Satan." This sounds like boot camp, right? Saving Private Ryan, boot camp! If they conquer on this point! What's our test? The Sunday law, right? Well, when that comes along it's too late! Our test is initially on appetite, "But those who are slaves of appetite will fail in perfecting Christian character and as we near the close of time Satan's temptation to indulge appetite will be more powerful!"⁵² How does Satan make food more addictive today?

DANIEL AND THE TIME OF TROUBLE

Now there are some other things that Daniel is known for besides his good diet, he spent a night with some big kittens didn't he, he got thrown to the Lions! This was his time of trouble, a time of difficulty for Daniel. Do you suppose that his diet had something to do with his making it through his time of trouble? Did you know he mentions a time of trouble for us also? "And there shall be a time of trouble such as never was since there was a nation even to that same time."⁵³ "Never was since there was a nation"! How many millions died under Hitler in Germany? 16 million? How many died under Stalin under communism? 75 million? How many died under religious persecution during the dark ages? 150 million. But this time of trouble, predicted by Daniel pales all these into insignificance. Do you suppose that Daniel's diet has something to do with us making it through our time of trouble?

Daniel's three friends, had their big test at the golden image. This was their time of trouble. When the entire world was bowing down to the image, these three vegetarians remained standing.

"Those who have had the light upon the subject of eating and dressing, with simplicity, in

obedience to physical and moral laws, and who turn from the light which points out their duty will shun duty in other things. If they blunt their consciences to avoid the cross which they will have to take up to be in harmony with natural law they will, in order to shun reproach, violate the Ten Commandments."⁵⁴ Is appetite a test for us? Very much so! Which comes first, the test on the commandments or a test on appetite?

BURDEN OR BLESSING

So, is Daniel's diet another burden, or is it really an inestimable a blessing?

In summary, Daniel is a prophetic book, sealed until our time, not to be opened until the time of the end. Why did God start a book that would be opened in our time with a cute little human-interest story about a dietary experiment? Because God wants us to have clear minds and sound constitutions so we can understand the prophecies of Daniel and survive during the last days!

How many want to remain loyal to their Saviour Jesus Christ during the time of trouble just upon us? How many want to adopt Daniel's diet to assist you in remaining loyal to their Saviour Jesus Christ during the time of trouble?

“Grains and fruits prepared free from grease, and in as natural a condition as possible, should be the food for the tables of all who claim to be preparing for translation to heaven.”ⁱ

– E.G. White.

ⁱ White, E. G. (1897). Healthful Living. Battle Creek, MI: Medical Missionary Board. p. 78.

CHAPTER 24

CRACKING THE COCONUT OIL CRAZE

As I looked into the refrigerator my eye caught a large tub of margarine. I liked margarine; I had grown up eating margarine. Margarine on steaming hot baked potatoes. Margarine on hot toast. With the publicity of the dangers of trans-fats my comfortability with this food had taken a real nose dive. Opening the lid, I dipped into the container and came out with a yellow greasy dab on my finger. Now they say, "If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck." And as I fingered the greasy thick spread I was questioning in my mind, it looks like grease, it feels like grease, and it tastes like grease, how then is it not just plain grease? This brought to mind the well stated counsel: "God has furnished man with abundant means for the gratification of an un-perverted appetite. He has spread before him the products of the earth--a bountiful variety of food that is palatable to the taste and nutritious to the system. Of these our benevolent heavenly Father says we may freely eat. Fruits, grains, and vegetables, prepared in a simple way, free from spice and grease of all kinds, make, with milk or cream, the most healthful diet. They impart nourishment to the body and give a power of endurance and a vigor of intellect that are not produced by a stimulating diet."¹

"free from spice and grease of all kinds"¹
What, even media/advertisement promoted grease?

Bible is clear on this topic: "Speak unto the children of Israel, saying, Ye shall eat no manner

of fat, of ox, or of sheep, or of goat."² Today God might say it like this: Ye shall eat no manner of fat, of lard, or margarine, or shortening, or Crisco, or saturated fat, or coconut oil, or trans-fat, or hydrogenated fat.

I looked back at the plastic tub of margarine (grease) in my fridge and resolved then and there to dispose of it promptly. In the bin it went.

But I liked my grease, I missed it, what could I replace it with? To the rescue came a charming product claiming health benefits, "Smart Balance". And yes, Smart Balance assumed the vacant spot in my refrigerator. Ok, but sticking my finger into this product and pulling some out I again thought to myself, "If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck."... Whose kidding who here? And how did they make this product so thick if it is not hydrogenated and filled with trans or saturated fat? My eyes searched the ingredients, and there it was, coconut oil! A source of saturated fat. In fact, coconut oil has more saturated fat than butter, lard, or beef-based shortenings (Coconut oil (82% saturated fat) vs Butter (63%) vs beef tallow (50%) vs Lard (40%)).³

So, what about coconut oil? Well, if I let the (well informed, always unbiased, ever truthful) popular media be my guide, coconut oil would be my elixir of life. Especially if I had any worries about coming down with Alzheimer's. But this is not an article on Alzheimer's, we have an article

on Alzheimer's.⁴ Even for Alzheimer's coconut oil is no panacea, as we shall discuss shortly.

Coconut oil may be pressed, heat extracted or separated using a chemical solvent. A thousand mature coconuts weighing approximately 1,440 kilograms (3,170 lbs.) yield around 70 liters of coconut oil making coconut oil a very refined concentrated food source.⁵ This puts coconut oil right up there with the other highly refined, processed, unhealthy modern disease fostering foods.

Can we really improve on the diet God gave Adam in the Garden of Eden in his sinless state with processed foods? "By precept and example make it plain that the food which God gave Adam in his sinless state is the best for man's use as he seeks to regain that sinless state."⁶

One time I was staying at someone's house, doing my own cooking. One day while making healthy waffles my supply of olive oil which I applied to the waffle iron's surface to prevent the waffles from sticking ran out. The host offered me some of their coconut oil. After breakfast that day I had a very stunning revelation. I felt very mentally dull and lethargic all morning. A little more experimenting proved the coconut oil to be the culprit. Apparently oils that are thick on your plate will be thick in your blood, and make you thick in the head too. "Fruits, grains, and vegetables, prepared in a simple way, free from spice and grease of all kinds, make, with milk or cream, the most healthful diet. They impart nourishment to the body and give a power of endurance and a vigor of intellect that are not produced by a stimulating diet."¹

Very interesting is the effect of saturated fat on the brain. You'd like the oxygen in your brain to be fairly high, maybe somewhere around 95%. This helps you study better, to be able to do your taxes and pass tests. But do you know what happens when you eat a saturated fat meal, like with coconut oil? Within six hours of eating the oxygen in the brain falls below 70%,

what's more it does not return to normal for three whole days! Wow! That's a long time. Will you remember those three whole days? Better not eat a high coconut oil meal within three days of taking a test, you won't perform your best on it. But who only eats one high fat meal a day? The next day another high fat meal is eaten, and you just go back down again to below 70% oxygen in your badly needed brain, and it's going to be yet another three days before your brain returns to normal. What is the moral of the story? Some people have never had a fully functioning brain! Be careful now, don't point any fingers at others, and don't name any names who you suspect might be thus affected.⁷ So, let me ask you, does a high saturated fat oil sound like it would be beneficial for an aging brain? Hopefully you have not had a high fat meal recently and the answer to that question will come readily to your mind.

And so, really, less oil is better. Here is a good article. Why No Free Oil?⁸

And what of the use of Oil in the Bible. The land was not literally flowing with olive oil, it was rather precious and scarce.⁹ In Bible times you did not just run down to the store and drown your Mediterranean cuisine in lipids. Salad and carbohydrates, like bread, coated with oil do not digest well. Soaked with oil, the carbohydrates from bread become unavailable to digest and the nutrients can become lost. The salad becomes impermeable to water-based stomach acid and digestive enzymes and can rot so that you lose the nutrients. The rotting process can cause toxins to enter your system and make you sick. See our article on fermented foods.

And what of the products they sell in the markets under the label of coconut oil?

I spent some time in the islands. One day my uncle, an islander, got up early and announced, "we're going to make coconut oil! Today we will go collect coconuts." So, off we went in the vehicle. My uncle could practically walk up a

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coconut tree. Up the tree he'd kick off the ripe coconuts and I would run around and pick them up and load them in the vehicle. We'd then cart them to our yard. When the yard was one layer deep in coconuts we proceeded to husk them, crack open the nuts, grind out the coconut meat, and fill a pot with it. We then separated the coconut oil from the pulp and put it into a jar and placed it on a shelf in our well air-conditioned house. Never did the coconut oil go hard. Never did the coconut oil solidify. Never did it turn to a white grease.

When I returned home to Oklahoma from the islands my father was building greenhouses which were to be kept warm (during the winter) with passive solar heat. We headed down to a corn chip factory to obtain their empty steel barrels. The job of cleaning and preparing the barrels fell to my lot. As I scooped and scrapped white sludge out of them, one hot summer day, I became curious as to what I was removing. Looking on a lid I discovered that this waxy/greasy white stuff was none other than coconut oil, that it had 8 ingredients and that it had been hydrogenated. Recalling the corn chip factory and their product line I puzzled about the fact that on their package ingredients labeling they only indicated that their product could contain one of three types of vegetable oil: corn oil, coconut oil or peanut oil. At the time I was a bit frustrated that none of the other 7 ingredients listed on the coconut oil barrel made their way to the corn chip bags ingredient list, and also that the corn chip bag did not describe any of their added oils as having been hydrogenated.

A few years later the coconut oil hype burgeoned and every one made a mad dash to the health food store for their share of blocks and jars of hard white coconut grease.

I called my aunt in the islands, "Did any of our homemade coconut oil ever turn white and hard like Crisco?"

"No", she said.

"They're selling blocks of white organic coconut oil here which never turns to liquid without heating it up." I then told her of my barrels of white coconut oil from the corn chip factory and she mused with me that, as Sesame Street sings, "One of these things is not like the other". Recall the council, "free from spice and grease of all kinds".¹ Now, I realize not all coconut oil is hydrogenated, but a lot of it is, and probably more of it is hydrogenated than labels would indicate, and all of it is at a minimum 82% saturated fat with a melting point for this grease above most people's room temperatures.

Science does not bear out that Alzheimer's is truly helped by coconut oil.¹⁰ What's more, coconut oil has a negative effect on the immune system and body inflammation much like any other saturated fat, such as lard, beef tallow, butter or shortening. Coconut oil is not great for arthritis, increases the average Joint Pain Index by 27%, as well as increases morning joint stiffness. It increases inflammatory markers such as serum amyloid A, Erythrocyte sedimentation rate, and IgM rheumatoid factor.¹¹ Coconut oil also increases high sensitivity C reactive protein (hs-CRP), an inflammatory marker, by 145%.¹² It also increases the proinflammatory cytokine interleukin-6 release.¹³ All in all, if it is your goal to lower the oxidative stress and inflammation in your body, coconut oil will not be your helper.

If you are trying to reduce your blood pressure, thick oils in your blood stream, that reduce oxygen to vital tissues will be of no benefit.¹⁴ See our article on hypertension.¹⁵

Coconut oil, with all its fat, can send your cholesterol skyward. Coconut oil is associated with significant elevations (as compared to corn oil) of: total cholesterol, LDL, and triglycerides, all of which are not beneficial to a healthy heart.^{16,17} see our article on cholesterol.¹⁸

The high blood lipids and low blood oxygen produced by consumption of coconut oil also

have a detrimental effect on physical performance. People eating coconut oil actually recover more slowly from exercise.¹⁹ This can be partly due to the fact that coconut oil decreases cardiac performance and increases the heart's susceptibility to hypoxia.²⁰ So if you don't care to run as far or as fast as you otherwise would, just lather on the saturated lipids and enjoy. But be mindful, your heart won't be happy.

Compared to unsaturated fats, coconut oil is more atherogenic. Laboratory animals could tell us that. Protocols for the study of coronary artery disease use coconut oil to create atherogenic plaque.²¹ Compared with peanut oil, corn oil and even butter oil, the most severe gross atherosclerosis is observed with coconut oil.²² The impact of coconut oil on the physical behavior of cholesterol is remarkable, and not positive. In one study an abnormal stacking of lipoprotein particles in electron micrographs of VLDL, LDL and HDL were observed with coconut oil in the diet.²³ For people who experience the misfortune of a heart attack, having been on a diet with coconut oil results in a higher level of myocardial (heart muscle) damage.²⁴

But what shall I spread on my bread or fry my potatoes in? Lard, butter, olive oil, margarine, or coconut oil? What are we advised about olive oil? "When properly prepared, olives, like nuts, supply the place of butter and flesh meats. The oil, as eaten in the olive, is far preferable to animal oil or fat. It serves as a laxative. Its use will be found beneficial to consumptives, and it is healing to an inflamed, irritated stomach."²⁵ Oil, "as eaten in the olive", does not suggest to me large quantities of industrially processed free lipids, but to whole olives.

But what if I discover that studies of coconut oil have been shown to help a particular disease I would like to treat, like autism?²⁶ You can do the same thing you would do if you discovered that some disease was helped by wheat, choose to use unprocessed whole wheat products not white flour products. So, in the case of coconut,

you would choose whole coconuts, shredded coconut, coconut milk or coconut cream, etc., any product with the least amount of processing and still possessing the entire product as grown with all its fiber, phytonutrients and vitamins.

Frying foods in oil is not particularly healthy. "We do not think fried potatoes are healthful, for there is more or less grease or butter used in preparing them. Good baked or boiled potatoes served with cream and a sprinkling of salt are the most healthful. The remnants of Irish and sweet potatoes are prepared with a little cream and salt and rebaked, and not fried; they are excellent."²⁷ Frying creates a large amount of oxidation which is unhealthy.

PARTING WORDS

Refined foods are the bane of 21st century health. Bottled (visible) oils increase the risk of cancer, heart disease, stroke diabetes and autoimmune disease. Saturated fats, whether from animals or plants, play a large role in health deterioration. The Bible warns against the use of fats. Coconut oil contributes to disease. The hype about coconut oil as a treatment for neurodegenerative disorders has not been found true by science. Coconut oil contributes to the disease burden in the areas of autoimmune inflammatory disease, arthritis, high blood pressure, high cholesterol and heart disease, and it reduces physical activity performance. My recommendation is to eat unprocessed foods as grown and enjoy the health benefits thereof and help reverse a few diseases.

HERE IS WHAT YOU SAID

My Thus saith the Lord experience regarding coconut oil:

When I was running a massage school, I felt impressed to put together a certified medical missionary training program. I scheduled it for in

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the summer when the massage school was not in session.

For some reason the "committee" that made all decisions & approved all programs asked another medical missionary help teach it.

Her lectures included a lengthy presentation and sale pitch on how wonderful coconut oil was, including power point presentation and books on it she was selling. She happened to give me one of the books. I was so busy handling all the admin, coordinating with the kitchen for lunches, plus teaching 3/4 of the lectures that I had no time or energy to look at the book. Our kitchen had a low oil/no oil policy for food for people attending our wellness programs.

After the nine-day course was over and everyone went home, including the guest medical missionary presenter who was blind in one eye and nearly blind in the other from behind the lens cataracts, I sat down at my desk in my little office and pulled out the book on coconut oil that she had given me (same one as she was selling to the students). As I started to open it, I was strongly impressed to get out my Bible, which I happened to have there at work. With Bible in front of me I was impressed to read in Leviticus. When I got to the food rules in Lev., as I got to the one about cutting the fat off of the meat before eating it, I hear an audible voice in my head say 'What type of fat is it?' I answered 'Lord, it's animal fat, but I don't eat animal fat, I am vegan, remember?' The same question was spoken to me again. I gave the same answer. The question came a third time.

Now, as tired as I was, I was now getting irritated with this question a third time. But one can't afford to get irritated with the Lord. So, I paused and thought to myself, what is he asking me? I thought awhile and I think the Holy Spirit must have helped me because I finally asked, Lord, do you mean saturated fat? I knew I had the right answer this time as the next thing I heard was "What type of fat is coconut oil?' In one of the lectures on coconut oil the other medical missionary had said that it was 91% saturated fat. The fat on beef that we are instructed to cut off is saturated fat.

I threw the book on coconut oil in the waste basket without ever opening it. And, I started do research on the internet. All over the internet was the statement that coconut oil raised your HDL. As I started looking at studies on coconut oil, and fortunately I had already learned by that time that you have to look at who funds a study, I finally came across the actual study where the product advertisers get the raising HDL from. Yes, coconut did in fact in the study raise the HDL. But what they neglected to mention in touting the wonderful virtues of coconut oil based on scientific studies, is that same study showed that it also raised LDL, VLDL, apo proteins A & B, all significantly!!! One in fact went up 512%.

By the time I was done, I had a 2 hour PPT presentation against oils in general and definitely coconut oil, with every slide pretty much documented with the study reference(s) on the slide.

“The oil, as eaten in the olive, is far preferable to animal oil or fat.”ⁱ

—E. G. White

ⁱ White, E. G. (1905). The Ministry of Healing. Mountain View, CA: Pacific Press Publishing Association.

CHAPTER 25

OIL IN MY BREAD

A lot of interesting reactions to the Coconut oil article came in, with some good questions which are the inspiration for this particular article. Here is your comment:

“Recently in my attempt to make light whole wheat/spelt bread for my family I started using extra virgin cold pressed organic olive oil in the bread (about 1-1 1/2 tablespoons in a large loaf). My family loves good healthy bread. I don't feel sluggish after eating it and no one seems to suffer from digestive issues, but I'm still wondering about it. Is this something to be concerned about? Does this create a problem for digesting the starches? Does your wife have a good, light whole wheat bread recipe that does not use oil? (I'd be interested!!). Thank you and God bless,”

Thank you for writing in and for your questions. Here is a good link to how to make good bread without oil:
<https://youtu.be/xsmchOVc8mU>

What about baking with oil, after all wasn't oil used in Bible times? My question is, would we recognize the oil used in Bible times? And, for over a million people traveling on foot through a desert, how much oil per person do you believe they used on a daily basis?

But what about baking with oils? Now, as an aside, but in approach to this topic, one common way oils are used is in frying, which we know significantly deteriorates their valuable properties and saturates them with oxidized products of thermal degeneration, referred to as Lipid peroxidation.¹ Oxidized fats are a source of much disease and suffering.

But what about simple baking with oils, as adding a little bottled oil to a bread recipe. I was fascinated to serendipitously discover (while doing the scientific research on why it is so harmful to mix fruits and vegetables such as lettuce and tomatoes) a set of articles on bread baking, which, when compared showed that adding oil to bread increased its oxidative stress by 10 times!^{2,3} That's right, ten times higher oxidative stress in bread which has been baked with one of its ingredients being bottled oil. We are talking here about the same oxidative stress that increases the risk of cardiovascular disease,^{4,5} rheumatoid arthritis⁶, and psychological disorders⁷. Yes, psychological disorders. So, if your oil loving friends seem a little bit dysfunctional, just cut them some slack and chalk it up to dietary choices.

Now, obviously, baking and frying aren't the only ways we use bottled oils. But, overall,

increased use of bottled vegetable oils has a negative impact on health. Ok, so at this point, you are probably catching your breath and saying to yourself, “He doesn’t sound like a loyal oil company sponsored salesman”. Well, here’s why. A high intake of vegetable oil increases the risk of stomach cancer by 4-1/2 times⁸, and breast cancer by nearly 5 times⁹. What’s more, it increases the risk of high blood pressure¹⁰ with all its attendant health implications.

Now that said, someone is going to ask, “what about my 100% pure extra virgin cold pressed olive oil?” And my first question will be, how do you know you have 100% pure extra virgin cold pressed olive oil? Some say it’s hard to find¹¹, some say it’s not¹². That said, the study above on the deterioration of frying oils was a study on olive oil, it does deteriorate when heated.

Does addition of free oil, i.e. bottle vegetable oil, to baked goods create a problem for digesting the starches? The results of cooking starches with oil is that the starches become resistant to digestion¹³. Whereas starch digestion starts in the mouth, facilitated by water-based enzymes, oil digestion occurs in the small intestine, facilitated by bile or fat based enzymes. If the starch is oil coated, the water-based enzymes cannot get at it to digest it.

So how do I make my favourite recipe without oil. Well, there are some viable alternatives, some good substitutes. I’m not saying you are going to be able to deep fat fry anything in any of these replacements, but in recipes they may work well for you.

Ground flax can be used in some recipes, as used in the bread recipe link above. Here is how it works: for each tablespoon of oil, margarine or butter the recipe calls for, substitute three times as much ground flax meal. Ground flax can be used to substitute for all of the oils or fats in the recipe or for just a portion them. Beware though, this will tend to make the baked goods brown more quickly. You may also want to add a little more liquid to the recipe or decrease the other dry ingredients a bit to make up for the added dry flax meal.

Personally, in breadmaking, I prefer to substitute the oil, tablespoon for tablespoon, with unsweetened applesauce. So, if the recipe calls for one tablespoon of vegetable oil, I would substitute one tablespoon of applesauce.

Another alternative worth knowing, in baking, is to add 2T soy flour per 1 cup grain flour, and this adds natural fat to your culinary creation.

All in all, I want to thank you all for your feedback and questions on the coconut oil article.

HERE IS WHAT YOU SAID

Greetings. I just read your article on “Sluggish for 3 days “.... And I’m remembering the 80’s. My late wife and I would go to the pie shop ONCE A YEAR before Christmas and I would order Boysenberry Pie Alamode (With 2 scoops of ice cream on top of warm pie). I found that for 3 days I felt sluggish!! My mind was so sluggish that I felt the need (I didn’t use one except then) to use a calculator when figuring

costs. After 3 days the cloud slowly disappeared. I can fully appreciate and understand what you say, and I'm 100 percent in agreement. But it may not affect all people that way. I've asked people if foods such as that affect them that way and most people don't notice Or don't know the difference.

I just received your newsletter and article about coconut oil. It confirmed what we already thought. We have never used margarine, smart balance, or any free oils in frying or other cooking. If I happen to eat some while out, I can testify to feeling so sluggish and sleepy and such a dull mind.

Thanks heaps John for this great info - another touchy subject. Should have heard the reaction when I emailed my church brothers and sisters the one on fermentation!

Out goes the coconut oil! Have to hand it to you, you sure are saving me money!

God bless you, Julie and Conner!

Dr. Clark,

Thank you so much for your newsletter. It is so easy to get off track. Your article on Coconut oil and grease was meant for me. I needed the added reminder. We are on the road so much it's easy to eat way too many fats.

Dr. John, Thank you for the good articles. The subjects are well done and ones I have interest in.

In Russia seems all whole wheat bread is sour dough. MY mission service in Phuket Thailand where coconuts were used daily and no heart disease in the rural area at that time. The whole food seems to be the answer.

“I am advising the people wherever I go to give up liquid food as much as possible.”ⁱ

—E. G. White

ⁱ White, E. G. (1897). Healthful Living. Battle Creek, MI: Medical Missionary Board.

CHAPTER 26

WHAT ABOUT JUICING?

“Juice Your Way to Fabulous Health”, sings a colorful title backed by pretty beverage illustrations. The book opens with this statement: “Have you heard the news? Purchasing a juicer; squeezing fresh juices from raw carrots, beets, celery, kale, lemons, apples, and grapes; and ‘juice fasting’ have suddenly gone mainstream.” “Juicing” has become so popular that it is the subject of books, web sites, and films.¹

On the other hand, a famous health advocate declares, “I am advising the people wherever I go to give up liquid food as much as possible.”² “Taken in a liquid state, your food would not give healthful vigor or tone to the system.”³ “Solid foods requiring mastication will be far better than mush or liquid foods.”⁴

As a medical doctor, who lectures on lifestyle medicine concerns, I am frequently approached with questions about the health benefits of juicing and/or smoothies.

It is essential to evaluate the origin of a health practice before you recommend it. “Juice therapy has long been a component of the 5,000 year-old tradition of Ayurveda. Ayurveda was a traditional system of medicine that originated in India.”⁵ This ancient Indian healing tradition involves believing in universal energy called prana—energy that is believed to travel through the body via channels called chakras.⁶ Ayurveda is concerned with achieving balance in body and mind by restoring the balance of three elements, or factors...VATA, PITTA and KAPHA (Air, Fire and Water) of which the body is made in their paradigm. Juice is said to be important to balance these elements.⁷ I would show you a

picture of the Hindu god Dhanvantari associated with juicing, but the god is poorly clad and I won’t risk offending your sense of modesty. “It is common practice in Hinduism for worshipers to pray to Dhanvantari seeking his blessings for sound health for themselves and/or others, especially on Dhanteras.”⁸

It is important to note that your body handles liquid foods differently than it handles solid foods. Liquid food does not give healthful vigor to the body.

“Your stomach was not receiving that vigor that it should from your food. Taken in a liquid state, your food would not give healthful vigor or tone to the system. But when you change this habit, and eat more solids and less liquids, your stomach will feel disturbed. Notwithstanding this, you should not yield the point; you should educate your stomach to bear a more solid diet.”⁹

More happens in the mouth than many appreciate. The immune tissue in the mouth and throat, like the tonsils, test substances coming into the body to let the immune system know what is being eaten as food.^{10,11,12,13,14} Allergy, inflammation and autoimmune diseases are more likely to flare up when food is not chewed long and well, when the body has not had sufficient time or impetus to identify the incoming antigens.^{15,16} One technique, of alternative allergists, is to take a food to which someone is allergic and make a liquid tincture

out of it, then have that person hold this tincture under their tongue for 15 minutes prior to eating, thus presenting the inflaming antigen to the testing cells of the mouth (dendritic cells), which, in turn will lower the sensitivity of the body to that substance. Chewing your food long, thoroughly, and well are part of avoiding or preventing annoying food sensitivity diseases.

Liquid diet fad is like a man falling into sin.

“Man has fallen by sin; but there is no need of his continually repeating the transgression of Adam and Eve. There is no necessity for pleasing and gratifying the appetite by indulging in forbidden things. All should understand that by indulging perverted appetite, they violate the laws of health and life. Many have misinterpreted health-reform, and have received perverted ideas of what constitutes right living. Some honestly think that a proper dietary consists chiefly of porridge. To eat largely of porridge would not insure health to the digestive organs; for it is too much like liquid. Encourage the eating of fruit and vegetables and bread.”¹⁷

Most people making liquid meals are not careful to follow good food combining principles. They intake a large variety of food at each meal in their smoothies or juices as though they had to balance their entire life's nutritional requirements in one sitting. This confuses the stomach.

“To eat largely of porridge would not insure health to the digestive organs; for it is too much like liquid. Encourage the eating of fruit and vegetables and bread. ... If we would preserve the best health, we should avoid eating vegetables and fruit at the same meal. If the stomach is feeble, there will be distress, the brain will be confused, and unable to put forth mental effort. Have fruit at one meal and vegetables at the next.”¹⁸

Liquid foods are not as wholesome.

“Grains used for porridge or "mush" should have several hours' cooking. But soft or liquid foods are less wholesome than dry foods, which require thorough mastication. Zwieback, or twice-baked bread, is one of the most easily digested and most palatable of foods. Let ordinary raised bread be cut in slices and dried in a warm oven till the last trace of moisture disappears. Then let it be browned slightly all the way through. In a dry place this bread can be kept much longer than ordinary bread, and, if reheated before using, it will be as fresh as when new.”¹⁹

Each type of food takes a different digestive approach. You may realize that your body reacts very differently to a lemon than it does to broccoli. Excessive variety, as encountered in a complex meal composed of multiple diverse foods or complex smoothies, can provoke allergy, inflammation and autoimmunity.²⁰

Super blenders are capable of making a drink of almost any solid food. When solids are whizzed up with liquid in a blender they are atomized into nano-particles. These nano-particles then tend to absorb into the bloodstream unchecked by the usual filtering mechanisms provided by the wall of the intestines. This is like a dangerous condition referred to as leaky gut syndrome.²¹ This has been the drawback to homogenization of milk.^{22,23,24} When these nano-particles enter unfiltered in the blood stream the body can develop sensitivities and/or unhealthy reactions.

Juicing has gained considerable popularity in the alternative and integrative approach to cancer therapy. One such system is that of Gerson. Gerson therapy daily regimen calls for drinking 13 glasses of juice from fresh, organic fruits, vegetables and calves' livers, and eating vegetarian meals prepared from organically grown fruits, vegetables and whole grains.²⁵

Interesting to note that studies have been unable to demonstrate any antioxidant

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advantage for consuming fruit as juice over eating the whole fruit.²⁶

Do large multinational epidemiological studies support juicing as effective for fighting cancer? March 4-6, 2008, I attended the Fifth International Congress on Vegetarian Nutrition. Over 700 attended representing over 40 countries. This congress has become the premiere scientific conference on plant-based diets. Scientists from a dozen different countries shared the podium to impart their evidence for the efficacy of vegetarian nutrition. In many cases we were asked not to photograph the presenters slides as they contained unpublished data. In one such lecture a presenter from Europe revealed his data from several countries demonstrating the benefit of vegetable consumption for the prevention of cancer. One slide showed that consumption of the recommended servings of whole vegetables reduced the risk of cancer by 30% (OR 0.7), while for the same population, consumption of the same vegetables as juice raised the risk for cancer by 30% (OR 1.3).²⁷ In other words, juicing increases the risk of cancer. One study showed a 3 times higher risk for stomach cancer in juice drinkers.²⁸

One rationale often sighted for the use of liquid food is that nutrients are absorbed more quickly and go straight to the cells. One example might be sugar. The removal of fiber from food in juicing or blending and physically disrupting the fiber can result in faster nutrient ingestion and faster absorption. This can result in decreased satisfaction and disturbed glucose control. Drinking your meals often results in the blood sugar rising faster and higher than the body can control. This causes excessive insulin production with resultant low blood sugars (hypoglycemia). Because liquids have less fiber / disrupted fiber, people drinking their meals tend to get hungry sooner, before their next scheduled mealtime.²⁹ These effects favor over-nutrition and, if often repeated, could lead to diabetes^{23,30} For the diabetic, juice drinking spells high blood sugar or hyperglycemia.³¹ In fact, orange juice proved to be no better than a cola drink in its effect on blood sugar.³²

Another example of unbridled absorption and subsequent health compromise is the case of oxalate as found in such commonly liquefied foods as spinach. Oxalate is a component of some painful renal compromising kidney stones. People who make liquid nutrition a significant portion of their food intake have been documented to suffer from oxalate overload and kidney stone formation.³³

That's the story for sugar and oxalate, what about other nutrients driven out of balance by liquefying them? Kale is another example. kale juice can even drive down thyroid function.³⁴ So what are you going to juice. My personal recommendation is to use medicinal teas, where you can be more selective on the nutrients you are wanting.

Hearty chewing is part of good appetite control. Juices are significantly less satisfying than purées, sauces or smoothies. Purées, sauces or smoothies are significantly less satisfying than whole fruit.^{35,36,37} The faster food is eaten the more calories that are typically eaten. People drinking more liquid food tend to eat faster and gain more weight.^{38,39}

Choosing foods that require more chewing can help reduce the number of calories eaten and help with weight management. Thorough chewing increases food satisfaction and decreases appetite.⁴⁰ The more you chew, the less food it takes to satisfy your appetite.⁴¹ Appetite is reduced by nerve feedback from the teeth to the brain when you chew something that is hard.⁴² Liquid nutrition does not engage the teeth as solid foods do, therefore they do not satisfy the appetite as do solid foods.

Liquids consumed with a solid meal do not decrease the amount of food eaten, they just tend to add to the total number of calories consumed.⁴³ If you drink with your meal you will tend to eat the same amount of food, the liquid just adds calories, this will just add to your weight gain.

When the intestines do not sense the presence of substantial fiber in the food the appetite is not suppressed and over nutrition can result.^{44,45} People who eat more fiber will tend to eat fewer calories and be less apt to

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become obese and get diabetes.^{46,47} This effect is not limited to the meal currently being eaten, low natural fiber content in food makes it so the person will eat a greater amount of food at the next meal too.⁴⁸

Most any food or drink that increases your insulin levels also tends to raise your cholesterol.⁴⁹

Digestion begins in your mouth. You need saliva with amylase and other enzymes to digest your food properly and for you to get all the nutrients you need from it. Solid foods in your mouth that require extensive chewing stimulate the saliva glands to produce a greater volume and better quality of saliva to begin digestion.^{50,51}

Saliva is the liquid you need with your meals not drink.

“Many make a mistake in drinking cold water with their meals. Taken with meals water diminishes the flow of the salivary glands; and the colder the water, the greater the injury to the stomach. Ice water or iced lemonade, drank with meals, will arrest digestion until the system has imparted sufficient warmth to the stomach to enable it to take up its work again. Hot drinks are debilitating; and besides, those who indulge in their use become slaves to the habit. Food should not be washed down; no drink is needed with meals. Eat slowly, and allow the saliva to mingle with the food. The more liquid there is taken into the stomach with the meals, the more difficult it is for the food to digest; for the liquid must first be absorbed. ... But if anything is needed to quench thirst, pure water drank some little time before or after the meal is all that nature requires. Never take tea, coffee, beer, wine, or any spirituous liquors. Water is the best liquid possible to cleanse the tissues.”⁵²

Saliva is rich in enzymes, cofactors and water necessary to process your food. How hard you chew determines how much saliva will be

produced and how loaded it will be in enzymes. Dry foods stimulate the glands to produce even more saliva higher in amylase than liquid foods.⁵³ If you are quickly drinking down smoothies or juices, enzymes will be missing from your digestion, digestion will be incomplete, nutrients from the valuable food you are eating will be lost to you and you could become deficient in some necessary nutrient.

“But I don’t have enough time to eat, I’m in a hurry!” Stress decreases saliva production.⁵⁴ If you do not have enough time to eat, better to skip the meal and just drink water than to slurp down a smoothie. Stressed living is the source of many modern ailments. Failing to plan adequate time for meals and substituting with liquid nutrition are not healthy. Interestingly, thorough chewing helps relieve the physiological effects of stress.⁵⁵

Longer in the mouth, better for the health.

“In order to have healthy digestion, food should be eaten slowly. Those who wish to avoid dyspepsia, and those who realize their obligation to keep all their powers in the condition which will enable them to render the best service to God, will do well to remember this. If your time to eat is limited, do not bolt your food, but eat less, and eat slowly. The benefit you derive from your food does not depend so much on the quantity eaten as on its thorough digestion, nor the gratification of the taste so much on the amount of food swallowed as on the length of time it remains in the mouth. Those who are excited, anxious, or in a great hurry, would do well not to eat until they have found rest or relief; for the vital powers, already severely taxed, cannot supply the necessary gastric juice.”⁵⁶

For children, eating foods that require more chewing builds the jaw, spreads the teeth and makes it less likely that they will need braces from an orthodontist to straighten out their bite.^{57,58}

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Fruit smoothies tend to be acidic and have been shown to soften teeth and cause dental erosion. The article concludes, in order to minimize the risk of developing dental erosion their consumption should be confined to mealtimes.⁵⁹ Which goes without saying, since eating juices or smoothies between meals is not something people pursuing optimal health would choose to do. Dental cavities or decay are significantly higher in juice drinkers.⁶⁰

Juicing separates juice from the whole fruit or vegetable. The processing results in a reduction in vitamins and minerals, because the nutrient-rich skin and fiber is left behind or the fiber is disrupted with blending.

Liquid food is classified with meat.

“The dishes of soft foods, the soups and liquid foods, or the free use of meat, are not the best to give healthful muscles, sound digestive organs, or clear brains. O how slow we are to learn! ... Solid foods requiring mastication will be far better than mush or liquid foods.”⁶¹

In the stomach, a liquid meal just makes for more work; the excess fluid must be adsorbed before serious digestion can begin.^{62,63} Having not spent much time in the mouth, the fluid is in danger of being warmer or colder than what the stomach likes, thus hampering or even delaying digestion.⁶⁴

Liquid food must be adsorbed before the real process of digestion can begin.

“In fact, the more liquid there is taken with the meals, the more difficult it is for the food to digest; for the liquid must be absorbed before digestion can begin.”⁶⁵

Many people suffer with reflux disease. For the esophagus, a liquid taken into the stomach just tends to put it at greater risk for reflux and its associated heart burn.^{66,67} Solid food stays down much better.

Fiber is the bulk in food that gives it body or fullness. When a meal, complete with unprocessed natural fiber enters the intestines,

it provides bulk, which stretches the intestinal walls. When the walls or the intestines sense stretching, they send a signal to the stomach to cut back on digestive acid. Juices and smoothies with disrupted fiber do not provide this stimulus for acid reduction; the stomach continues to make too much acid, and heart burn, reflux and indigestion can be the result.⁶⁸

When pre-digested liquid meals such as juices are substituted instead of whole foods the intestines atrophy.⁶⁹ Intestines that are atrophied are more prone to disease and poor adsorption of nutrients.

Good dietary fiber is important for the health of the intestines, it reduces inflammation and as it breaks down it actually feeds healthy intestinal flora.⁷⁰ We call this good fiber prebiotics.

Where does all this liquid food end up that goes rushing into the blood stream? The filters are the kidneys and they really suffer, not to mention, until the kidneys do clear the murk out of the blood you may experience some brain fog. Liquid food is a major hazard for people with kidney failure and increases the risk of kidney cancer.^{71,72}

Liquid food taxes the kidneys

“I told them that the preparation of their food was wrong, and that living principally on soups and coffee and bread was not health reform; that so much liquid taken into the stomach was not healthful, and that all who subsisted on such a diet placed a great tax upon the kidneys, and so much watery substance debilitated the stomach.”

“I was thoroughly convinced that many in the establishment were suffering with indigestion because of eating this kind of food. The digestive organs were enfeebled and the blood impoverished. Their breakfast consisted of coffee and bread with the addition of prune sauce. This was not healthful. The stomach, after rest and sleep, was better able to take care of a substantial meal than when wearied with work. Then the

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noon meal was generally soup, sometimes meat. The stomach is small, but the appetite, unsatisfied, *partakes largely of this liquid food; so it is burdened.”⁷³

A lot of people fight high blood pressure. Studies of people consuming liquid nutrition demonstrate that juices are no aid in controlling hypertension, in fact they compound the problem by increasing, especially diastolic blood pressure.⁷⁴

In case I forget, I want to mention, people who drink juice every day have lower total brain volume, lower hippocampal volume, and poorer memories, making juice drinking a serious risk factor for Alzheimer’s dementia.⁷⁵ Studies show that chewing actually has a positive effect on brain function, cognition,⁷⁶ and reduces depression. In fact, poor dentition correlates with cognitive decline.⁷⁷

Liquid food is not good for students.

“I know not who is cook at the boarding hall, but I beseech you, do not place any persons to oversee the cooking of food for the college students unless they have a thorough knowledge of the right kind of cooking, that the students shall take away with them the very best intelligence of what hygienic cooking means. The much-liquid food, the pastries, the desserts, prepared for the table after European hotel fashion, is not the proper food to place before a hungry lot of students, whose appetites are keen to devour the most substantial food. ... The students pay for their board; give them good, solid, nourishing food.”⁷⁸

I am not saying to never take a sip of juice. Pointing out the disadvantages of some lifestyle practice is not a complete condemnation of it entirely. Situations where a little liquid food could be lifesaving would include someone with dangerously low blood sugar, or someone who has extreme debilitating fatigue.

Is there any place for juice?

“The pure juice of the grape, free from fermentation, is a wholesome drink. But many of the alcoholic drinks which are now so largely consumed contain death-dealing potions. Those who partake of them are often maddened, bereft of their reason. Under their deadly influence men commit crimes of violence and often murder.”⁷⁹

“Make fruit the article of diet to be placed on your table, which shall constitute the bill of fare. The juices of fruit, mingled with bread, will be highly enjoyed. Good, ripe, undecayed fruit is a thing we should thank the Lord for, because it is beneficial to health.”⁸⁰

“Cider and wine may be canned when fresh and kept sweet a long time, and if used in an unfermented state they will not dethrone reason.”⁸¹

“It is a treat to have all the oranges we want. I use lemon juice freely. It is the best thing you could use for rheumatism, for your head, and for malaria.”⁸²

“We are now expressing juice from the oranges and canning the same. We have pressed out the juice from the lemons also, in order that we may furnish palatable drink for hot weather.”⁸³

“The third day when the aromatic odor of the cigars came to me I became stomach-sick. The most intense pain pierced my eyeballs and back of the eyeballs in my head. It seemed that the top of my head was crashing like broken glass. My distress became very great. I thought I was going into a fit. Large drops of perspiration stood upon my face and my entire body broke out in profuse perspiration. Then came a confused noise in my head and I became blind and fainted entirely away. In half an hour I

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revived by lemon juice being pressed in my mouth. I knew as soon as I revived that it was the smoking of cigars which had thus affected me. All in the cars were alarmed and smoking was banished from the car. I have not fully recovered from the effects of this illness.”⁸⁴

“When you see that you are becoming weak physically, it is essential for you to make changes, and at once. Put into your diet something you have left out. It is your duty to do this. Get eggs of healthy fowls. Use these eggs cooked or raw. Drop them uncooked into the best unfermented wine you can find. (DR. KRESS ACCEPTED THIS COUNSEL. HE FOLLOWED THE RAW-EGG AND GRAPE-JUICE REGIMEN REGULARLY UNTIL HIS DEATH IN 1956 AT THE AGE OF 94.) This will supply that which is necessary to your system. Do not for a moment suppose that it will not be right to do this.”⁸⁵

“I was weak, and my heart pained me. I felt the need of a strong cordial, but there was nothing in the house but grape juice. I took some of this, and it strengthened me, but I was much exhausted.”⁸⁶

“It is many years since I have had meat on my table at home. We never use tea or coffee. Occasionally I have used red-clover-blossom tea for a warm drink, but few of my family drink any fluid at our

meals. The table is provided with cream instead of butter, even though we have company present. I have not used butter for many years.”⁸⁷

“Taken in a liquid state, your food would not give healthful vigor or tone to the system. But when you change this habit, and eat more solids and less liquids, your stomach will feel disturbed. Notwithstanding this, you should not yield the point; you should educate your stomach to bear a more solid diet.”⁸⁸

Example of author leaving off liquid food

“I have recently left off the use of all liquids, such as homemade coffee, with my meals. I eat my food as dry as possible. The result is excellent. In the morning I take lemon and water. I drink nothing between meals unless it be occasionally some lemon and water. At the table I do not eat many things either. I use dry peas boiled, then strained, then baked, and canned tomatoes. When fresh, I use the tomatoes uncooked with bread. This is my principal article of food.”⁸⁹

Habits are difficult to change, and some of these practices we have embraced unwittingly. But God loves us and is willing to supply the power for positive change. Aren't you glad we serve a God like that?

“The truth for this time, the third angel’s message, is to be proclaimed with a loud voice, meaning with increasing power, as we approach the great final test. This test must come to the churches in connection with the true medical missionary work, a work that has the Great Physician to dictate and preside in all it comprehends. Under the great Head we are to present God’s word requiring obedience to the system of Bible truth, which is a system of authority and power, convicting and converting the conscience. The demand of the Word to obedience is a life-and-death question.”ⁱ

— E. G. White

ⁱ White, E. G. (1981). Loma Linda Messages. Payson, AZ: Leaves-Of-Autumn Books. p. 336.

CHAPTER 27

MANDATORY HEALTHCARE: Does God Care?

Fear, which could not be disguised, yet determined conviction could be heard in the voice of a distraught parent as they requested an evaluation of their small child, who they feared might have cancer. "Could you examine my child and do some lab tests, he has a lump under his skin and we would like to know what it is." They were members of a church congregation where another child had contracted cancer and had been forced to take treatments that this family's convictions opposed. The child had died, only after going deaf and blind. They had come to me in hoping that I could render them a diagnosis without exposing their child to a similar fate.

Who is invested with authority to decide what care is right for a person, and what criteria govern that choice, and where does that authority come from? A person's conscientious convictions about moral choices in health care are assaulted in many different ways, some passive and some aggressive.

Passively, there is the social pressure, perhaps by well-meaning relatives or so-called friends who feel their views on the subject are the only ones that can rule health (co-dependency at work here). They, "come to you in sheep's clothing, but inwardly they are ravening wolves." (Matthew 7:13-15).

There is pressure through the media, designed to influence (or brain wash) the public sentiment in favor of health care practices not generally in harmony with a firm "thus saith the Lord" but rather in opposition thereto. "...to seduce, if it were possible, even the elect." (Mark 13:21-23).

There are subtle enticements, like from the snake in the tree of the Garden of Eden, advertising and promoting treatments that are not on God's acceptable list. "But every man is tempted, when he is drawn away of his own lust, and enticed." (James 1:14,15).

Then there are the public health guises, claiming to have the better good of society in view and venerating the benefits as out weighing the

risks (herd immunity and the like), "it is expedient for us, that one man should die for the people, and that the whole nation perish not." (John 11:50). But what are the risks; a guilty conscience and eternal loss? "There is a way that seemeth right unto a man, but the end thereof are the ways of death." (Proverbs 16:25).

LIBERTY OF CONSCIENCE THREATENED

Sometimes those in power become aggressive and resort to methods of deadly force to secure homage to their dictates regarding health care. An aggressive way in which the God-ordained mandate to care for one's body is defied is through oppressive legislation. "...commanding to abstain from meats, which God hath created to be received with thanksgiving of them which believe and know the truth." (1 Timothy 4:1-3). Groups of men in government dare to dictate the care of man's body, in disregard to God's will. "Who changed the truth of God into a lie, and worshipped and served the creature more than the Creator,..." (Romans 1:25). Satan (the leader of the opposition to God's government) has, as the pillars of his kingdom, force, fear, intimidation, manipulation and/or bribery. "...and cause that as many as would not worship the image of the beast should be killed." (Revelation 13:15-17).

THE LAMBS OF OUR FOLD

The control of children's health care seems to be more disputed than any other.

God tells us that children are a gift from Him, to their parents, "Lo, children are an heritage of the LORD: and the fruit of the womb is his reward." (Psalms 127:3, Genesis 33:5;48:9, Hebrews 2:13). Parents are held accountable to teach their children right principles and ways of life, "Train up a child in the way he should go: and when he is old, he will not depart from it." (Proverbs 22:6;

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Deuteronomy 4:9; 6:7; Psalms 78:1-8). "And, ye fathers, provoke not your children to wrath: but bring them up in the nurture and admonition of the Lord." (Ephesians 6:4). Those who follow this directive are commended, "For I know him, that he will command his children and his household after him, and they shall keep the way of the LORD, to do justice and judgment; that the LORD may bring upon Abraham that which he hath spoken of him." (Genesis 18:19). The end result is that children keep the commands of God, "And shalt return unto the LORD thy God, and shalt obey his voice according to all that I command thee this day, thou and thy children, with all thine heart, and with all thy soul;" (Deuteronomy 30:2).

The Bible further teaches that parents—not the state—are entrusted with the care and welfare of their children, "But if any provide not for his own, and specially for those of his own house, he hath denied the faith, and is worse than an infidel." (1 Timothy 5:8). "For the children ought not to lay up for the parents, but the parents for the children." (2 Corinthians 12:14). Biblically, the state does not have a good track record in their approach to caring for God's children (Exodus 1:22; Amos 1:13; Matthew 2:16-18; Revelation 12:4). Of no one on earth is a more rigorous account going to be required in the judgment than of parents. "Where is the flock that was given thee, thy beautiful flock?" (Jeremiah 13:20; Isaiah 8:18). "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me." (Matthew 25:40).

SPIRITUAL NATURE OF HEALING

In the Old Testament sickness seemed only to come in response to disobedience and was a call to return to God (2 Chronicles 7:13,14; Isaiah 6:9-12). In contrast, health came from God in response to obeying His law and meditating on His word (Proverbs 3:1-7; 4:20-22; Exodus 15:26). The real question that we all need to answer is this: Is our illness (disease) a call from God to soul searching and repentance?

Does God promise that He'll protect us from pestilence? Moses knew this. He knew if they didn't meet together they would get a pestilence. When he went before Pharaoh he said, "The God of the Hebrews hath met with us: let us go, we pray thee, three days' journey into the desert, and sacrifice unto the LORD our God; lest he fall upon us with pestilence, or with the sword." Exodus 5:3. "Hurricanes, storms, tempests, fire and flood, disasters by sea and land, follow each other in quick succession. Science seeks to explain all these. The signs thickening around us, telling of

the near approach of the Son of God, are attributed to any other than the true cause." (Testimonies for the Church Vol. 6, Pg. 408). What caused the pestilence in David's Day? Satan stood up against Israel and provoked David to number Israel and a pestilence came. What happened, what caused a pestilence when Balaam got the people of Israel to come over to Balak and Moab and had the festival at Baalpeor? It was their apostasy. There is no place in the Bible that says, "Oh, it was a bad year, and we had a really bad mutation, and some funny bugs showed up." Does Matthew 24 tell us why pestilence comes? In the end time it's a sign of Jesus coming, isn't it? There is also the true philosophy of history, where righteousness exalts a nation (Proverbs 14:34). Has China been a champion of religious freedom lately, or has it been cracking down on Christians? Recently you may have heard stories about them saying they're intending to rewrite the Bible so it looks more like the Communist Manifesto, so the Christian churches will come more in line with Communist doctrine. Maybe that's why they got the pandemic over there first.

"Natural means, used in accordance with God's will, bring about supernatural results. We ask for a miracle, and the Lord directs the mind to some simple remedy. We ask to be kept from the pestilence that walketh in darkness, that is stalking with such power through the world; we are then to cooperate with God, observing the laws of health and life. Having done all that we possibly can, we are to keep asking in faith for health and strength. We are to eat that food which will preserve the health of the body. God gives us no encouragement that He will do for us what we can do for ourselves. Natural laws are to be obeyed. We are not to fail of doing our part. God says to us, 'Work out your own salvation with fear and trembling. For it is God which worketh in you both to will and to do of his good pleasure' (Phil. 2:12, 13)." (Selected Messages Vol. 2, Pg. 346).

Healing was often sought at the hand of the priests or prophets. For example, Naaman came to prophet Elisha and found healing after following God's natural treatment regimen (2 Kings 5). The very word health is religious, in fact in the new testament one Greek word "Sozo" serves to carry both the meaning "save" (e.g., Matthew 18:11). and "heal" (e.g., Mark 5:34). God links good physical health to soul prosperity, "Beloved, I wish above all things that thou mayest prosper and be in health, even as thy soul prospereth." 3 John 2. In other words, many people will not find physical healing until they find spiritual healing. Is your current health care

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provider prepared to mentor you in spiritual healing as well as physical healing?

When human help fails James tells us what we are to do. Call the elders, anoint the sick, and then he says that the prayer of faith shall “save” (Greek “Sozo”) the sick. (James 5:14,15).

The opposing sides of this issue differ on their views on the origin of life, which impacts their opinion on who has authority to decide the treatment and fate of an ill person. But for the Christian, the Bible answers the question with a ring of authority that only God can wield, “To the law and to the testimony: if they speak not according to this word, it is because there is no light in them.” (Isaiah 8:20).

OWNERSHIP DICTATES “POWER OF ATTORNEY”

If you were working on a broken automobile and came to a point where several options were available, who would you look to for direction on which option to pursue? The car’s owner, of course. Only the owner of the car has the legal right to decide what they will have done to their car. Who owns us and has the final word in our care? God created man. (Genesis 1:26,27). Not only was man God’s workmanship by creation (“For we are his workmanship, created in Christ Jesus” Ephesians 2:10), but when man fell to Satan’s lies through transgression of God’s command, God bought him back by the life of His dear Son. Thus, man became doubly God’s both by redemption and by creation. “But now thus saith the LORD that created thee, O Jacob, and he that formed thee, O Israel, Fear not: for I have redeemed thee, I have called thee by thy name; thou art mine.” (Isaiah 43:1,2). We owe a double debt of gratitude and submission to our Creator-Redeemer. Does God tie His healthcare statutes to His authority as our Savior? “What? know ye not that your body is the temple of the Holy Ghost which is in you, which ye have of God, and ye are not your own? For ye are bought with a price: therefore glorify God in your body, and in your spirit, which are God’s.” (1 Corinthians 6:19,20).

GOD DECIDES OUR CARE

“Woe unto him that striveth with his Maker! Let the potsherd strive with the potsherds of the earth. Shall the clay say to him that fashioneth it, What makest thou? or thy work, He hath no hands?” (Isaiah 45:9-13). “Ye are bought with a price; be not ye the servants of men.” (1 Corinthians 7:23). Anyone else presuming to dictate our care could be a thief and a robber. “Verily, verily, I say unto you, He that entereth not

by the door into the sheepfold, but climbeth up some other way, the same is a thief and a robber.” “I am the door:” “The thief cometh not, but for to steal, and to kill, and to destroy: I am come that they might have life, and that they might have it more abundantly.” (John 10:1,9,10).

THERE IS A PURPOSE

God, who is so invested in man, is not silent on His purpose for man, to be a praise and a blessing in the earth. “and the people which shall be created shall praise the LORD.” (Psalms 102:18). “for I have created him for my glory,” (Isaiah 43:7), to glorify God in his body. (1 Corinthians 6:19,20. quoted above). And God, who is so invested in man, is also not silent on the care He intends for man to take of his own physical being. “That every one of you should know how to possess his vessel in sanctification and honour;” (1 Thessalonians 4:4). It is the violation of God’s expressed command at the beginning that exposed man to the risk of disease and death, and anyone who likewise violates God’s natural law can also only expect to reap disease and death. “Be not deceived, God is not mocked: for whatsoever a man soweth, that shall he also reap.” (Galatians 6:7). So, who decides if you are going to cooperate with the Creator in the physical care of your body? “when thou shalt be old, thou shalt stretch forth thy hands, and another shall gird thee, and carry thee whither thou wouldest not.” (John 21:18,19).

BEYOND DESTINY

Ultimately, God would like mankind to escape disease, death and the limitations of his well-being resulting from his Eden transgression. Presently God desires to dwell in our hearts and live out the principles of His kingdom through us. “I will dwell in them, and walk in them; and I will be their God, and they shall be my people.” (2 Corinthians 6:16,17). If faithful in taking care of our body here, “...if ye have not been faithful in that which is another man’s, who shall give you that which is your own?” (Luke 16:10-12). The plan is for man to be given immortality and a body like Christ’s. “Who shall change our vile body, that it may be fashioned like unto his glorious body,...” (Philippians 3:21). Otherwise he will be destroyed. “If any man defile the temple of God, him shall God destroy; for the temple of God is holy, which temple ye are.” (1Cor 3:16,17). We are not going to be rewarded positively if we continue to follow any of Satan’s health and spirituality compromising lies. “For we must all appear before the judgment seat of Christ; that every one may

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receive the things done in his body, according to that he hath done, whether it be good or bad.” (2 Corinthians 5:10). In the judgment, is God going to commend you for the care which has been given to your body?

TRUE HEALTH FROM YOUR SUSTAINER

God is not just an absentee landlord who created us, who wound us up like a clock and has now left us on our own. As a creature of God's unremitting care, man never has a moment when he is not sustained, breath-by-breath by his Creator. “He giveth to all life, and breath, and all things;...in him we live, and move, and have our being” (Acts 17:24,27). And perchance illness befalls man, it is his Creator who has His way with the disease. “Who forgiveth all thine iniquities; who healeth all thy diseases; Who redeemeth thy life from destruction;” (Psalms 103:3,4). We are all dependent upon God. “...he maketh his sun to rise on the evil and on the good, and sendeth rain on the just and on the unjust.” (Matthew 5:45). You are either healed at God's will by God or you are not really healed at all. “for I am the LORD that healeth thee.” (Exodus 15:26). “Except the LORD build the house, they labour in vain that build it: except the LORD keep the city, the watchman waketh but in vain.” (Psalms 127:1). Except the Lord heal you, are you really healed at all? And if healed, but not by the Lord, who then healed you?

There is health power in the word of God. “My son, attend to my words; incline thine ear unto my sayings. Let them not depart from thine eyes; keep them in the midst of thine heart. For they are life unto those that find them, and health to all their flesh.” (Proverbs 4:20-22). God's word is a “tree of life” to those who receive it (see Proverbs 3:13-19).

GOD RATHER THAN MAN

Truly, what is at stake here is religious liberty. “We ought to obey God rather than men.” (Acts 5:29). Man has a charge from God and a God given right to medical self-determination. Those who usurp authority from God over His children claim the right to dictate the care of man's body (God given and God sustained) according to their judgment in ways that are physically and philosophically different than God's will and ways, and that violate the judgment and conscience of the individual. “Every one of you should know how to possess his vessel in sanctification and honour;” (1 Thessalonians 4:4). We are warned that we cannot serve two masters “No man can serve two masters: for either he will hate the one, and love

the other; or else he will hold to the one, and despise the other.” (Matthew 6:24). Either you choose the will of God in your healing, or you don't.

Ultimately who you turn to in your time of need for healing demonstrates who you worship. Jesus said, “And ye will not come to me, that ye might have life.” (John 5:40). If we believe in Him, He can work for our recovery. If not, where can we turn? “And he did not many mighty works there because of their unbelief.” (Matthew 13:58). Are you looking to God's dear Son for life and His sanctified means for recovery, or are you seeking only for physical life at all costs (even to the cost of eternal life)? In the end we will either trust in God or we will turn to His adversary. “And all that dwell upon the earth shall worship him, whose names are not written in the book of life of the Lamb slain from the foundation of the world.” (Revelation 13:8).

Is the Christian to seek care of the non-believer or even an anti-Christian? What if the witch of Endor (1Samuel 28:7), who was definitely an anti-Christian, boasts a 100% success rate at healing the disease from which you suffer ($p < 0.00001$); does that make her God's gift of healing for you? What if the witch of Endor goes off to medical school and learns to prescribe drugs and becomes a designated government accredited health care provider; does that make her God's gift of healing to you? What if your best Christian friend goes off to witch doctor school; does that make them God's gift of healing to you? What if the respected atheist neighbor next door goes off to medical school and becomes a famous doctor for a famous atheistic institution of renown; does that make them God's gift of healing to you? Is God indebted to where His enemy has led the way in medical technology for your healing? God is looking for true health practitioners who can care for the spiritual as well as the physical needs of His people. We must be healed body soul and spirit, or we are not really healed at all.

“If any among us are sick, let us not dishonor God by applying to earthly physicians, but apply to the God of Israel. If we follow his directions (James 5:14, 15) the sick will be healed. God's promise cannot fail. Have faith in God, and trust wholly in him, that when Christ who is our life shall appear we may appear with him in glory.” (Broadside2, January 31, 1849).

God has promised health to the obedient, “Wherefore it shall come to pass, if ye hearken to these judgments, and keep, and do them, that the LORD thy God shall keep unto thee the covenant and the mercy which he sware unto thy fathers:...And the LORD will take away from thee

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all sickness, and will put none of the evil diseases of Egypt, which thou knowest, upon thee; but will lay them upon all them that hate thee.” (Deuteronomy 7:12-15; Proverbs 4:20-22; Jeremiah 30:17; Exodus 15:26). Is your health care provider and their health recommendations a call to obedience and worship of God?

If you want to be lost, just follow the health plans and suggestions of Satan instead of God. “Forasmuch then as the children are partakers of flesh and blood, he also himself likewise took part of the same; that through death he might destroy him that had the power of death, that is, the devil; And deliver them who through fear of death were all their lifetime subject to bondage.” (Hebrews 2:14,15; 1 John 3:8).

Good king Asa and bad king Ahaziah went outside of God’s approved channels of healing and it proved their ruin. Of king Asa it is said, “And Asa in the thirty and ninth year of his reign was diseased in his feet, until his disease was exceeding great: yet in his disease he sought not to the LORD, but to the physicians.” (2 Chronicles 16:12). When Ahaziah sought not to God for his care he was asked, “Is it not because there is not a God in Israel, that ye go to enquire of Baalzebub the god of Ekron?” (2Kings 1:1-6). Similarly, others have found only financial loss. “And a certain woman, which had an issue of blood twelve years, And had suffered many things of many physicians, and had spent all that she had, and was nothing bettered, but rather grew worse,” (Mark 5:25,26). Sometimes there does appear to be healing, but in the end only the symptoms were addressed and the person is not well. “For they have healed the hurt of the daughter of my people slightly, saying, Peace, peace; when there is no peace.” (Jeremiah 8:11).

Daniel is an example of one who took the management of the health of his mind and body under his own supervision in line with his understanding of God’s will for his care. When

presented by the state with a diet deemed to be official (Daniel 1:5,10), Daniel negotiated a diet after God’s plan (Daniel 1:12). It is said, “But Daniel purposed in his heart that he would not defile himself with the portion of the king’s meat, nor with the wine which he drank: therefore he requested of the prince of the eunuchs that he might not defile himself.” (Daniel 1:8).

Who is invested with authority to decide what health care is right for a person and what criteria governs that choice?

THE BOTTOM LINE

God owns you because He created you and has paid for your redemption. God has given to you the responsibility of taking care of the body he has entrusted you with and He has given directions to be followed in its care, and will hold you responsible thereunto. Health care legislation is moral legislation. When it opposes God, you have to decide to whom your worship belongs, God or man (Matthew 21:33-41).

Are there health care practices which you would be willing to stand up for, as did the three worthies, and say, “If it be so, our God whom we serve is able to deliver us from the burning fiery furnace, and he will deliver us out of thine hand, O king. But if not, be it known unto thee, O king, that we will not serve thy gods, nor worship the golden image which thou hast set up.” (Daniel 3:17, 18)? We are apply advised, “And fear not them which kill the body, but are not able to kill the soul: but rather fear him which is able to destroy both soul and body in hell.” (Matthew 10:28). “But he that shall endure unto the end, the same shall be saved (or healed, Gr. Sozo).” (Matthew 24:13).

When it comes to the care of your body are you willing to, “Trust in the LORD with all thine heart;” and have Him, “direct thy paths.” (Proverbs 3:5,6)?

“What? know ye not that your body is the temple of the Holy Ghost which is in you, which ye have of God, and ye are not your own? For ye are bought with a price: therefore glorify God in your body, and in your spirit, which are God’s.”ⁱ

-Paul the Apostle

ⁱ 1 Corinthians 6:19-20. King James Version of the Holy Bible.

CHAPTER 28

GLORIFY GOD IN YOUR BODY: A BIBLE STUDY

1. What does the first angel's message of Revelation 14 tell us we should be doing? (*Italics supplied*).
 - A "And I saw another angel fly in the midst of heaven, having the everlasting gospel to preach unto them that dwell on the earth, and to every nation, and kindred, and tongue, and people, Saying with a loud voice, *Fear God, and give glory to him*; for the hour of his judgment is come: and worship him that made heaven, and earth, and the sea, and the fountains of waters." Revelation 14:6,7.
2. Toward the close of probation, the last of the seven angels with trumpets is to sound his trumpet. What is to be finished during this critical time?
 - A "But in the days of the voice of the seventh angel, when he shall begin to sound, the *mystery of God should be finished*, as he hath declared to his servants the prophets." Revelation 10:7.
3. To whom will this mystery eventually be revealed and by whom will it be revealed?
 - A "Unto me, who am less than the least of all saints, is this grace given, that I should preach among the Gentiles the unsearchable riches of Christ; And to make all men see what is the fellowship of the mystery, which from the beginning of the world hath been hid in God, who created all things by Jesus Christ: To the intent that now *unto the principalities and powers* in heavenly places *might be known by the church* the manifold wisdom of God, According to the eternal purpose which he purposed in Christ Jesus our Lord: In whom we have boldness and access with confidence by the faith of him." Ephesians 3:8-12.
4. Paul calls us a spectacle, to whom are we a spectacle?
 - A "For I think that God hath set forth us the apostles last, as it were appointed to death: for we are made a *spectacle unto the world, and to angels, and to men*." 1Corinthians 4:9.
5. What is the mystery of God?
 - A "Whereof I am made a minister, according to the dispensation of God which is given to me for you, to fulfill the word of God; Even the mystery which hath been hid from ages and from generations, but now is made manifest to his saints: To whom God would make known what is the riches of the glory of this mystery among the Gentiles; which is *Christ in you, the hope of glory*: Whom we preach, warning every man, and teaching every man in all wisdom; that we may present every man perfect in Christ Jesus: Whereunto I also labour, striving according to his working, which worketh in me mightily. Colossians 1:25-29.
6. Why were we originally created?
 - A "I will say to the north, Give up; and to the south, Keep not back: bring my sons from far, and my daughters from the ends of the earth; Even every one that is called by my name: for *I have created him for my glory*, I have formed him; yea, I have made him." Isaiah 43:6,7.

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7. When Jesus' ministry was reaching its completion, He said that He had glorified His Father in heaven. How did he say he had glorified His Father?

A "And this is life eternal, that they might know thee the only true God, and Jesus Christ, whom thou hast sent. I have glorified thee on the earth: I have finished the work which thou gavest me to do. And now, O Father, glorify thou me with thine own self with the glory which I had with thee before the world was. *I have manifested thy name unto the men* which thou gavest me out of the world: thine they were, and thou gavest them me; and they have kept thy word." John 17:3-6.

8. When the Bible speaks of the name of God it is talking about His character. How is His character described?

A "And the LORD descended in the cloud, and stood with him there, and proclaimed the name of the LORD. And the LORD passed by before him, and proclaimed, The LORD, The LORD God, *merciful and gracious, longsuffering, and abundant in goodness and truth,*" Exodus 34:5,6.

9. To glorify God is to reveal His character or name in our lives. What all does this include?

A "Whether therefore ye *eat, or drink, or whatsoever ye do*, do all to the glory of God." 1Corinthians 10:31.

10. What will happen when we do this?

A "Let your light so shine before men, that they may see your good works, and *glorify your Father which is in heaven.*" Matthew 5:16.

11. The mystery of God to be finished just before the close of probation is "Christ in you the hope of glory". If Christ lives in us, what does that make us?

A "What? know ye not that your body is the *temple of the Holy Ghost* which is in you, which ye have of God, and ye are not your own? For ye are bought with a price:

therefore glorify God in your body, and in your spirit, which are God's." 1Corinthians 6:19,20.

12. What happens if we defile our temple?

A "Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you? If any man defile the temple of God, *him shall God destroy*; for the temple of God is holy, which temple ye are." 1Corinthians 3:16,17.

13. The Bible sometimes speaks of God as causing or doing that which He allows or foresees. How does Romans describe what God does to those who do not glorify Him?

A "Because that, when they knew God, they glorified him not as God, neither were thankful; but became vain in their imaginations, and their foolish heart was darkened. Professing themselves to be wise, they became fools, And changed the glory of the uncorruptible God into an image made like to corruptible man, and to birds, and fourfooted beasts, and creeping things. *Wherefore God also gave them up* to uncleanness through the lusts of their own hearts, to dishonour their own bodies between themselves: Who changed the truth of God into a lie, and worshipped and served the creature more than the Creator, who is blessed for ever. Amen." Romans 1:21-25.

14. The Day of Atonement is a special day, what does God say should be done on that day?

A "Also on the tenth day of this seventh month there shall be a day of atonement: it shall be an holy convocation unto you; and *ye shall afflict your souls*, and offer an offering made by fire unto the LORD. And ye shall do no work in that same day: for it is a day of atonement, to make an atonement for you before the LORD your God." Leviticus 23:27,28. ("Every man was to afflict his soul while the work of atonement was going forward. All business was laid aside, and the whole congregation of Israel spent the day in

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solemn humiliation before God, with prayer, fasting, and deep searching of heart." PP 355.)

15. The Day of Atonement was a day of judgment for Israel, prefiguring the final judgment of the world. Since 1844 we have been living in what the Bible calls "God's judgment hour". Upon what evidence are we being judged?

A "For we must all appear before the judgment seat of Christ; that every one may receive the *things done in his body*, according to that he hath done, whether it be good or bad." 2Corinthians 5:10.

16. During the time of judgment, ancient Israel was to be sober and search their hearts so God could cleanse the sanctuary of their sins. What happened to these people's sin when they decided to celebrate instead?

A "And in that day did the Lord GOD of hosts call to weeping, and to mourning, and to baldness, and to girding with sackcloth: And behold joy and gladness, slaying oxen, and killing sheep, eating flesh, and drinking wine: let us eat and drink; for to morrow we shall die. And it was revealed in mine ears by the LORD of hosts, *Surely this iniquity shall not be purged from you till ye die*, saith the Lord GOD of hosts." Isaiah 22:12-14.

17. How does Paul describe those who live for their own glory and please their own bellies?

A "For many walk, of whom I have told you often, and now tell you even weeping, that they are the enemies of the cross of Christ: Whose end is destruction, *whose God is their belly, and whose glory is in their shame, who mind earthly things*." Philippians 3:18,19.

18. Have you heard it said, eat to live and don't live to eat? How does Solomon say this?

A "Blessed art thou, O land, when thy king is the son of nobles, and thy princes *eat in due season, for strength, and not for drunkenness!*" Ecclesiastes 10:17.

19. Can we love the sins of the world and glorify God?

A "Love not the world, neither the things that are in the world. *If any man love the world, the love of the Father is not in him*. For all that is in the world, the lust of the flesh, and the lust of the eyes, and the pride of life, is not of the Father, but is of the world. And the world passeth away, and the lust thereof: but he that doeth the will of God abideth for ever." 1John 2:15-17.

20. How can we be prepared for the judgment; how can we glorify God?

A Now unto him that is able to keep you from falling, and to present you faultless before the presence of his glory with exceeding joy, To the only wise God our Saviour, be glory and majesty, dominion and power, both now and ever. Amen. Jude 1:24-25.

21. What happened to Moses when he came into the presence of God's glory? How did the children of Israel feel in Moses presence?

A "And it came to pass, when Moses came down from mount Sinai with the two tables of testimony in Moses' hand, when he came down from the mount, that Moses wist not that the *skin of his face shone* while he talked with him. And when Aaron and all the children of Israel saw Moses, behold, the skin of his face shone; and *they were afraid to come nigh him*. And Moses called unto them; and Aaron and all the rulers of the congregation returned unto him: and Moses talked with them. And afterward all the children of Israel came nigh: and he gave them in commandment all that the LORD had spoken with him in mount Sinai. And till Moses had done speaking with them, he put a vail on his face. But when Moses went in before the LORD to speak with him, he took the vail off, until he came out. And he came out, and spake unto the children of Israel that which he was commanded. And the children of Israel saw the face of Moses, that

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the skin of Moses' face shone: and Moses put the vail upon his face again, until he went in to speak with him." Exodus 34:29-35.

22. The only way we will ever be able to stand in God's glory is if we are without sin. How does Romans describe this condition?

A "I beseech you therefore, brethren, by the mercies of God, that ye present your bodies a *living sacrifice, holy, acceptable unto God*, which is your reasonable service. And be not conformed to this world: but be ye transformed by the renewing of your mind, that ye may prove what is that good, and acceptable, and perfect, will of God." Romans 12:1.

23. Could just any sheep be used for a sacrifice?

A "Your lamb shall be *without blemish*, a male of the first year: ye shall take (it) out from the sheep, or from the goats:" Exodus 12:5.

24. Could just any man go into the temple to be a priest?

A "Speak unto Aaron, saying, Whosoever he be of thy seed in their generations that hath any blemish, let him not approach to offer the bread of his God. For whatsoever man he be that hath a blemish, he shall not approach: a blind man, or a lame, or he that hath a flat nose, or any thing superfluous, Or a man that is brokenfooted, or brokenhanded, Or crookbackt, or a dwarf, or that hath a blemish in his eye, or be scurvy, or scabbed, or hath his stones broken; No man that hath a blemish of the seed of Aaron the priest shall come nigh to offer the offerings of the LORD made by fire: he hath a blemish; he shall not come nigh to offer the bread of his God. He shall eat the bread of his God, (both) of the most holy, and of the holy. Only he shall not go in unto the vail, nor come nigh unto the altar, *because he hath a blemish*; that he profane not my sanctuaries: for I the LORD do sanctify them." Levi 21:17-23.

25. Can we go into God's presence if we have any blemish?

A "And the city had no need of the sun, neither of the moon, to shine in it: for the glory of God did lighten it, and the Lamb is the light thereof. And the nations of them which are saved shall walk in the light of it: and the kings of the earth do bring their glory and honour into it. And the gates of it shall not be shut at all by day: for there shall be no night there. And they shall bring the glory and honour of the nations into it. And *there shall in no wise enter into it any thing that defileth, neither whatsoever worketh abomination, or maketh a lie*: but they which are written in the Lamb's book of life." Revelation 21:23-27.

26. God wants us to be sanctified, what all does this entail?

A "And the very God of peace *sanctify you wholly*; and I pray God your whole *spirit and soul and body be preserved blameless* unto the coming of our Lord Jesus Christ. Faithful is he that calleth you, who also will do it." 1The 5:23,24.

27. Which one of the fruits of the Spirit has to do with health and helps to combat the lust of the flesh?

A "This I say then, Walk in the Spirit, and ye shall not fulfil the lust of the flesh. For the flesh lusteth against the Spirit, and the Spirit against the flesh: and these are contrary the one to the other: so that ye cannot do the things that ye would. But the fruit of the Spirit is love, joy, peace, longsuffering, gentleness, goodness, faith, Meekness, *temperance*: against such there is no law. And they that are Christ's have crucified the flesh with the affections and lusts. If we live in the Spirit, let us also walk in the Spirit." Galatians 5:16-23.

28. Will God share our hearts with anything else?

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- A "And what agreement hath the temple of God with idols? for ye are the temple of the living God; as God hath said, I will dwell in them, and walk in them; and I will be their God, and they shall be my people. *Wherefore come out from among them, and be ye separate, saith the Lord, and touch not the unclean thing;* and I will receive you, And will be a Father unto you, and ye shall be my sons and daughters, saith the Lord Almighty." 2Corinthians 6:16-18.
29. Who praised God when they realized how special were their physical gifts?
- A "*I will praise thee; for I am fearfully and wonderfully made: marvellous are thy works; and that my soul knoweth right well.*" Psalms 139:14.
30. Has anyone lived to an old age without sickness, disease or disability?
- A "And Moses was an hundred and twenty years old when he died: his eye was not dim, nor his natural force abated." Deuteronomy 34:7.
31. How are we to love the Lord our God?
- A "And, behold, a certain lawyer stood up, and tempted him, saying, Master, what shall I do to inherit eternal life? He said unto him, What is written in the law? how readest thou? And he answering said, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy *strength*, and with all thy mind; and thy neighbour as thyself. And he said unto him, Thou hast answered right: this do, and thou shalt live." Luke 10:25-28.
32. Does God have an insurance policy for us?
- A "If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, *I will put none of these diseases upon thee,* which I have brought upon the Egyptians: for I am the LORD that healeth thee." Exodus 15:26
33. Why is alcohol use a bad idea for those who want to treat others well?
- A "It is not for kings, O Lemuel, it is not for kings to drink wine; nor for princes strong drink: *Lest they drink, and forget the law, and pervert the judgment of any of the afflicted.*" Proverbs 31:4,5.
34. Should priests and ministers use alcoholic beverages as a part of a religious service? Why or why not?
- A "And the LORD spake unto Aaron, saying, *Do not drink wine nor strong drink,* thou, nor thy sons with thee, when ye go into the tabernacle of the congregation, lest ye die: it shall be a statute for ever throughout your generations: *And that ye may put difference between holy and unholy, and between unclean and clean;* And that ye may teach the children of Israel all the statutes which the LORD hath spoken unto them by the hand of Moses." Leviticus 10:8-11.
35. How does God feel when people confuse His worship service with that of Satan's? What happens to society when this confusion is introduced?
- A "Her priests have violated my law, and have profaned mine holy things: they have put no difference between the holy and profane, neither have they shewed difference between the unclean and the clean, and have hid their eyes from my sabbaths, and *I am profaned among them.* Her princes in the midst thereof are like wolves ravening the prey, to shed blood, and to destroy souls, to get dishonest gain. And her prophets have daubed them with untempered mortar, seeing vanity, and divining lies unto them, saying, Thus saith the Lord GOD, when the LORD hath not spoken. *The people of the land have used oppression, and exercised robbery, and have vexed the poor and needy: yea, they have oppressed the stranger*

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wrongfully. And I sought for a man among them, that should make up the hedge, and stand in the gap before me for the land, that I should not destroy it: but I found none. Therefore have I poured out mine indignation upon them; I have consumed them with the fire of my wrath: their own way have I recompensed upon their heads, saith the Lord GOD.” Ezekiel 22:26-31.

36. Is there a cross in health reform—does it require denying self?

A “*Always bearing about in the body the dying of the Lord Jesus, that the life also of Jesus might be made manifest in our body.*” 2Corinthians 4:10.

37. Jesus’ death on the cross was the climax or redemption, but what does His self-denying life do for us?

A “For if, when we were enemies, we were reconciled to God by the death of his Son, much more, being reconciled, *we shall be saved by his life.*” Romans 5:10.

38. As it was in the days of Noah, so shall it be in the days of Jesus second coming. What do people of our generation love more than God?

A “This know also, that in the last days perilous times shall come. For men shall be lovers of their own selves, covetous, boasters, proud, blasphemers, disobedient to parents, unthankful, unholy, Without natural affection, trucebreakers, false accusers, incontinent, fierce, despisers of those that are good, Traitors, heady, highminded, *lovers of pleasures more than lovers of God;* Having a form of godliness, but denying the power thereof: from such turn away.” 2Timothy 3:1-5.

39. How can I avoid overwhelming feelings of condemnation as the judgment moves forward?

A “There is therefore now no condemnation to them which are in Christ Jesus, *who walk not*

after the flesh, but after the Spirit.” Romans 8:1.

40. How important is bodily health in being able to practice what we preach?

A “Know ye not that they which run in a race run all, but one receiveth the prize? So run, that ye may obtain. And every man that striveth for the mastery is temperate in all things. Now they do it to obtain a corruptible crown; but we an incorruptible. I therefore so run, not as uncertainly; so fight I, not as one that beateth the air: *But I keep under my body, and bring it into subjection: lest that by any means, when I have preached to others, I myself should be a castaway.*” 1Corinthians 9:24-27.

41. How does John describe the relation between our health and our spiritual life?

A “Beloved, I wish above all things that thou mayest prosper and *be in health, even as thy soul prospereth.*” 3John 1:2.

42. When God “gave in” to the Israelites and gave them meat to eat, how did it affect their souls?

A “But lusted exceedingly in the wilderness, and tempted God in the desert. And he gave them their request; but *sent leanness into their soul.* They envied Moses also in the camp, and Aaron the saint of the LORD.” Psalms 106:14-16.

43. There is one word in Greek (sozo) translated either as save or heal.

A “For the Son of man is come to *save* that which was lost.” Matthew 18:11

A “And he said unto her, Daughter, thy faith hath *made thee whole;*” Mark 5:34

44. How did Jesus illustrate this principle?

A “And they come unto him, bringing one sick of the palsy, which was borne of four. And when they could not come nigh unto him for the press, they uncovered the roof where he was: and when they had broken it up, they

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let down the bed wherein the sick of the palsy lay. When Jesus saw their faith, he said unto the sick of the palsy, Son, thy sins be forgiven thee. But there were certain of the scribes sitting there, and reasoning in their hearts, Why doth this man thus speak blasphemies? who can forgive sins but God only? And immediately when Jesus perceived in his spirit that they so reasoned within themselves, he said unto them, Why reason ye these things in your hearts? *Whether is it easier to say to the sick of the palsy, Thy sins be forgiven thee; or to say, Arise, and take up thy bed, and walk?* But that ye may know that the Son of man hath power on earth to forgive sins, (he saith to the sick of the palsy,).” Mark 2:3-10.

45. In conclusion, in light of the current judgment hour and our commission to glorify God before the world, what is the greatest threat to our soul?

A “But ye are a chosen generation, a royal priesthood, an holy nation, a peculiar people; that ye should shew forth the praises of him who hath called you out of darkness into his marvellous light: Which in time past were not a people, but are now the people of God: which had not obtained mercy, but now have obtained mercy. Dearly beloved, I beseech you as strangers and pilgrims, *abstain from fleshly lusts, which war against the soul;*” 1 Peter 2:9-11.

“Let this mind be in you, which was also in Christ Jesus: Who, being in the form of God, thought it not robbery to be equal with God: But made himself of no reputation, and took upon him the form of a servant, and was made in the likeness of men: And being found in fashion as a man, he humbled himself, and became obedient unto death, even the death of the cross. Wherefore God also hath highly exalted him, and given him a name which is above every name: That at the name of Jesus every knee should bow, of things in heaven, and things in earth, and things under the earth; And that every tongue should confess that Jesus Christ is Lord, to the glory of God the Father.”ⁱ

- Paul the Apostle

ⁱ Philippians 2:5-11. King James Version of the Holy Bible.

CHAPTER 29

ILL-GOTTEN GAIN AND THE WAGES OF SIN

Sixty-two percent of all bankruptcies in the United States were tied to medical expenses in 2007. Most medical debtors were well educated, owned homes, and had middle-class occupations. Three quarters had health insurance.¹ You've come a long way baby. How is it that a profession which is supposed to save life has come to be such a financial burden?

In the thirteenth century 20,000 Albigensian (Cathar) natural healers sealed with their blood their commitment to follow in the self-denying footsteps of Jesus Christ and heed His admonition "heal the sick" (Luke 9:2). In the late twelfth century A.D., the early protestant Waldensian and Cathar (or Albigensian) religious movements began practicing medicine according to the dictates of their conscience. The Waldensians were especially noted for their desire to go from house to house, regardless to monetary remuneration, and spend days to even weeks at a time nursing the sick back to health. "They had much experience in medicine and surgery, and in these arts possessed amazing secrets, wonderful in their simplicity...."²

The Roman Catholic Church re-established the pagan healing shrines and centered them on Roman Catholic saints. During this time the papal system flourished monetarily due to the fact that it had now established a system whereby it could exact even greater means from its servitors. Upon many hospital deathbeds, priests were able to exact entire inheritances from those going to their grave with guilty consciences. Historians today, reflecting upon the

establishment of the hospital systems of the Papacy refer to them as "money spinners" or as we would call them today—profit-based. As we know, this leads to a multitude of other issues.

In his Lateran Council of 1215, the Papal See saw to it that only doctors approved by the church could practice medicine.³

Cathar (Albigensian) doctors quickly became known as the "best of doctors." In response to this growing threat to its dominance in all matters concerning humanity, the Romish Church, at the directive of Pope Innocent III, carried out a massive assault on the Cathars and Waldensians. As a result, twenty thousand Cathars were murdered and along with them the hopes of a large scale change for the better in the medical establishment.⁴

"For the love of money is the root of all evil: which while some coveted after, they have erred from the faith, and pierced themselves through with many sorrows."⁵

There are two different symbols sometimes employed to represent medicine. One is a rod with one snake wrapped around it called the rod of Asclepius; the second is a rod with wings at the top and two snakes wrapped around it, called the caduceus. "The caduceus is sometimes used as a symbol for medicine or physicians (instead of the rod of Asclepius) even though the symbol has no connection with Hippocrates and any association with healing arts is something of a stretch; its singularly inappropriate connotations of theft, commerce, deception and death have provided fodder for academic humor."⁶

Blue Print for Health and Healing

As a healthcare worker or physicians, am I exempt from self-sacrificing wages, after all I spent far more time in school? Doesn't society owe me a debt of financial gratitude? Do I as a healthcare provider have a special professional immunity to the need for self-sacrifice?

A Professor in a Christian university tells of an encounter he had with one of his elementary education students who was soon to graduate. The student approached him with a big smile and proudly announced, there were 400 applications for the job I applied for and I got it. To which the professor replied, "what a waste!" "What a waste?", the student looked stunned. "What a waste! You mean to tell me there were 400 other qualified applicants and you took the job? Let me take you to a little school in the mission field where if you don't take the job nobody else will." I'm happy to say that she turned down the job she had just been accepted for and went to the mission field.

Moses faced a similar life-shaking decision. As heir to the throne of pharaoh, he was literally in line to be the next god of Egypt. "Ye shall be as gods" was his option, the other option was poverty, following the will of God. Moses chose the latter, "By faith Moses, when he was come to years, refused to be called the son of Pharaoh's daughter; Choosing rather to suffer affliction with the people of God, than to enjoy the pleasures of sin for a season; Esteeming the reproach of Christ greater riches than the treasures in Egypt: for he had respect unto the recompence of the reward."⁷ Today Moses watches me write this article, today, Pharaoh is returning to dust. God willing, I want to join Moses.

Likewise, Paul was a gifted and highly educated man. His position even surpassed that of a physician who stands between patients and death; Paul could be seen as standing between people and their hope of eternal life. How much can you charge to bring somebody to eternal security? But Paul was very humble. He saw himself, not as a benefactor, but as a debtor to those less fortunate than himself, "'I am debtor,' Paul declares, 'both to the Greeks, and to the barbarians; both to the wise, and to the unwise.' Romans 1:14. So also are we. By all that has blessed our life above others, we are placed under obligation to every human being whom we might benefit."⁸

Satan particularly hates those who go around the earth undoing the pain and suffering he is try to produce, says Roger J Morneau, a former spiritualist and author of the book, "A Trip Into the Supernatural". Could it be that Satan has gained control of those he hates simply by playing upon their love of gain and extortion? Satan knows that, "Nor thieves, nor covetous, nor drunkards, nor revilers, nor extortioners, shall inherit the kingdom of God."⁹

In the Old Testament the priests also functioned as physicians. For example: "And the LORD spake unto Moses and Aaron, saying, When a man shall have in the skin of his flesh a rising, a scab, or bright spot, and it be in the skin of his flesh like the plague of leprosy; then he shall be brought unto Aaron the priest, or unto one of his sons the priests: And the priest shall look on the plague in the skin of the flesh:"¹⁰ When the Priest and other religious personal began to commercialize their roles God could not keep silent about this evil: "The heads thereof judge for reward, and the priests thereof teach for hire, and the prophets thereof divine for money: yet will they lean upon the LORD, and say, Is not the LORD among us? none evil can come upon us."¹¹ God is the one that has promised to supply all my needs, why need I extort money from His children?

God's goal is to bring a group of people to heaven who will in no way endanger the universe with another rebellion like Satan's. "We are all to be tested here in this life to prove whether, if admitted to heaven, we shall repeat the same course that Satan pursued there.... if men desire to be highly esteemed among men, if they are seeking for the highest positions, and demanding the highest remuneration they can obtain in this life, they will have just such characters in the future life. All heaven will pronounce them unfit for the kingdom, disqualified for any position of trust in the great work of God in the courts above."¹²

There are certain professions where large gains are justifiable and there are other professions where they are not easily excused.

It was my fortune and privilege to meet a Hungarian pharmaceutical research laboratory CEO as he toured our lifestyle center. He told of a pharmaceutical preparation that his company developed which, in one dose, could cure a prevalent European disease. They took the

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invention to the investors. The investor's response? "Wow, that's cool, but we won't invest, that's not a good business model." The lifesaving preparation never made it to market.

"All heaven is looking on with intense interest to see what character medical missionary work will assume under supervision of human beings. Will men make merchandise of God's ordained plan for reaching the dark parts of the earth with a manifestation of His benevolence?...Is the enterprise of mercy through which in the past God has manifested His grace in rescuing the ignorant, the sick, and the sorrowing, to become a matter of selfish merchandise? Shall God's agency of blessing be used by those who profess to believe the truth, in buying and selling and getting gain?...My brother, use every advantage possible to secure the salvation of souls. Never forsake the true standard, even though to cling to it makes you a beggar."¹³

Most ministers commit themselves to the gospel commission without regard to financial incentives, but what about the healthcare worker—the nurse, the physical therapist, the physician, the administrator? I am reminded of a medical school experience. "I've progressed to a more lucrative branch of the Lord's vineyard", a chuckle rippled through the class. A medical school classmate of mine was at the front of the lecture hall addressing the assembly of students. A minister in his former career, he had commanded the pulpit of one of the largest churches in the state, a most enviable success by most ministerial standards. "A more lucrative branch of the Lord's vineyard"? Are we not told, "We then that are strong ought to bear the infirmities of the weak, and not to please ourselves."¹⁴ Jesus did not become a medical missionary to better His social standing or improve His financial status. "It is just as consistent for the minister of the gospel to demand an excessive salary for visiting the sick, comforting the desponding, bringing peace and joy to the oppressed, as for the physician to make large charges for his professional visits."¹⁵

"Christ has purchased us at an infinite cost, and today He lifts His hand, and calls our names as He did the name of Matthew as he sat at the receipt of custom. Jesus said, "Follow Me" (Matthew 9:9). Matthew left all, --all his gains, --and followed his Lord. He did not wait and stipulate a certain sum reaching the amount he

had received in his former occupation, before he would render service, but without a question, he arose and followed Jesus."¹⁶

Jesus was the ultimate minister and the Great Physician, "Let this mind be in you, which was also in Christ Jesus: Who, being in the form of God, thought it not robbery to be equal with God: But made himself of no reputation, and took upon him the form of a servant, and was made in the likeness of men: And being found in fashion as a man, he humbled himself, and became obedient unto death, even the death of the cross."¹⁷

My great-grandfather, Dr. Earl Warner, was a Godly physician during horse and buggy days out in the Midwest of America. Grandmother tells of how he would deliver the third, fourth and fifth baby from a farm family and still have not received any remuneration for the first child. A retired pastor once told me of how my grandfather had taught him to preach; that when he came to the church district my grandfather had 40 people ready to join the church. What has happened to medical care since those days?

Really, if I want to be truly successful in the medical missionary work, self-sacrifice, like Christ practiced, is crucial. "In ministering to the sick, more than in any merely secular business, success depends on the spirit of consecration and self-sacrifice with which the work is done."¹⁸

"Here is \$10, I counted it myself." A young mother placed a handful of money on my receptionist's counter at my clinic. As she left I asked my secretary about the incident. "She is so faithful, she comes here every week and pays \$10 on her bill." She was a young mother with a bony anomaly and had undergone a very expensive medical diagnostic workup, which calmed everyone's fears that it could be a worse disease, but left her with an outrageous medical debt. I was mortified, I said, "We are not here to do this to these people, please cancel her debt."

The Biblical account is clear, "And a certain woman, which had an issue of blood twelve years, And had suffered many things of many physicians, and had spent all that she had, and was nothing bettered, but rather grew worse,"¹⁹ This is a business in which there are no medical outcome guarantees, and yet, there's also no

mercy to the debtor. The only one at risk seems to be the patient.

Not far distant from the emergency department at the medical school where I attended stood full-size statues of the good Samaritan—a call to remember that benevolent work done for the man caught among robbers. But in the emergency department financially underprivileged patients often experienced far less than Good Samaritan arrangements. Not all passed the “wallet biopsy”. “Someone has not spent enough time meditating out in front of the statues stationed in front of the administration building”, I thought. “What they desire is a method of forgetting God which shall pass as a method of remembering Him.”²⁰

“Do something that has procedures, it pays better.” A friend of mine was trying to decide on his residency specialty and called on a Christian doctor to learn his specialty recommendation. This doctor was an internist who had taken up doing colonoscopies and was building a financial empire. “It is not right for a physician to make an extravagant outlay of means, and then charge exorbitant prices for performing small operations. God looks at all these matters in their true light.”²¹ And why do procedures pay so well? Because people feel they have to have them. This is reminiscent of Zacchaeus in the Bible, a tax collector, who padded his pockets with tax excess which people were obliged to pay. In business language we would refer to this practice as gouging or profiteering. People often look at a physician as standing between them and death. “Skin for skin, yea, all that a man hath will he give for his life.”²² Am I justified if I exploit this fear of death to my own financial advantage? “The money physicians generally take from rich and poor, is in many cases too large for the services rendered and is reckoned no more or less than dishonest gain, by the God of Heaven; yet they demand these exorbitant prices for their professional aid, simply because they can do it; for when suffering, people must have help.”²³

“CEO’s income as a multiple of the average workers wage.” I was on a flight and had picked up a copy of the newspaper, USA Today, and glanced at the headline. According to the article, twenty years earlier CEOs made 56 times the average employ wage, at the time of the article’s writing that number had risen to 526. I

have to ask myself, as a physician, how many times more than the average person is my income, and why? Do I put my pants on differently than they do?

I had an occasion to require the services of a lawyer or solicitor. The gentleman told me his rate, \$400 per hour. Just to make sure I did not have a heart attack on the spot, he shared with me that all the other lawyers in town charge \$500 per hour. Who sets the standard? Who is enticing whom? If the world sins 10 times a day am I safe in sinning only twice? “Thus saith the LORD, Learn not the way of the heathen,”²⁴

We were between classes and one of my classmates, the son of a physician, took the lectern to entertain the class. According to his anecdote, a young medical graduate came home to take over his father’s medical practice. A young hot shot with all the latest and greatest, he boasted to his father of his recent success. “You know that woman, dad, with the skin condition you have been treating for 20 years, I cured her!” to which the father was said to have replied, “you fool, that lady put you through medical school.” “The exorbitant price charged by physicians in this country (Australia), when called upon to attend suffering humanity is robbery, fraud. God gave physicians their wisdom and skill. It is not man who saves life; it is the Great Restorer. But poor men are often charged for services they never received.”²⁵ “The medical profession in general carries a heavy stock of unjust exactions; but shall we copy their sin? We are reformers. We are supposed to be pursuing a course that will represent the character of perfect humanity, the pure, elevated character of Christ.”²⁶ “Many good and merciful acts have been done by practicing physicians, but I was shown that as a general thing the medical profession has become a den of thieves. In connection with the cause of God the work of the Christian physician is to be beautified by the presence of Christ; for He would cooperate with the physician who professes His name. But when men become extortioners, all He can do is to drive them from His courts.”²⁷

Am I doing unto my fellow men as I would have them do unto me? “And as ye would that men should do to you, do ye also to them likewise.”²⁸

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Did they said it was a privilege, when you went off to university to obtain an education for your healthcare career? Yes, it was a privilege, but, it was an even greater responsibility. For to whom much is given, much! much! will be required.²⁹ God blesses with wisdom and skill. I am accountable to Him for my use of these gifts. He made me, He called me, He equipped me, He is sending me, and woe unto me if I waste it all on myself! "For what shall it profit a man, if he shall gain the whole world, and lose his own soul? Or what shall a man give in exchange for his soul?"³⁰

Yes, but as a medical person I study hard, work hard, and sometimes keep late hours! How much can someone pay me to entice me to overwork, destroy my own health and lose heaven? "Why should the Christian physician, who is believing, expecting, looking, waiting, and longing for the coming and kingdom of Christ, when sickness and death will no longer have power over the saints, expect more pay for his services than the Christian editor or the Christian minister? He may say that his work is more wearing. That is yet to be proved. Let him work as he can endure it, and not violate the laws of life which he teaches to his patients. There are no good reasons why he should overwork and receive large pay for it, more than the minister or the editor."³¹

The question I have to face is, am I a consumer or a producer? Consumers draw on the resources of the universe during their lifetime leaving behind a negative balance when they're gone. Producers add to the value of the universe during their lifetime. How is this earth better off for my having been here? The universe was definitely better off for Jesus having spent time among us. He lived a life of unselfishness; He was the Giver of all. "For ye know the grace of our Lord Jesus Christ, that, though he was rich, yet for your sakes he became poor, that ye through his poverty might be rich."³²

God's forewarning is, "For with what judgment ye judge, ye shall be judged: and with what measure ye mete, it shall be measured to you again."³³ "God will require a return from men in proportion as they set a value upon themselves and their services, for they will be judged according to their deeds, and by no less a standard than they themselves have

established....When they demand exorbitant prices for their services, God, the judge of all earth, will hold them to the measure of their own overrated estimation, and require of them to the full extent of the value they put upon themselves....As they judge of their worth from a money point of view, God will judge of their works, comparing their services with their valuation of them."³⁴

If I strive with all my might to accumulate wealth and possessions here in this life, I will be granted the unenviable privilege of doing so, but Jesus warns, "Verily I say unto you, They have their reward."³⁵ I want more than just a reward in this life; I am working for eternity. God has called us to a mission of mercy to the sick and suffering and the most prized remuneration He has for us is eternal life. "Friend, I do thee no wrong: didst not thou agree with me for a penny?"³⁶ As regards the merit of our work we are only, "unprofitable servants: we have done that which was our duty to do."³⁷ God does not promise us a life of ease here on earth, or a certain salary.

"And this is why I am so glad that I get to work with you medical students given the fact that you have not made financial acquisitions the focus of your careers." My PhD teacher, renown for exposing fraud in health care, was finishing up his lecture on some fraudulent practitioners and comparing us to what he had just described. The class erupted in raucous laughter. The speaker reeled backwards as if an explosion had hit him. In a startled voice he stammered, "I never thought I would get a reaction like that out of a medical school class." Taking a step backward he again said, "I never thought I would get a reaction like that out of a medical school class." Still quivering and retiring even further he said a third time with great emphasis, "I never thought I would get a reaction like that out of a medical school class." With that he snatched up his lecture notes and disappeared from the room. "The greatest want of the world is the want of men—men who will not be bought or sold, men who in their inmost souls are true and honest, men who do not fear to call sin by its right name, men whose conscience is as true to duty as the needle to the pole, men who will stand for the right though the heavens fall."³⁸

Blue Print for Health and Healing

Studies in medical school were punctuated with recreational activities design to disrupt the monotony. One such recreational venture involved dinner at faculty homes and a roundtable discussion. The next day in class one of my classmates said, with his face aglow, "I can't wait till we get to live in those kind of big houses". Who is the role model? "And Jesus said unto him, Foxes have holes, and birds of the air have nests; but the Son of man hath not where to lay his head."³⁹ Jesus Christ did not come to this earth, walk in dusty sandals, and surrender his life to the most ignominious death, so I could live in a split-level wonderland and drive a Ferrari. And what about those faculty houses, from which one could gaze across the valley, across the railroad tracks, to one of the poorest most heavily government-subsidized cities in the state?

As a physician, I am admired. In order to help cultivate this respect, shouldn't I drive a luxurious automobile, live in an impressive house and wear extravagant clothing? Don't people have a right to feel proud of me as their health care provider? "Expensive, outward show does not elevate men and women in the eyes of sensible people."⁴⁰ As a health care professional I worry lest I become of the class of the rich young ruler whom Jesus told, "One thing thou lackest: go thy way, sell whatsoever thou hast, and give to the poor, and thou shalt have treasure in heaven: and come, take up the cross, and follow me."⁴¹ Hopefully I will not, as did this young man, go away sorrowful.

I had the privilege of working with a very fine Jewish doctor from Poland. He was very good at what he did. One day as we were talking, he commented that, for a Christian institution, there sure were a lot of psychedelic cars out in the parking lot. And so it was, if anyone wanted to see the latest and greatest, a trip to the hospital parking lot would give him or her a good survey of current models. What a testimony to this observant non-Christian. Even the world knows to expect self-denial of Christians. If our example, Jesus, lived a life of self-denial, would not to do otherwise risk denying Him? "The question as to whether the medical profession is to be controlled by Christian principles in regard to compensation, or by the selfish standard of the world, has long been ignored, but can be ignored no longer. Shall the pure

elevating principles of Christianity be exemplified in the physician's life?... Shall he practice self-denial for Christ's sake? or is it only for a few men of more common occupation to follow in the footsteps of Jesus, while merchants, lawyers, and professional men, go free to follow the bent of a selfish will? Is the world to see no representatives of Christianity in the medical profession?"⁴²

I'm called to think about Jesus Christ, the great physician, who gave up heaven to come to this earth, and show us what God was really like by healing our diseases and sharing the way of salvation. I can find no record of Him making merchandise of His services. I take it as a challenge and as a pledge of honour to follow in the footsteps of Jesus. I want to be able say with sincerity and commitment, "I am not bound to be rich, but I am under obligation to be righteous and to represent my Redeemer. I will not imperil my soul by declaring I must have a certain revenue. I have purposed in my heart that I will not give Satan reason to triumph over me because I endanger my spiritual life and become the servant of sin. I will not cultivate or encourage selfishness and covetousness, for it is the ruin of the world."⁴³

And, many an aspiring medical missionary gets dollar signs in their eyes thinking of all the money they are going to make charging patients for the humanitarian services they are going to offer. Is medical missionary work supposed to make you rich? Are you going to fund a whole sanitarium on patient charges? Wouldn't this be like a gospel missionary charging people for sharing with them the light of the gospel? Did Christ charge patients for His work of healing?

"All heaven is looking on with intense interest to see what character medical missionary work will assume under supervision of human beings. Will men make merchandise of God's ordained plan for reaching the dark parts of the earth with a manifestation of His benevolence? Will they cover mercy with selfishness, and then call it medical missionary work?"

"All heaven is watching with intense anxiety to see what is to be the outcome of the work that is so large and so important. God is watching, the heavenly

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universe is watching; and souls are perishing. And a change has come that has hindered the work which God designed should move forward without a trace of selfishness. Is the enterprise of mercy through which in the past God has manifested His grace in rescuing the ignorant, the sick, and the sorrowing, to become a matter of selfish merchandise? Shall God's agency of blessing be used by those who profess to believe the truth, in buying and selling and getting gain?"

"God will test the sincerity of men. Those who will deny self, take up the cross, and follow Christ, will have a continual work to do in the line of restoring. Those who sacrifice for truth make a deep impression on the world. Their example is contagious and convincing. Men see that there is in the church that faith which works by love and purifies the soul. But when those who profess to be working only for God seek to benefit themselves, they greatly retard the work, and cast reproach upon it."

"My brother, use every advantage possible to secure the salvation of souls. Never forsake the true standard, even though to cling to it makes you a beggar.

God has set up a high standard of righteousness. He has made a plain distinction between human and divine wisdom. All who work on Christ's side must work to save, not to destroy. Worldly policy is not to become the policy of the servants of God. Divine authority is to be acknowledged. The church on earth is to be the representative of heavenly principles. Amidst the awful confusion of injustice, deception, robbery, and crime, she is to shine with light from on high. In the righteousness of Christ, she is to stand firm against the prevailing apostasy."⁴⁴

"No man can serve two masters: for either he will hate the one, and love the other; or else he will hold to the one, and despise the other. Ye cannot serve God and mammon." Matthew 6:24

So I've shared a bird's eye view of an issue too big for any one of us to tackle alone. It's so big, this selfishness/sin problem, that it has taken all the resources that God can possibly muster, including the life of His Son, too endeavour to resolve it. Two great forces battle for the heart, the force of selfishness, and the force of love. To which force is my life a testimony of loyalty?

*“Eating the flesh of dead animals has
an injurious effect upon
spirituality.”ⁱ*
– E. G. White

ⁱ White, E. G. (1977). Mind, Character, and Personality, vol. 2. Nashville, TN: Southern Publishing Association. p. 407.

CHAPTER 30

DOES MEAT EATING SPOIL YOUR SPIRITUALITY?

You are what you eat. I often tell people that if you do not like what you are, change what you eat. The juices and fluids of what we eat pass into the circulation of our blood, and we are composed of what we eat. Our bones, our muscles, our skin, and yes, our brains are made of what passes between our lips. What is your brain composed of, and how does what you feed it impact its efficiency? There are nutrients that promote mental acuity and there are the foods that impede good thinking.

In approaching this subject, I want to make sure the experiences of the Jews are not lost on us. In the wilderness, the children of Israel were said to have *lusted* for, or craved, a flesh diet.

“And the mixt multitude that was among them fell a *lusting*: and the children of Israel also wept again, and said, “Who shall give us flesh to eat?”¹

In the words of a famous advertisement campaign the question was asked, “Where’s the Beef”!?²

Now their cravings after an animal-based diet were not by any means unique to their era. Addictions to, and cravings for meat, are universal. Ever wonder why people have a hard time giving up eating meat? One reason meat is so addictive lies in its ability to stimulate the same receptors in the brain as does heroin. That’s right; heroin addicts experience the same challenge giving up their habit as carnivores do theirs.³

As with addiction to heroin, the true realities of life are overshadowed by the impulsive pursuit of the addictive substance, in this case: flesh. In fact, the Israelites are said to have chosen meat over their very salvation. Let’s look at this in the Bible. We are told that in lusting after meat in the wilderness, the Israelites

hardened their hearts and provoked God and this kept them from entering Canaan and rest.

“To day if ye will hear his voice, Harden not your heart, as in the *provocation*, and as in the day of temptation in the wilderness: When your fathers tempted me, proved me,” “Unto whom I swear in my wrath that they should not enter into my rest.”⁴

What was the “provocation”? How did they provoke God?

“And they sinned yet more against him by *provoking* the most High in the wilderness. And they tempted God in their heart by asking meat for their *lust*.” “Because they believed not in God, and trusted not in his salvation.”⁵

God wanted to take the Israelites home to Canaan. God wants to take us home to heaven and the new earth; to Eden restored, a restored garden, and a restored people. So, our challenge, in essence, is to take back the Garden of Eden. This will require warfare—going through a time of trial and difficulty.

“The reason why many of us will fall in the time of trouble is because of laxity in temperance and indulgence of appetite. Moses preached a great deal on this subject, and the reason the people did not go through to the promised land was because of repeated indulgence of appetite. Nine-tenths of the wickedness among the children of today is caused by intemperance in eating and drinking. Adam and Eve lost Eden through the indulgence of appetite, and we can only regain it by the denial of the same.”⁶

Ever wish you could improve your mental performance? It has been documented that a meat eater’s brain performance suffers.

In a study of diet and mental performance, Granic and Nyaradi discovered that putting people on a (western) diet including red meat,

potatoes with rich gravy, and butter significantly limited brain function.^{7,8} How well your brain functions will determine how clear are your spiritual perceptions of God and His will.

Meat is not the only food that can degrade brain performance. Refined foods, especially sugar negatively impact brain function and learning ability. Most people would like their brains to be able to comprehend and retain all that it is possible to, but researcher Molteni has discovered in his laboratory experiments that a diet high in animal fat and sugar significantly depresses the ability to learn and grow new brain pathways.⁹ This is just like eating meat! "And from the light given me, sugar, when largely used, is more injurious than meat."¹⁰

What does the Bible record about the impact of meat eating on a person's soul? Does eating meat ruin your spiritual life? As usual, the Bible is very clear.

"But *lusted* exceedingly in the wilderness, and tempted God in the desert. And he gave them their request; but sent leanness into their soul."¹¹

This can be confirmed in modern research in studies looking at the impact of animal foods on psychological health. Studying psychological health, researcher Beezhold has demonstrated that vegetarian diets are associated with healthier mood states, with less negative emotions, compared to a diet that includes meat. Conversely, he discovered that restricting the eating of meat, fish, and poultry could improve the mood.^{12,13}

Now there is the Lord's Supper, or table of the Lord, and there is the table of devils.

"Ye cannot drink the cup of the Lord, and the cup of devils: ye cannot be partakers of the Lord's table, and of the table of devils."¹⁴

What might one find to eat on the table of the devil? Zechariah can help us understand what is on the devils table.

"And the LORD said unto me, Take unto thee yet the instruments of a foolish shepherd. For, lo, I will raise up a shepherd in the land, which shall not visit those that be cut off, neither shall seek the young one, nor heal that that is broken, nor feed that that standeth still: but he shall eat the flesh of the fat,"¹⁵

Why would Satan want people to be eating meat?

"Dr. Morrow took 200 New Zealand rabbits and divided them into five groups of about 40 rabbits each. Each group was fed a different diet ranging from the standard rabbit food of alfalfa pellets to hamburger. The rabbits given hamburger required extra time getting accustomed to a meat diet. But after developing a taste for it, they consistently refused supplemental rabbit chow. Their preference for hamburger was so strong that they would go several days without eating available vegetable food, waiting for the hamburger to be served."

"Ordinarily rabbits are peaceful animals, but the hamburger diet made a dramatic change in their personalities. They actually became vicious. They were prone to kill and eat their babies. It was not uncommon for them to fight to the death. At times, if one of the rabbits would die, the others would become cannibalistic. Eventually the caretaker had to be careful in handling these hamburger-eating rabbits in order to keep from being bitten. The caretaker himself, after noticing the change in the rabbits, became a vegetarian."

"Dr. Morrow went on to explain that man is considered an omnivore, or both herbivorous and carnivorous, and yet it has been fairly well recognized that if one wishes to have a tough, mean fighter in the human, this can be achieved by a meat diet as opposed to a vegetarian diet. He stated that this is well known in boxing circles. He testified personally to the difference in himself when on a vegetarian diet as opposed to a meat diet. He felt much more aggressive on a flesh diet. He concluded that to strengthen those characteristics that are associated with a higher level of spirituality, a vegetarian diet would be helpful."¹⁶

Meat is not the only food known to incite aggression. This violent characteristic can also be incited by a diet high in sugar, especially from soft drinks. Solnick, a research scientist, has demonstrated that students who use more sugar-laden soft drinks exhibit increased aggressive behaviour toward their fellow classmates.^{17,18}

Metaphors are employed in the Bible to improve our understanding of spiritual things. One such is the concept that Jesus was the manna Israel ate in the wilderness. Jesus says, "I am the living bread which came down from heaven: if any man eat of this bread, he shall live

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for ever: and the bread that I will give is my flesh, which I will give for the life of the world.”¹⁹ Here’s the question: If manna represented Jesus Christ, what does the meat that they *lusted* after represent?

Paul states that by seducing the Israelites to *lust* for a meat diet, Satan overthrew them in the wilderness, and that we can learn from their failure.

“But with many of them God was not well pleased: for they were overthrown in the wilderness. Now these things were our examples, to the intent we should not *lust* after evil things, as they also *lusted*.” “Now all these things happened unto them for ensamples: and they are written for our admonition, upon whom the ends of the world are come.”²⁰

Behaviour can deteriorate significantly on a meat diet. Research scientist Oddy found that adolescent behaviour is significantly better on a fresh fruit and vegetable diet than on a meat diet.²¹

Diet reform is to be progressive. As we near the heavenly Canaan, our diet will more closely match that of heaven.

“Let the diet reform be progressive. Tell them that the time will soon come when there will be no safety in using eggs, milk, cream, or butter, because disease in animals is increasing in proportion to the increase of wickedness among men.” “Let them teach the people to preserve the health and increase the strength by avoiding the large amount of cooking that has filled the world with chronic invalids. By precept and example make it plain that the food which God gave Adam in his sinless state is the best for man's use as he seeks to regain that sinless state.”²²

What was Jesus talking about when He mentions a fast for His followers?

“And they said unto him, Why do the disciples of John fast often, and make prayers, and likewise the disciples of the Pharisees; but thine eat and drink? And he said unto them, Can ye make the children of the bride chamber fast, while the bridegroom is with them? But the days will come, when the bridegroom shall be taken away from them, and then shall they fast in those days.”²³

Josephus, the great historian of the Jews makes some very interesting observations about the sacrificial system. At the time of Jesus’

statement, regarding a coming era of fasting, the sacrificial system was still in full swing. Josephus estimates that toward the close of the Jewish feasts, the Passover was associated with the slaughter of 255,000 sacrificial animals.²⁴ Indeed, the sacrificial system, as conducted in the days of Israel, practically necessitated a herdsman’s occupation, and thus lent itself to a meat diet. One could easily get the idea by reading all the dietary accounts of the post flood Bible heroes that all the world was eating meat.

Jesus came to fulfil prophecy. One such prophecy foretold the termination of the sacrificial system, which we have pointed out, that made meat eating seem so natural.

“And he shall confirm the covenant with many for one week: and in the midst of the week he shall cause the sacrifice and the oblation to cease,”²⁵

Jesus was moving the early Christian church away from an economy based on animals to one based on plant foods. The early disciples were transitioning to the New Testament or diet of the new Christian church. This can be seen in the menu of the Lord’s supper.

“And they made ready the Passover.” “And he said unto them, With desire I have desired to eat this Passover with you before I suffer: For I say unto you, I will not any more eat thereof, until it be fulfilled in the kingdom of God. And he took the cup, and gave thanks, and said, Take this, and divide it among yourselves: For I say unto you, I will not drink of the fruit of the vine, until the kingdom of God shall come. And he took bread, and gave thanks, and brake it, and gave unto them, saying, This is my body which is given for you: this do in remembrance of me. Likewise also the cup after supper, saying, This cup is the new testament in my blood, which is shed for you.”²⁶

From this passage it is clear that whatever was served at the Lord’s supper will be on the menu in Heaven. Heaven is a place of peace and non-violence. No article of food will be served necessitating the suffering of innocent animals. The lion will lay down with the lamb and neither of them will be in fear that Jesus or us will want to eat them.

Jesus was preparing His disciples for the long haul through the dark ages until He should return to receive them as His own. Are we

cooperating with Him in preparing for translation?

"Grains and fruits prepared free from grease, and in as natural a condition as possible, should be the food for the tables of all who claim to be preparing for translation to heaven. The less feverish the diet, the more easily can the passions be controlled. Gratification of taste should not be consulted irrespective of physical, intellectual, or moral health."²⁷

Our goal is to accustom ourselves here to the diet we know God will be providing for us when we reach the beauties of heaven. We need to progress to the diet of heaven.

To recap: the menu of the Lord's Supper was something that Jesus can eat with us in heaven. It seems Jesus was instituting a new dietary era for His church. He was causing the economy of meat eating to cease and the era fasting from flesh and a luxurious diet to begin. This is referred to in terms of a fast that would last till the bridegroom should return at His second coming.

"How could the children of the bride-chamber fast when the bridegroom was yet with them? But when he should go back to Heaven, leaving his disciples to meet alone the unbelief and darkness of the world, then it would be fitting for the church to fast and mourn, until her absent Lord should return the second time."²⁸

Meat was not a part of the Jesus' preparation went to meet the devil in the wilderness.

"And Jesus being full of the Holy Ghost returned from Jordan, and was led by the Spirit into the wilderness, being forty days tempted of the devil. And in those days he did eat nothing: and when they were ended, he afterward hungered."²⁹

We are to follow Jesus in everything as the children of Israel should have, even in their diet choices.

"Although Christ was suffering the keenest pangs of hunger, He withstood the temptation. He repulsed Satan with the same scripture He had given Moses to repeat to rebellious Israel when their diet was restricted and they were clamoring for flesh meats in the wilderness, "Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God."³⁰

We are to follow Jesus in His use of scripture to meet temptation, and in His choice of diet in

preparation for spiritual warfare. This fasting is a preparation for the final conflict. The 144,000 are those who "follow the lamb where ever He goeth". They do what He does; they follow Him in His abstemious diet in preparation for the final showdown.

Why fast? The Bible is clear: "Howbeit this kind goeth not out but by prayer and fasting."³¹

Fasting and "afflicting" your soul go together. "Then I proclaimed a fast there, at the river of Ahava, that we might afflict ourselves before our God, to seek of him a right way for us, and for our little ones, and for all our substance."³²

Even the heathen realize the importance of fasting! When confronted with annihilation, the inhabitants of Nineveh fasted as they sought the God of heaven. Are we as insightful, as we live in the hour of the Judgment?

"So the people of Nineveh believed God, and proclaimed a fast, and put on sackcloth, from the greatest of them even to the least of them."³³

The layout of the sanctuary suggests a progression in diet. As one came to the tabernacle, the first door or curtain led to the courtyard. The gentiles were left outside the courtyard, and they were known to eat unclean meat. Within the courtyard was the alter of sacrifice where lambs were offered. The common Jew offered sacrifices of only clean animals in the courtyard. The next door or curtain led into the Holy Place. Only the priest entered the Holy Place where food items included bread, grape juice and olives. The next curtain or door led to the Most Holy Place. The high priest entered the Most Holy Place where were found only manna and almonds. Our goal is to be able to enter the Most Holy Place where the presence of God is, where only the pure and holy, those thoroughly cleansed of sin, can enter and not die from His holy presence.

The time since the commencement of the Judgment in 1844 in a time of fasting and soul searching as it was for ancient Israel on the Day of Atonement.

"On the tenth day of this seventh month there shall be a day of atonement: it shall be an holy convocation unto you; and ye shall afflict your souls,"³⁴

This afflicting of the soul included the fasting about which we have been speaking.

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"I humbled (afflicted) my soul with fasting; and my prayer returned into mine own bosom."³⁵

Not everyone catches this spirit of fasting. To fast or not to fast is the question? Isaiah speaks to this dilemma. He writes of God's call to fast and afflict one's soul. He writes about the people's rebellious reaction. Then, he tells of God's judgment on their refusal to fast and afflict their souls in preparation for the final judgment.

"And in that day did the Lord GOD of hosts call to weeping, and to mourning, and to baldness, and to girding with sackcloth: And behold joy and gladness, slaying oxen, and killing sheep, eating flesh, and drinking wine: let us eat and drink; for to morrow we shall die. And it was revealed in mine ears by the LORD of hosts, Surely this iniquity shall not be purged from you till ye die, saith the Lord GOD of hosts."³⁶

When God says, "Get ready! Fast and pray!", partying, eating meat and drinking wine, is not suitable.

Daniel teaches us some important principles of fasting. Daniel's fast was not total abstinence of food.

"I ate no pleasant bread, neither came flesh nor wine in my mouth, neither did I anoint myself at all, till three whole weeks were fulfilled."³⁷

What is the purpose and effect of this kind of fast, a fast from stimulating foods?

A fascinating study was conducted at UCLA. Researcher Douglass wanted to see the effect of a vegan diet on sufferers of high blood pressure and being overweight. The participants were fed a largely fresh fruit and vegetable diet like God gave Adam. Yes, they lost weight and their blood pressures came down, but what really caught the attention of the researchers, and of myself, was an unexpected finding. In their comments

about the study, the researchers stated, "Eighty percent of those who smoked or drank alcohol abstained spontaneously." Now let's put this in perspective, Alcoholics Anonymous would be happy with a 15% recovery rate. Here in the UCLA study, we have a group of people who are NOT told to stop drinking and smoking, but on a largely raw vegan diet, 80% of them spontaneously stop drinking and smoking. Get this; here is a diet that science proves is supportive of a victorious life in Christ.³⁸

If we are to be among Jesus' end time faithful people, we will need to pay a special attention to God's diet for us.

Is your body ready for heaven? God wants to sanctify it for heaven.

"And the very God of peace sanctify you wholly; and I pray God your whole spirit and soul and **body** be preserved blameless unto the coming of our Lord Jesus Christ."³⁹

Either we will be sanctified for heaven, aided with the help of a good diet, or we will fail in preparation for Christ's second coming.

CONCLUSION

- The ultimate goal is a return to the Garden of Eden, on the new earth, where no trace of sin or meat eating will be found.
- The journey must lead one to heaven, as God operates it. In God's order, a plant based abstemious diet is optimal for the unimpaired happiness of all His creatures.
- Jesus championed this by transitioning the Hebrew economy from one centered on animal sacrifice to one founded on the last supper--based in plant foods, in preparation for the enjoyment of heaven's diet and the marriage supper of the Lamb.

“There are many whose hearts are aching under a load of care because they seek to reach the world’s standard. They have chosen its service, accepted its perplexities, adopted its customs. Thus their character is marred, and their life made a weariness. In order to gratify ambition and worldly desires, they wound the conscience, and bring upon themselves an additional burden of remorse. The continual worry is wearing out the life forces. Our Lord desires them to lay aside this yoke of bondage. He invites them to accept His yoke; He says, “My yoke is easy, and My burden is light.” He bids them seek first the kingdom of God and His righteousness, and His promise is that all things needful to them for this life shall be added. Worry is blind, and cannot discern the future; but Jesus sees the end from the beginning. In every difficulty He has His way prepared to bring relief. Our heavenly Father has a thousand ways to provide for us, of which we know nothing. Those who accept the one principle of making the service and honor of God supreme will find perplexities vanish, and a plain path before their feet.”ⁱ

— E. G. White.

ⁱ White, E. G. (1898). *The Desire of Ages*. Mountain View, CA: Pacific Press Publishing Association. p. 330.

CHAPTER 31

STRESS MANAGEMENT GOD'S WAY

Stress has an incredibly harmful impact on health! According to some authors, ninety percent of disease originates from stress and anxiety.*

A sarcastic voice rang out above the din of the crowd mocking what was being taught to those gathered. She had been coming every day now for many days and her influence was starting to negatively impact public opinion.

It was a week filled with major life event stressors. A lesser man would have crumpled under the pressure. Before the day was over there would be an encounter with demons, a run in with the authorities, a life-threatening physical beating, jail confinement in stocks, and a major natural disaster—an earthquake, which would demolish the building over their heads! Yet Paul was at peace, and it showed. (see Acts 16:16-34).

Everywhere they tried to talk to people about Jesus, a spiritualist woman followed them calling out in a mocking sarcastic voice, "These men are servants of the Most High God! They announce to you how you can be saved!" How stressful. Ever have someone stalk you that you wish you could get off your trail?

As a devout Jew, of high religious education, he had grown up in a strikingly gentile town, Tarsus. He stood for what he believed and put his whole heart, soul, mind and strength into whatever he did. Paul had every reason to be stressed; he was a very driven man—a bit of an overachiever. I do not know why, but his mother had given him the name of the first king of Israel, "Saul".

After a few days this woman got on Paul's nerves. Looking right at her he said, "I command thee in the name of Jesus Christ to come out of her." And a demon came out of her.

This angered her managers. Ever gotten in the way of someone's money making? They had commercialized her channelling and fortune telling. This meddling in their merchandizing infuriated them and they physically dragged Paul to the council. As a result, Paul and Silas took a severe beating from the government, and found

themselves bound in cruel stocks in a filthy jail. How unfair, this was not supposed to happen to Roman citizens.

Praise the Lord! Their voices broke the grumbling of the inmates with sweet melody. The jailer was impressed.

How could they sing? It had been a bad week. The woman had troubled them. The magistrates had beaten them. They were in a dirty jail.

That night disaster hit. The ground trembled in a major earthquake. The jail was demolished. The jailer was now the one feeling ultimate stress. What would he do if the government charged him with irresponsibility and loss of prisoners? They would humiliate him and execute him.

Paul's life was the life that was truly in jeopardy more than the jailer's! How did he cope so well? What advice does he have for us?

"For God hath not given us the spirit of fear; but of power, and of love, and of a sound mind. Be not thou therefore ashamed of the testimony of our Lord, nor of me his prisoner: but be thou partaker of the afflictions of the gospel according to the power of God; Who hath saved us, and called us with an holy calling, not according to our works, but according to his own purpose and grace, which was given us in Christ Jesus before the world began, But is now made manifest by the appearing of our Saviour Jesus Christ, who hath abolished death, and hath brought life and immortality to light through the gospel: Whereunto I am appointed a preacher, and an apostle, and a teacher of the Gentiles. For the which cause I also suffer these things: nevertheless I am not ashamed: for I know whom I have believed, and am persuaded that he is able to keep that which I have committed unto him against that day. Hold fast the form of sound words, which thou hast

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heard of me, in faith and love which is in Christ Jesus." 2 Timothy 1:7-13.

The stress was too great and the jailer proceeded to attempt a violent suicide. Rather than loose face and be tortured to death, the jailer decides to take his own life, before the government could prosecute him. About to run himself through with his own sword, Paul called out to him, "Don't kill yourself, we are all here."

I marvel at this next part of the story.

"Then he called for a light, and sprang in, and came trembling, and fell down before Paul and Silas, And brought them out, and said, Sirs, what must I do to be saved? (sozo: saved or healed)" Acts 16:29-30.

Who are the Christians in this story and what is their state of mind amidst all their trials? Who is the pagan here in this story and what is his state of mind? Are we pagans, or are we Christians in our response to stress? What did the jailer realize Paul and Silas had that he lacked, and that he greatly wanted? What was he asking to be saved or healed from? Freedom from sin's stress, worry, freedom from the fear of death!

Have you ever been afraid of death?

"Forasmuch then as the children are partakers of flesh and blood, he also himself likewise took part of the same; that through death he might destroy him that had the power of death, that is, the devil; And deliver them who through fear of death were all their lifetime subject to bondage." Hebrews 2:14-15.

What was Paul's solution? Antidepressants? Months of psychoanalysis? Anxiolytic Medication? A diagnosis of fibromyalgia, MS or Crohn's and frequent doctor visits? Breathing exercises? Transcendental meditation? Cognitive behavioural therapy?

"And they spake unto him the word of the Lord, and to all that were in his house. And he took them the same hour of the night, and washed their stripes; and was baptized, he and all his, straightway. And when he had brought them into his house, he set meat before them, and rejoiced, believing in God with all his house." Acts 16:32-34.

Is the jailer rejoicing now too? Yes! What did Paul teach them?

"I am crucified with Christ: nevertheless I live; yet not I, but Christ liveth in me: and the life which I now live in the flesh I live by the faith of the Son of God, who loved me, and gave himself for me." Galatians 2:20.

"I die daily." 1 Corinthians 15:31.

Why did this work for Paul in coping with stress?

"Those who take Christ at His word, and surrender their souls to His keeping, their lives to His ordering, will find peace and quietude. Nothing of the world can make them sad when Jesus makes them glad by His presence. In perfect acquiescence there is perfect rest. The Lord says, 'Thou wilt keep him in perfect peace, whose mind is stayed on Thee: because he trusteth in Thee.' Isa. 26:3. Our lives may seem a tangle; but as we commit ourselves to the wise Master Worker, He will bring out the pattern of life and character that will be to His own glory. And that character which expresses the glory--character--of Christ will be received into the Paradise of God. A renovated race shall walk with Him in white, for they are worthy." {The Desire of Ages p.331}

How does Jesus teach us to deal with stress and rejection?

"Blessed are ye, when men shall hate you, and when they shall separate you from their company, and shall reproach you, and cast out your name as evil, for the Son of man's sake. Rejoice ye in that day, and leap for joy: for, behold, your reward is great in heaven: for in the like manner did their fathers unto the prophets." Luke 6:22-23.

How did Jesus deal with personal stress and rejection?

"For even hereunto were ye called: because Christ also suffered for us, leaving us an example, that ye should follow his steps: Who did no sin, neither was guile found in his mouth: Who, when he was

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reviled, reviled not again; when he suffered, he threatened not; but committed himself to him that judgeth righteously." 1 Peter 2:21-23.

Jesus knew that everything that happened was under God's supervision.

"Jesus answered, Thou couldst have no power at all against me, except it were given thee from above: therefore he that delivered me unto thee hath the greater sin." John 19:11.

"The Father's presence encircled Christ, and nothing befell Him but that which infinite love permitted for the blessing of the world. Here was His source of comfort, and it is for us. He who is imbued with the Spirit of Christ abides in Christ. The blow that is aimed at him falls upon the Saviour, who surrounds him with His presence. Whatever comes to him comes from Christ. He has no need to resist evil, for Christ is his defense. Nothing can touch him except by our Lord's permission, and 'all things' that are permitted 'work together for good to them that love God.' Romans 8:28." {Thoughts from the Mount of Blessing p.71}

Why didn't Paul have Post Traumatic Stress Disorder (PTSD) after all this trauma?

Have you heard of "Little-Faith" in Pilgrims Progress? He is robbed by three thugs in the allegory. And though he escapes with his life and his religious experience, he spends the rest of his days bemoaning his losses and informing everyone of the past tragedy in his life. We have to ask ourselves, are we of little faith?

So how did Paul escape PTSD?

"Brethren, I count not myself to have apprehended: but this one thing I do, forgetting those things which are behind, and reaching forth unto those things which are before, I press toward the mark for the prize of the high calling of God in Christ Jesus. Let us therefore, as many as be perfect, be thus minded: and if in any thing ye be otherwise minded, God shall reveal even this unto you." Philippians 3:13-15.

The work of Christ before him, Paul laid to rest the things behind him.

Is there any more advice from Paul on how to practice this, "forgetting those things which are behind"?

"Therefore leaving the principles of the doctrine of Christ, let us go on unto perfection; not laying again the foundation of repentance from dead works, and of faith toward God," Hebrews 6:1.

What about Jesus, what does He advise about the past?

"And he said unto another, Follow me. But he said, Lord, suffer me first to go and bury my father. Jesus said unto him, Let the dead bury their dead: but go thou and preach the kingdom of God. And another also said, Lord, I will follow thee; but let me first go bid them farewell, which are at home at my house. And Jesus said unto him, No man, having put his hand to the plough, and looking back, is fit for the kingdom of God." Luke 9:59-62.

The gospel plow, service to others, is a key to stress management. Isaiah helps with this concept.

"Let the wicked forsake his way, and the unrighteous man his thoughts: and let him return unto the LORD, and he will have mercy upon him; and to our God, for he will abundantly pardon. For my thoughts are not your thoughts, neither are your ways my ways, saith the LORD." Isaiah 55:7-8.

Can I really "forsake" my unrighteous thoughts?

"For though we walk in the flesh, we do not war after the flesh: (For the weapons of our warfare are not carnal, but mighty through God to the pulling down of strong holds;) Casting down imaginations, and every high thing that exalteth itself against the knowledge of God, and bringing into captivity every thought to the obedience of Christ;" 2 Corinthians 10:3-5.

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Do I have a guide to instruct me in the best thoughts to entertain in my mind as a weapon against PTSD?

“And the peace of God, which passeth all understanding, shall keep your hearts and minds through Christ Jesus. Finally, brethren, whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things. Those things, which ye have both learned, and received, and heard, and seen in me, do: and the God of peace shall be with you.” Philippians 4:7-9.

The Paralytic of Bethesda Jesus told to sin no more lest a worse thing come upon him. How does a Paralyzed man Sin? I believe his thoughts needed guarding.

How can you keep from looking back when you've committed yourself to the gospel plow? Paul has the answer:

“Or saith he it altogether for our sakes? For our sakes, no doubt, this is written: that he that ploweth should plow in hope; and that he that thresheth in hope should be partaker of his hope.” 1 Corinthians 9:10.

“The gospel is a wonderful simplifier of life's problems. Its instruction, heeded, would make plain many a perplexity and save us from many an error. It teaches us to estimate things at their true value and to give the most effort to the things of greatest worth--the things that will endure.” {The Ministry of Healing p. 363}

Does the apostle Peter address this issue?

“Wherefore let them that suffer according to the will of God commit the keeping of their souls to him in well doing, as unto a faithful Creator.” 1 Peter 4:19.

Believe it or not, this remedy has almost universal impact!

“The pleasure of doing good to others imparts a glow to the feelings which flashes through the nerves, quickens the circulation of the blood, and induces

mental and physical health.” {Testimonies for the Church, Volume 4, p. 56.2}

Just like Jesus:

“Who, when he was reviled, reviled not again; when he suffered, he threatened not; but committed himself to him that judgeth righteously:” 1 Peter 2:23.

We must commit our ways unto Jesus the author and finisher of our faith.

“Looking unto Jesus the author and finisher of our faith; who for the joy that was set before him endured the cross, despising the shame, and is set down at the right hand of the throne of God.” Hebrews 12:2.

The biggest source of our stress comes from our expectations and the opinions of others we believe are important.

“There are many whose hearts are aching under a load of care because they seek to reach the world's standard. They have chosen its service, accepted its perplexities, adopted its customs. Thus their character is marred, and their life made a weariness. In order to gratify ambition and worldly desires, they wound the conscience, and bring upon themselves an additional burden of remorse. The continual worry is wearing out the life forces. Our Lord desires them to lay aside this yoke of bondage. He invites them to accept His yoke; He says, ‘My yoke is easy, and My burden is light.’ He bids them seek first the kingdom of God and His righteousness, and His promise is that all things needful to them for this life shall be added. Worry is blind, and cannot discern the future; but Jesus sees the end from the beginning. In every difficulty He has His way prepared to bring relief. Our heavenly Father has a thousand ways to provide for us, of which we know nothing. Those who accept the one principle of making the service and honor of God supreme will find perplexities vanish, and a plain path before their feet.” {The Desire of Ages p. 330}

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Paul could be content in Jesus, and this gave him peace.

"Not that I speak in respect of want: for I have learned, in whatsoever state I am, therewith to be content. I know both how to be abased, and I know how to abound: every where and in all things I am instructed both to be full and to be hungry, both to abound and to suffer need. I can do all things through Christ which strengtheneth me." Philipians 4:11-13.

Paul advises the same for us:

"Let your conversation be without covetousness; and be content with such things as ye have: for he hath said, I will never leave thee, nor forsake thee." Hebrews 13:5.

Covetousness will destroy your peace.

"Perverse disputings of men of corrupt minds, and destitute of the truth, supposing that gain is godliness: from such withdraw thyself. But godliness with contentment is great gain. For we brought nothing into this world, and it is certain we can carry nothing out. And having food and raiment let us be therewith content. But they that will be rich fall into temptation and a snare, and into many foolish and hurtful lusts, which drown men in destruction and perdition. For the love of money is the root of all evil: which while some coveted after, they have erred from the faith, and pierced themselves through with many sorrows. But thou, O man of God, flee these things; and follow after righteousness, godliness, faith, love, patience, meekness. Fight the good fight of faith, lay hold on eternal life, whereunto thou art also called, and hast professed a good profession before many witnesses." 1 Timothy 6:5-12.

Are your wages the problem? John the Baptist taught contentment in one's income.

"And the soldiers likewise demanded of him, saying, And what shall we do? And he said unto them, Do violence to no man, neither accuse any falsely; and be content with your wages." Luke 3:14.

Paul had learned the blessing of persecution, distress, infirmities, and reproaches:

"And he said unto me, My grace is sufficient for thee: for my strength is made perfect in weakness. Most gladly therefore will I rather glory in my infirmities, that the power of Christ may rest upon me. Therefore I take pleasure in infirmities (sickness), in reproaches, in necessities, in persecutions, in distresses for Christ's sake: for when I am weak, then am I strong. I am become a fool in glorying; ye have compelled me: for I ought to have been commended of you: for in nothing am I behind the very chiefest apostles, though I be nothing." 2 Corinthians 12:9-11.

What are we invited to do with all our stress?

"Come unto me, all ye that labour and are heavy laden, and I will give you rest. Take my yoke upon you, and learn of me; for I am meek and lowly in heart: and ye shall find rest unto your souls. For my yoke is easy, and my burden is light." Matthew 11:28-30.

"Casting all your care upon him; for he careth for you." 1 Peter 5:7.

"Then said Jesus unto his disciples, If any man will come after me, let him deny himself, and take up his cross, and follow me. For whosoever will save his life shall lose it: and whosoever will lose his life for my sake shall find it." Matthew 16:24-25.

Appeal: Do you want to live in the perfect peace of Jesus? Will you commit all to him, take up your cross and put the stress behind you, casting it all at Jesus feet?

*"Sickness of the mind prevails everywhere. Nine tenths of the diseases from which men suffer have their foundation here." (Mind Character and Personality, Volume 1, p. 59)

“The Lord desires us to appreciate the great plan of redemption, to realize our high privilege as the children of God, and to walk before Him in obedience, with grateful thanksgiving. He desires us to serve Him in newness of life, with gladness every day. He longs to see gratitude welling up in our hearts because our names are written in the Lamb’s book of life, because we may cast all our care upon Him who cares for us. He bids us rejoice because we are the heritage of the Lord, because the righteousness of Christ is the white robe of His saints, because we have the blessed hope of the soon coming of our Saviour.”ⁱ

- E.G. White

ⁱ White, E. G. (1900). Christ’s Object Lessons. Review and Herald Publishing Association. p. 299.

CHAPTER 32

IF WE WOULD BE BUT MORE GRATEFUL: THE POWER AND SCIENCE OF GRATITUDE

A powerful church sign caught my attention. It unflinchingly proclaimed, “The covetous man is always poor.” “How true”, I thought. It’s a paradigm, a perspective, when you’re always wanting something, your thoughts are thoughts of discontent, with your current plight. As such, you’re not cultivating feelings of satisfaction or peace, but of want and desire. Really, it’s selfishness. Then it came to my mind that there must be an opposite truth. Perhaps a sign could read, “The grateful man is always wealthy!”

Have you ever heard, or sung the song, “Count Your Blessings” by Johnson Oatman? Here it is:

COUNT YOUR BLESSINGS

1. When upon life’s billows you are tempest-tossed,
When you are discouraged, thinking all is lost,
Count your many blessings; name them one by one,
And it will surprise you what the Lord has done.

[Chorus]

Count your blessings;
Name them one by one.
Count your blessings;
See what God hath done.
Count your blessings;
Name them one by one.
Count your many blessings;
See what God hath done.

2. Are you ever burdened with a load of care?
Does the cross seem heavy you are called to bear?

Count your many blessings; ev’ry doubt will fly,
And you will be singing as the days go by.

3. When you look at others with their lands and gold,
Think that Christ has promised you his wealth untold.

Count your many blessings; money cannot buy
Your reward in heaven nor your home on high.

4. So amid the conflict, whether great or small,
Do not be discouraged; God is over all.
Count your many blessings; angels will attend,
Help and comfort give you to your journey’s end.

I believe that singing that song, in truth and in the Spirit, could really make you richer! Are you ready for a raise? You are going to have to sing for it. :-)

WHAT IS GRATITUDE?

What does a dictionary say about gratitude?
Good old Webster’s 1828 Dictionary says the following:

GRATITUDE, n. [L. gratitudo, from gratus, pleasing. See Grace.]

An emotion of the heart, excited by a favor or benefit received; a sentiment of kindness or good will towards a benefactor; thankfulness. Gratitude is an agreeable emotion, consisting in or accompanied with good will to a benefactor, and a disposition to make a suitable return of benefits or services, or when no return can be made, with a desire to see the benefactor

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prosperous and happy. Gratitude is a virtue of the highest excellence, as it implies a feeling and generous heart, and a proper sense of duty. The love of God is the sublimest gratitude.

A thesaurus has these synonyms to compare:

Acknowledgment
Obligation
Recognition
Thanks
Appreciativeness
Grace
Gratefulness
Honor
Indebtedness
Praise
Requital
Response
Responsiveness
Thankfulness
Thanksgiving
Sense of Obligation

Ultimately, to whom is our gratefulness directed? I like Psalms 50:23 on this, it's worth reading: "Whoso offereth praise glorifieth me:" This is a part of the great circle of beneficence: God showers blessings down on us, we share blessings with others, then praise and gratitude return back to God!

"Looking unto Jesus we see that it is the glory of our God to give. 'I do nothing of Myself,' said Christ; 'the living Father hath sent Me, and I live by the Father.' 'I seek not Mine own glory, but the glory of Him that sent Me.'" John 8:28; 6:57; 8:50; 7:18. In these words is set forth the great principle which is the law of life for the universe. All things Christ received from God, but He took to give. So in the heavenly courts, in His ministry for all created beings: through the beloved Son, the Father's life flows out to all; through the Son it returns, in praise and joyous service, a tide of love, to the great Source of all. And thus, through Christ the circuit of beneficence is complete, representing the character of the great Giver, the law of life."¹

ARE ALL GRATEFUL?

"This know also, that in the last days perilous times shall come. For men shall be lovers of their own selves, covetous, boasters, proud,

blasphemers, disobedient to parents, unthankful,"²

The wicked are characterized as unthankful.

"Because that, when they knew God, they glorified him not as God, neither were thankful; but became vain in their imaginations, and their foolish heart was darkened."³

Why be grateful? What are the benefits?

GRATITUDE IMPROVES YOUR HEALTH

"A merry [rejoicing] heart doeth good like a medicine.' Proverbs 17:22. Gratitude, rejoicing, benevolence, trust in God's love and care—these are health's greatest safeguard."⁴

A grateful outlook—recognizing and appreciating the positives in our lives can:

- Make us more optimistic. Optimism, in turn, makes us happier, improves our health, and has been shown to increase lifespan by several years. Optimism has been shown to decrease depression, anxiety, PTSD (Post Traumatic Stress Disorder) and suicides.^{5,6}
- Decrease the likelihood of being suicidal when showing gratitude to others.⁷
- Make heart failure patients less fatigued, less depressed and more optimistic about controlling their symptoms.⁸
- Lower blood sugar and HbA1c levels.⁹ Elevated HbA1c levels have been associated with chronic kidney disease, cancer, and diabetes.
- Improve long term survival in cancer patients.¹⁰
- Lower triglycerides making heart attacks less likely.¹¹
- Decrease the risk of another heart attack in someone who has already had one.^{12,13}
- Decrease psychological stress and harmful stress hormones.¹⁴
- Reduce inflammation: TNF- α and IL-6 decrease as gratitude increases.¹⁵
- Decelerate the effects of neurodegeneration, helping to stave off Alzheimer's and other dementias.¹⁶
- Reduce the amount of fatty comfort foods people eat, thus helping to combat obesity.¹⁷
- Help alleviate insomnia, giving better sleep quality.^{18,19}

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- Lower dangerously high blood pressure.²⁰

Nothing means nothing! Look at this quote: "Nothing tends more to promote health of body and of soul than does a spirit of gratitude and praise...While words express thoughts, it is also true that thoughts follow words. If we would give more expression to our faith, rejoice more in the blessings that we know we have, --the great mercy and love of God, --we should have more faith and greater joy."²¹

GRATITUDE IMPROVES OUR LIVES

Gratitude makes us feel good.²² Gratitude is really happiness that we recognize after-the-fact, from the kindness of others. Gratitude doesn't just make us happier, it is a form of happiness in and of itself! "The soul may ascend nearer heaven on the wings of grateful praise."²³

Gratitude strengthens our positive emotions.²⁴ Gratitude helps us: bounce back quicker from stress, reduces feelings of envy, and lets us experience more good feelings. As we are grateful, God gives us more for which to be grateful. "God loves the thankful heart, trusting implicitly in His words of promise, gathering comfort and hope and peace from them; and He will reveal to us still greater depths of His love."²⁵

Gratitude reduces materialism.^{26,27,28} Materialism reduces the sense of well-being and increases rates of mental disorders.²⁹ The problem with materialism is that it makes you feel less competent, reduces your feelings of relatedness and gratitude, reduces your ability to appreciate and enjoy the good in life, generates negative emotions, and makes you more self-centered. How does gratitude reduce materialism?³⁰ Gratitude helps by reducing our tendency to compare ourselves to those with a higher social status. Those who cultivate an attitude of gratitude are more likely to perceive benevolence, which in turn causes their brains to assume they are in an environment full of social support, which in turn kills insecurity and materialism.

Gratitude makes us less self-centered. The very nature of gratitude is to focus on others (on

their acts of benevolence toward us or people we are close to).³¹

"As every blessing we enjoy is brought to us through the condescension, humiliation, and sacrifice of Jesus Christ, we should render to him our best gifts, above all not withholding ourselves. The infinite sacrifice which Christ has made to free us from the guilt and woe of sin, should work in every heart a spirit of gratitude and self-denial which is not manifested by the world. God's gift of Christ to man filled all Heaven with amazement, and inspired at his birth the angelic song, 'Glory to God in the highest, and on earth peace, good will toward men.'"³²

"Looking upon the crucified Redeemer, we more fully comprehend the magnitude and meaning of the sacrifice made by the Majesty of heaven. The plan of salvation is glorified before us, and the thought of Calvary awakens living and sacred emotions in our hearts. Praise to God and the Lamb will be in our hearts and on our lips; for pride and self-worship cannot flourish in the soul that keeps fresh in memory the scenes of Calvary."³³

Did you know that gratitude can makes our past memories happier? Cultivating a grateful spirit helps us to remember the past in a more positive light. It can actually transform some of our neutral or even negative memories into positive ones.³⁴

As Chronicles says, "All things come of thee"³⁵

Gratitude reduces feelings of envy.³⁶ Envy produces feelings of inadequacy, insecurity, materialism, inferiority, distrust, and unhappiness. Just like it is impossible to feel optimistic and pessimistic at the same time, gratitude is the act of perceiving benevolence, while envy and jealousy is the act of perceiving inadequacy. Benevolence and inadequacy cannot be completely perceived at the same time.³⁷ "A humble mind and a grateful heart will elevate us above petty trials and real difficulties."³⁸ The Bible speaks of love as charity and says, "charity envieth not;" 1 Corinthians 13:4. Showing gratitude to others must then be an expression of love. One way of loving your neighbour would be to show or express to him something about him for which you are grateful.

Gratitude increases your spirituality.³⁹ Gratitude awakens our spiritual nature, helping

us feel closer to God. "O give thanks unto the LORD; for he is good: for his mercy endureth for ever."⁴⁰

There is an inconceivable blessing in being grateful! "No tongue can express, no finite mind can conceive, the blessing that results from appreciating the goodness and love of God."⁴¹

Really, Christianity is all about gratitude! "In this was manifested the love of God toward us, because that God sent his only begotten Son into the world, that we might live through him. Herein is love, not that we loved God, but that he loved us, and sent his Son to be the propitiation for our sins. Beloved, if God so loved us, we ought also to love one another."⁴²

Gratitude makes you more likely to take part in healthy exercise.⁴³ In one study, those who kept a weekly gratitude journal exercised 40 minutes more per week.

Gratitude increases your energy levels.⁴⁴ Gratitude and vitality are strongly correlated – the grateful are much more likely to report physical and mental vigor. "Gratitude deepens as we give it expression, and the joy it brings is life to soul and body."⁴⁵

Gratitude increases your productivity. Gratitude fosters life satisfaction and improved motivation in youth.⁴⁶ "Let each give love rather than exact it. Cultivate that which is noblest in yourselves, and be quick to recognize the good qualities in each other. The consciousness of being appreciated is a wonderful stimulus and satisfaction. Sympathy and respect encourage the striving after excellence, and love itself increases as it stimulates to nobler aims."⁴⁷

Gratitude helps you network with others⁴⁸ and make friends more readily.⁴⁹ And who doesn't need more good friends, especially ones that are attracted to grateful people?

Gratitude improves your decision-making ability.⁵⁰ It helps not to be too self-focused when attempting objective decision-making.

Gratitude helps you relax.⁵¹ Gratitude and positive emotions are among the strongest relaxants known to man. "I will both lay me down in peace, and sleep: for thou, LORD, only makest me dwell in safety."⁵²

Gratitude helps us bounce back. People who express gratitude are more resilient, their negative emotional swings don't last as long. Those that have more gratitude are less likely to develop post-traumatic stress disorder, and are

more likely to grow in times of stress.⁵³ "In every thing give thanks: for this is the will of God in Christ Jesus concerning you."⁵⁴ "And we know that all things work together for good to them that love God, to them who are the called according to his purpose."⁵⁵ Like Joseph, we can say, "But as for you, ye thought evil against me; but God meant it unto good, to bring to pass, as it is this day, to save much people alive."⁵⁶ Joseph could see the good in all things and trust all to God with gratefulness.

Gratitude helps your marriage.⁵⁷ There is a ratio that has been called the Losada ratio, which divides the total number of positive expressions (support, encouragement, and appreciation) made during a given period of time, by the number of negative expressions (disapproval, sarcasm, and cynicism). When the ratio is below .9, that is, there are 11% more negative expressions than positive expressions, marriages tend to plummet towards divorce. Marriages that last and are satisfying, are those with a positivity ratio above 5.1 (five positive expressions to each negative). You may want to start a gratitude journal just to list positive things about your spouse.

BECOMING MORE GRATEFUL

One of the most effective ways you can improve your thankfulness is to keep a gratitude journal.⁵⁸ Take time daily to remind yourself of the gifts, grace, benefits, and good things you enjoy. Recall moments of gratitude associated with ordinary events, your personal attributes, or valued people in your life. "Then they that feared the LORD spake often one to another: and the LORD hearkened, and heard it, and a book of remembrance was written before him for them that feared the LORD, and that thought upon his name."⁵⁹

Be aware, through your senses, of things in your surroundings that call fourth your grateful praise.⁶⁰ Through our senses— the ability to touch, see, smell, taste, and hear— we gain an appreciation of God's blessings and of what an incredible miracle it is to be alive. Seen through the lens of gratitude, the human body is not only a miraculous construction, but also a gift.⁶¹ "I will praise thee; for I am fearfully and

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wonderfully made: marvellous are thy works; and that my soul knoweth right well.”⁶²

It is also helpful to have visual reminders. The two obstacles to gratefulness are forgetfulness and a lack of mindful awareness, visual reminders can serve as cues to trigger thoughts of gratitude. Some people keep a crucifix around to remind them of Christ's death on Calvary. Often times, the best visual reminders are other people.⁶³ In the Bible, visual reminders include the rainbow⁶⁴ and scenes and articles from Jesus' parables.⁶⁵

“The irregular mountains of the earth we should look upon as God's fountains of blessings from which flow forth the waters to supply all the living creatures. Every time I look upon the mountains, I feel gratitude to God. My heart is lifted up in praise to Him who knows the wants and needs of man. If the earth had been a uniform level, there would be stagnant marshes.”⁶⁶

Go through the physical motions of being grateful. If you go through grateful motions, the emotion of gratitude should be triggered. Grateful motions include smiling, saying thank you, and writing letters of gratitude. Fake it till you make it.⁶⁷

Do your words tend toward thankfulness? Watch closely what you say. Grateful people have a particular linguistic style that uses the language of gifts, givers, blessings, blessed, fortune, fortunate, and abundance. I had one friend who always, when asked how he was doing, would say, “I am blessed”. In gratitude, you should not focus on how inherently good you are, but rather on the good things others have done on your behalf.⁶⁸

“The language of the soul should be that of joy and gratitude. If any have dark chapters in their experience let them bury them. Let this history not be kept bright by repetition. Forgetting the things that are behind, press forward to the things that are before. Cultivate only those thoughts and those feelings which shall produce gratitude and praise. If you have been wronged, forget it, and think only of the

great mercies, the loving-kindness, and inexpressible love of Jesus. Learn to praise rather than to censure.”⁶⁹

Make a pledge to practice gratitude. Research shows that making an oath to perform a behavior increases the likelihood that the action will be repeated. Therefore, write your own gratitude vow, which could be as simple as “I vow to count my blessings each day,” and post it somewhere where you will be reminded of it every day.⁷⁰

Establish and maintain rituals of gratitude.⁷¹ When rituals of gratitude are a normal part of both your routine and your special events, you connect with those around you in a way that benefits everyone. The experience you share with your partner and/or your children becomes a meaningful time of bonding. So, say thank you, say it often, and say it together.⁷² For example, the yearly ritual of the feast of tabernacles was a joyous commemoration of the blessings of God to us as a people. “Well would it be for us to have a feast of tabernacles, a joyous commemoration of the blessings of God to us as a people. As the children of Israel celebrated the deliverance that God wrought for their fathers, and his miraculous preservation of them during their journeyings from Egypt to the promised land, so should the people of God at the present time gratefully call to mind the various ways he has devised to bring them out from the world, out from the darkness of error, into the precious light of truth.”⁷³

Did you know that in the Bible God prescribes a day for gratitude? We learn this by looking at the Psalm written specifically for the weekly Sabbath. “A Psalm or Song for the sabbath day. It is a good thing to give thanks unto the LORD, and to sing praises unto thy name, O most High.”⁷⁴

Learn prayers of gratitude. For example, “O give thanks unto the LORD; for he is good; for his mercy endureth for ever. And say ye, Save us, O God of our salvation, and gather us together, and deliver us from the heathen, that we may give thanks to thy holy name, and glory in thy

praise. Blessed be the LORD God of Israel for ever and ever. And all the people said, Amen, and praised the LORD.”⁷⁵ Prayers of gratitude are a powerful form of prayer, because through these prayers people recognize the ultimate source of all they are and all they will ever be. “Begin every day with earnest prayer, not omitting to offer praise and thanksgiving.”⁷⁶ “Be careful for nothing; but in every thing by prayer and supplication with thanksgiving let your requests be made known unto God.”⁷⁷ “Prayer is addressing the mind to God, the Fountain of wisdom, the Source of strength and peace and happiness. Prayer includes acknowledgment of the divine perfections, gratitude for mercies received, penitential confession of sins, and earnest entreaty for the blessing of God, both for ourselves and for others.”⁷⁸

“When you open your eyes in the morning, thank God that He has kept you through the night. Thank Him for His peace in your heart. Morning, noon, and night, let gratitude as a sweet perfume ascend to heaven.”⁷⁹

Can you always be grateful? If you have God in your life you can: “Although the fig tree shall not blossom, neither shall fruit be in the vines; the labour of the olive shall fail, and the fields shall yield no meat; the flock shall be cut off from the fold, and there shall be no herd in the stalls: Yet I will rejoice in the LORD, I will joy in the God of my salvation.”⁸⁰

In seeking to cultivate an attitude of gratitude it may be helpful to remember the not-so-good we have experienced in the past. To be grateful in your current situation, you may find it helpful to remember the hard times that you once lived through. When you remember how difficult life used to be and how far you have come, this contrast is fertile ground for gratefulness. As Ezekiel says, “Then shall ye remember your own evil ways, and your doings that were not good.”⁸¹ This contrast will become especially real to us when we reach heaven, where, upon thinking back and comparing heaven with the trials in this current earth we will be compelled

to exclaim, “Alleluia! heaven is cheap enough.”⁸²

“Now therefore, our God, we thank thee, and praise thy glorious name. But who am I, and what is my people, that we should be able to offer so willingly after this sort? for all things come of thee, and of thine own have we given thee.”⁸³

“And I thank Christ Jesus our Lord, who hath enabled me, for that he counted me faithful, putting me into the ministry; Who was before a blasphemer, and a persecutor, and injurious: but I obtained mercy, because I did it ignorantly in unbelief.”⁸⁴

“We must know our real condition, or we shall not feel our need of Christ's help. We must understand our danger, or we shall not flee to the refuge. We must feel the pain of our wounds, or we should not desire healing.”⁸⁵

“The degree of our love for God depends upon the clearness and fullness of our conviction of sin. ‘By the law is the knowledge of sin.’ The more we see of the perils to which we have been exposed by sin, the more grateful we shall be for deliverance.”⁸⁶

Your diet could affect your capacity to be more grateful. “The gratitude we offer to God for His blessings is greatly affected by the food placed in the stomach. Indulgence of appetite is the cause of dissension, strife, discord, and many other evils.”⁸⁷

“But Jeshurun waxed fat, and kicked: thou art waxen fat, thou art grown thick, thou art covered with fatness; then he forsook God which made him, and lightly esteemed the Rock of his salvation.”⁸⁸

“Remove far from me vanity and lies: give me neither poverty nor riches; feed me with food convenient for me: Lest I be full, and deny thee, and say, Who is the LORD? or lest I be poor, and steal, and take the name of my God in vain.”⁸⁹

SHOWING GRATITUDE TO OTHERS

Give a gift of gratitude.⁹⁰ When choosing a gift aimed specifically at expressing gratitude, opt for meaningful over monetary value. Gratitude in itself is a gift, but giving a thoughtful, personal gift, that can be kept, displayed, and treasured is something really special.⁹¹

We can give God gifts of gratitude. “It is God who blesses men with property, and He does this that they may be able to give toward the advancement of His cause. In turn, He would have men and women show their gratitude by returning Him a portion in tithes and offerings--in thank offerings, in freewill offerings, in trespass offerings.”⁹²

Show gratitude by random acts of kindness.⁹³ Random acts of kindness can yield substantial reward in terms of subjective well-being.⁹⁴ If you see a stranger struggling under a heavy load of shopping, offer a hand. Donate unwanted clothes to charity. Help someone with directions who is lost.⁹⁵ “We should be self-forgetful, ever looking out for opportunities, even in little things, to show gratitude for the favors we have received of others, and watching for opportunities to cheer others and lighten and relieve their sorrows and burdens by acts of tender kindness and little deeds of love.”⁹⁶

“Gratitude deepens as we give it expression, and the joy it brings is life to soul and body.”⁹⁷

Show gratitude through your own creative work. A friend of ours showed their appreciation for a bridal shower gift we had given them by including in a thank you card a book mark they had hand painted themselves. What a treasure and unforgettable expression of gratitude!

Express your gratitude in words. Words are powerful and the simplest, most direct, way to express gratitude to the people we may otherwise take for granted. Given proximity, a verbal expression of your appreciation in person is effective – if you can’t do it in person, make the phone call and brighten somebody’s day.⁹⁸

Express your appreciation face to face with a gratitude visit.⁹⁹ While expressing gratitude in person might be a big step for some, the gesture of going out of your way to tell someone how much you appreciate them is enough for everyone to feel the benefits. If you can’t make the visit in person, you could send a personalized video message.¹⁰⁰

Do not criticize, condemn or complain. We tend to focus on the negative. Every time we complain we’re reinforcing a negative state of mind, making it more difficult to feel and express gratitude. Remember some things are out with your control; focus on the positive instead.¹⁰¹

Show an interest in them, ask how they are doing and listen attentively to their response! It’s easy to feel overwhelmed; the simple act of actively listening to your loved ones can be an effective way to show you value them. Put down your phone, remain attentive and let them steer the conversation.¹⁰²

Write a note or letter of gratitude.¹⁰³ Spend some time thinking about what you appreciate most about your friends, teacher, or parents and draft a letter by hand, expressing your sentiments. While recognizing your gratitude is important – just writing it down is enough to make you feel warm inside – actually reading the letter out loud is worth so much more. Maybe jumping in with a full gratitude letter is too big a first step for you to make, that’s OK! Why not try a “thank you” note in a thoughtfully selected or handmade card? While writing thank you notes is a bit of a lost art; it takes almost no time at all, and can be a sincere expression of gratitude.¹⁰⁴

What does God really long for, what is the inner desire of His heart? “The Lord desires us to appreciate the great plan of redemption, to realize our high privilege as the children of God, and to walk before Him in obedience, with grateful thanksgiving. He desires us to serve Him in newness of life, with gladness every day. He longs to see gratitude welling up in our hearts because our names are written in the Lamb’s

book of life, because we may cast all our care upon Him who cares for us. He bids us rejoice because we are the heritage of the Lord, because the righteousness of Christ is the white robe of His saints, because we have the blessed hope of the soon coming of our Saviour.”¹⁰⁵

“Our hearts are to be so filled with the love of Christ that our words of thanksgiving shall warm other hearts.”¹⁰⁶

“God so loved the world that he would not suffer it to remain possible for it to be said that he could have given us more, or manifested for the human family a greater measure of love. He knew that the great manifestation of love, displayed in the life and death of the Son of God, would awaken the fiercest jealousy on the part of Satan. The gift of Christ to the world was beyond computation, and no power could compete with God by giving a gift that would bear any comparison to the value of heaven's best treasure. The greatness of this gift was to furnish men with a theme of thanksgiving and praise that would last through time and through eternity. Having given his all in Christ, God lays claim to the heart, mind, soul, and strength of man. Looking upon the treasure which God has provided in the full and complete gift of Christ, we can exclaim: ‘Herein is love!’”¹⁰⁷

“Those who show true gratitude glorify God by loving him supremely and their neighbors as themselves.”¹⁰⁸

“Many, walking along the path of life, dwell upon their mistakes and failures and disappointments, and their hearts are filled with grief and discouragement. While I was in Europe, a sister who had been doing this, and who was in deep distress, wrote to me, asking for some word of encouragement. The night after I had read her letter I dreamed that I was in a garden, and one who seemed to be the owner of the garden was conducting me through its paths. I was gathering the flowers and enjoying their fragrance, when this sister, who had been walking

by my side, called my attention to some unsightly briars that were impeding her way. There she was mourning and grieving. She was not walking in the pathway, following the guide, but was walking among the briars and thorns. “Oh,” she mourned, “is it not a pity that this beautiful garden is spoiled with thorns?” Then the guide said, “Let the thorns alone, for they will only wound you. Gather the roses, the lilies, and the pinks.”

Have there not been some bright spots in your experience? Have you not had some precious seasons when your heart throbbed with joy in response to the Spirit of God? When you look back into the chapters of your life experience do you not find some pleasant pages? Are not God's promises, like the fragrant flowers, growing beside your path on every hand? Will you not let their beauty and sweetness fill your heart with joy?

The briars and thorns will only wound and grieve you; and if you gather only these things, and present them to others, are you not, besides slighting the goodness of God yourself, preventing those around you from walking in the path of life?

It is not wise to gather together all the unpleasant recollections of a past life, — its iniquities and disappointments, — to talk over them and mourn over them until we are overwhelmed with discouragement. A discouraged soul is filled with darkness, shutting out the light of God from his own soul and casting a shadow upon the pathway of others.

Thank God for the bright pictures which He has presented to us. Let us group together the blessed assurances of His love, that we may look upon them continually: The Son of God leaving His Father's throne, clothing His divinity with humanity, that He might rescue man

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from the power of Satan; His triumph in our behalf, opening heaven to men, revealing to human vision the presence chamber where the Deity unveils His glory; the fallen race uplifted from the pit of ruin into which sin had plunged it, and brought again into connection with the infinite God, and having endured the divine test through faith in our Redeemer, clothed in the righteousness of Christ, and exalted to His throne—these are the pictures which God would have us contemplate.”¹⁰⁹

IN SUMMARY:

- A spirit of gratitude yields physical, mental, social and spiritual health benefits.
- Make it a practice to remember what you are grateful for.
- Spread gratitude by expressing it to others in words and acts.
- Our greatest gratitude goes to God to whom we owe everything in life.

*“According to your faith
be it unto you.”ⁱ*

- Jesus Christ, The Great Physician

ⁱ Matthew 9:29. King James Version of the Holy Bible.

CHAPTER 33

HEALTH BY FAITH: WHOLE PERSON HEALING

HEALING FAITH

Health of body and restoration of the sick depend on the faith, submission and obedience of the suppliant and are the prerogative of God. God works in mysterious ways His wonders to perform. “Not by might, nor by power, but by my spirit, saith the LORD of hosts.”¹

A recognized author from the 1800s, AT Jones, well respected for his contributions to our understandings of “righteousness by faith” declares:

“Health reform, as such, is to be practiced by faith in Christ. And when our people get to that place where they will live health reform by faith in Christ, then they will live righteousness by faith in Christ. Any one who does not live righteousness by faith in Christ, cannot live health reform as God has given it. One is just as really a matter of faith as the other. Did not God give it? Has he not prescribed it? Is he not the source of it? Does he not intend to be not only the author but the finisher of it? Then is it not of faith? Read Romans, fourteenth chapter, and note especially the last verse, and the last words of that verse, —‘Whatsoever is not of faith is sin.’ And this is spoken of eating and drinking, too. Well, let us get hold of it that way, and apply it that way, and then that will bring in a better practice of health reform among us.”²

This means I carry out in faith that which I know to be the best according to God’s revealed will and I rest in confidence that God will do the rest.

Another author says it this way: “If the sick and suffering will do only as well as they know in regard to living out the principles of health reform perseveringly, then they will in nine cases out of ten recover from their ailments.”³

The implication is, 90% of the diseases from which we suffer are related in some way to our lifestyle practices, good, bad or negligent. Can we expect or ask the blessing of God on poor management of the physical resources with which He has endowed us? Can we expect Him to save us from ourselves despite an ambivalence over His instructions regarding the preservation of our bodies from disease? Can I in good faith pray for healing while continuing the lifestyle practices which brought disease? On the other hand, is worry about illness reasonable if I *have done* all in my knowledge and power to be a diligent custodian of my physical endowments?

NATURE IS NOT SELF-WORKING

To better understand this, a realization of the involvement of God in our existence is relevant. Did He just create everything and then leave it to run all on its own, like a perpetual motion machine? Has God made me so very intricate and complicated only to hand off the maintenance of this precious body machinery to me? Or is He at work keeping it all in order? His word declares to us that: “He giveth to all life, and breath, and all things;” that: “in him we live, and move, and have our being;”⁴ And that He is: “upholding all things by the word of his power”⁵ The reason why all things continue is that: “he is strong in power; not one faileth.”⁶ *There is not a breath you take, nor a move you make, that is not a blessing directly from God at that very moment.* Were it not for Him, all life would disintegrate. Feel for your pulse! Have you noticed the hand of God in your life today?

“The mechanism of the human body cannot be fully understood; it presents mysteries that

baffle the most intelligent. It is not as the result of a mechanism, which, once set in motion, continues its work, that the pulse beats and breath follows breath. In God we live and move and have our being. Every breath, every throb of the heart, is a continual evidence of the power of an ever-present God.”⁷

Reach down and find your pulse; that predictable throb is God at work in your life. Do you trust Him?

SUSTAINED IN HEALTH OR DISEASE

And so, the question arises, If He sustains me in everything I do, is He not just as able to make me well as to sustain me in sickness? And what would make the difference? I believe His words in Exodus 15:26 have the answer:

“If thou wilt diligently hearken to the voice of the LORD thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the LORD that healeth thee.”⁸

So long as we cooperate with God, obeying His instructions for the care of our bodies and souls, He can do for us that which we cannot do for ourselves. Notice that the freedom from disease and the healing come in the context of obedience. Conversely, we put Him at a disadvantage, in caring for us, when we violate the natural laws governing our existence. Can we do in faith that which we know harms or is not the best for us and expect Him to override our misdoings?

What do I do if I find myself at the receiving end of blessings removed? Of disease and a need for healing? Of God keeping me alive, but just barely?

We often think of faith healing as supernatural in character and in results. And while I believe God has some miraculous intervention He would like to do for us, His chosen way of working is in cooperation with simple divinely inspired remedies and in adherence to His natural laws.

“Natural means, used in accordance with God’s will, bring about supernatural results. We ask for a miracle, and the Lord directs the mind to some simple remedy. We ask to be kept from the pestilence that walketh in darkness, that is

stalking with such power through the world; we are then to cooperate with God, observing the laws of health and life. Having done all that we possibly can, we are to keep asking in faith for health and strength. We are to eat that food which will preserve the health of the body. God gives us no encouragement that He will do for us what we can do for ourselves. Natural laws are to be obeyed. We are not to fail of doing our part. God says to us, ‘Work out your own salvation with fear and trembling. For it is God which worketh in you both to will and to do of His good pleasure’ (Philippians 2:12, 13).

“We cannot disregard the laws of nature without disregarding the laws of God. We cannot expect the Lord to work a miracle for us while we neglect the simple remedies He has provided for our use, which, aptly and opportunely applied, will bring about a miraculous result. “Therefore, pray, believe, and work.”⁹

REMEDY OF THE DAY

And God’s remedies are not always predictable or the same every time. Take for example the two instances of the healing of bitter waters mentioned in the Bible. For Moses, a tree had to be cut down and thrown into the water. For Elisha, a vessel of salt to be poured in to the water was prescribed. Both enjoyed the blessing of God, but the solution varied. Following God by faith brings blessing. Likewise, the healing of leprosy in the Bible shares the blessing of healing amongst many different interventions of remedies. Naaman is told to go dip in a muddy river seven times, Miriam goes out on a period of quarantine, ten lepers are sent on a run and find relief, and several are simply touched by the hand of God as He walked on earth. And while the apparent solution varied, the involvement of faith remained the same--men did what God asked.

So, ask in prayer, apply simple remedies, follow natural law and expect healing as providence sees best. Thus, faith in healing is like faith in redemption.

RIGHTEOUSNESS BY FAITH IS OBEDIENCE BY FAITH.

We do what God has said is right and His power sustains us and saves us from the wages or results of our sin. Health reform by faith is obedience by faith to *all God's health laws and instructions*. We do what God has said is right and His power sustains us and saves from physical death and disease.

"When we bring our lives to complete obedience to the law of God, regarding God as our supreme Guide, and clinging to Christ as our hope of righteousness, God will work in our behalf. This is a righteousness of faith, a righteousness hidden in a mystery of which the worldling knows nothing, and which he cannot understand. Sophistry and strife follow in the train of the serpent; but the commandments of God diligently studied and practiced, open to us communication with heaven, and distinguish for us the true from the false. This obedience works out for us the divine will, bringing into our lives the righteousness and perfection that was seen in the life of Christ."¹⁰

Faith it is, and in faith I am to act, and by faith I experience health.

LIFESTYLE OF FAITH

And what is it that I am to live on (in faith)?

"If fruits, vegetables and grains are not sufficient to meet the wants of man, then the Creator made a mistake in providing for Adam."¹¹

Today is that food only "sufficient" if I add to it supplements? (of ... protein, vitamins, dead animals, bottled fats, refined sugars, glyconutrients...?) If we do what God has prescribed, can we not expect His blessings of health?

The garden of Eden is not the only time that God got involved in our actual menu. In the wilderness God gave, what to many minds might seem a very monotonous diet--one thing on the menu for 40 years. Where's the variety in that? But what is the lesson from that menu? God said that He prescribed that particular diet for a purpose. The purpose was said to be to "prove" them. "Then said the LORD unto Moses, Behold, I will rain bread from heaven for you; and the people shall go out and gather a certain rate every day, that I may prove them, whether they

will walk in my law, or no."¹² The proving revealed their hearts. They rebelled against the diet. They said: "our soul loatheth this light bread."¹³ This incident became an immortal lesson for all generations to follow of Israel's failure to enter into a righteousness by faith covenant with God. This incident of refusing the menu is referred to as the "provocation"¹⁴ "To day if ye will hear his voice, Harden not your heart, as in the provocation, and as in the day of temptation in the wilderness: When your fathers tempted me, proved me, and saw my work. Forty years long was I grieved with this generation, and said, It is a people that do err in their heart, and they have not known my ways: Unto whom I swear in my wrath that they should not enter into my rest."¹⁵ They did not like the diet that God had provided for them and which He had promised to bless. After all, it was He who was giving them every breath of air, why not trust Him on the food too? That would be like us turning our noses up at fresh fruits and vegetables, "loathing" them, and requesting a menu change (probably to something health destroying but appealing to a perverted appetite). We **must** have faith in our food and choose food by faith. Food God has chosen for us. Look at what Romans 14 says and note that it is in the context of food.

"It is good neither to eat flesh, nor to drink wine, nor any thing whereby thy brother stumbleth, or is offended, or is made weak. Hast thou faith? have it to thyself before God. Happy is he that condemneth not himself in that thing which he alloweth. And he that doubteth is damned if he eat, because he eateth not of faith: for whatsoever is not of faith is sin."¹⁶ How do I apply this to food? Only eat that which in good conscience you can believe will add to the health of your body and spirit—the Creator's diet! "Then God said, 'I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food.'"¹⁷ "and you will eat the plants of the field."¹⁸

GOD SAID IT, I BELIEVE IT, THAT SETTLES IT FOR ME

Perhaps we need a little of the attitude, "God said it, I believe it, that settles it for me!" Do right and expect health! "Without faith it is

impossible to please him: for he that cometh to God must believe that he is, and that he is a rewarder of them that diligently seek him.”¹⁹

One famous faith healing experience in the Bible is when the people of Israel were bitten by poisonous serpents. Moses was instructed to make a serpent out of brass and hang it on a pole in front of the congregation. All who had been bitten, if they looked at the serpent, in faith, would live. “The command came to Moses to lift up a brazen serpent on a pole, and to tell the people that if they would look upon it, they should live. Suppose that one had said, ‘O, my wounds are too grievous. I am so full of fever and suffering that I cannot raise my eyes. Wait till I am a little better.’ Could he get better without following the directions? -- No, he would only grow worse and worse, and die. The only remedy was to fasten his eyes on the brazen serpent. The instruction was, “Look and live,” and every soul who did this was healed.”²⁰

Jesus used this as an example of salvation in the New Testament. “And as Moses lifted up the serpent in the wilderness, even so must the Son of man be lifted up: That whosoever believeth in him should not perish but have eternal life.”²¹

FAITH IS FOLLOWING THE DIRECTIONS

And if we have a righteousness that is not by such faith, what kind of righteousness do we possess? And if we have health that is not by a faith that follows the directions of God, what kind of health do we have? And what are we most apt to substitute for faith?

“He says, ‘Whatsoever ye shall ask the Father in My name, He will give it you.’ He promises to come to us as a Comforter to bless us. Why do we not believe these promises? That which we lack in faith we make up by the use of drugs. Let us give up the drugs, believing that Jesus does not desire us to be sick, and that if we live according to the principles of health reform, He will keep us well.”²² What pill do you take for salvation? And do we keep going to the doctors of the Philistines to see if we are well or not?

THE PRAYER OF FAITH IS NOT PRESUMPTION

Drugs do not cure disease, they do not heal. Or if they seem to, they do so only partially or slightly. And really, to be only partially healed, is

not to be healed at all. “They have healed also the hurt of the daughter of my people slightly,”²³ God sees through this and is not really pleased with the whole charade. “For my people have committed two evils; they have forsaken me the fountain of living waters, and hewed them out cisterns, broken cisterns, that can hold no water.”²⁴

WHO IS YOUR HEALER?

Who is your healer? And if not God, are you really healed? Who do you want to be your healer? The Bible comments on building in a way that I think is instructive to our whole discussion of healing. “Except the LORD build the house, they labour in vain that build it: except the LORD keep the city, the watchman waketh but in vain.”²⁵ If it is not God building the house, who is doing it? If it is not God watching the city, who then is the watchman? “Who forgiveth all thine iniquities; who healeth all thy diseases;”²⁶ If it is not God who has healed you, then who did you entrust with the care of your blood bought body? Who we turn to in time of illness shows who we honour or worship.

“If any among us are sick, let us not dishonor God by applying to earthly physicians, but apply to the God of Israel. If we follow his directions (James 5:14, 15) the sick will be healed. God’s promise cannot fail. Have faith in God, and trust wholly in him, that when Christ who is our life shall appear we may appear with him in glory.”²⁷ The Bible comments on a king who exemplifies this principle. “And Asa in the thirty and ninth year of his reign was diseased in his feet, until his disease was exceeding great: yet in his disease he sought not to the LORD, but to the physicians.”²⁸

But what if we have exhausted all our options and no recovery has come?

“Why is it that men are so unwilling to trust Him who created man, and who can by a touch, a word, a look, heal all manner of disease? Who is more worthy of our confidence than the One who made so great a sacrifice for our redemption? Our Lord has given us definite instruction through the apostle James as to our duty in case of sickness. When human help fails, God will be the helper of His people. ‘Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing

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him with oil in the name of the Lord: and the prayer of faith shall save the sick, and the Lord shall raise him up.' If the professed followers of Christ would, with purity of heart, exercise as much faith in the promises of God as they repose in satanic agencies, they would realize in soul and body the life-giving power of the Holy Spirit."²⁹

Are we ready to give up on the world and let God be our healer?

HOW DO WE GET THIS HEALING?

"The Lord has given me light that when the Israel of today humble themselves before Him, and cleanse the soul-temple from all defilement, He will hear their prayers in behalf of the sick and will bless in the use of His remedies for disease. When in faith the human agent does all he can to combat disease, using the simple methods of treatment that God has provided, his efforts will be blessed of God."³⁰

When we do our part in faith God can do His part in faith too. But, what if it is not in God's will to heal us? What if He sees that it is not in our best interest to return to life. Hezekiah is a good illustration of this principle.

WHAT IF IT IS NOT GOD'S WILL FOR YOU TO BE HEALED?

"In those days was Hezekiah sick unto death. And Isaiah the prophet the son of Amoz came unto him, and said unto him, Thus saith the LORD, Set thine house in order: for thou shalt die, and not live."³¹ Wouldn't it be just lovely to know, not only when you are going to die, but that you were assured of the accomplishment of the task of setting your house in order—being a guaranteed inheritor of salvation. Not Hezekiah, "Then Hezekiah turned his face toward the wall, and prayed unto the LORD, And said, Remember now, O LORD, I beseech thee, how I have walked before thee in truth and with a perfect heart, and have done that which is good in thy sight. And Hezekiah wept sore."³² At this God was not insensitive to Hezekiah's wishes, however misdirected. "Then came the word of the LORD to Isaiah, saying, Go, and say to Hezekiah, Thus saith the LORD, the God of David thy father, I

have heard thy prayer, I have seen thy tears: behold, I will add unto thy days fifteen years."³³

But what of the additional fifteen years? During that lingering time Hezekiah sold the nation out to the Babylonians, raised a son, Manasseh, who would apostatize and actually take the life of the prophet Isaiah. The point is, Hezekiah did not know when to die! Now I am not making a point for dying, but, in God's providence and wisdom, there is a time for everything, a time to live and a time to die. "A time to be born, and a time to die; a time to plant, and a time to pluck up that which is planted;"³⁴ We don't want to be so eager to maintain our own life here on earth that we resort to unhallowed means to achieve our existence. "For whosoever will save his life shall lose it; but whosoever shall lose his life for my sake and the gospel's, the same shall save it."³⁵ All must be on the altar, ready to live or sacrifice as God in His all-knowing providence shall indicate.

And what if God decides not to heal us? "Although the fig tree shall not blossom, neither shall fruit be in the vines; the labour of the olive shall fail, and the fields shall yield no meat; the flock shall be cut off from the fold, and there shall be no herd in the stalls: Yet I will rejoice in the LORD, I will joy in the God of my salvation."³⁶ Just trust in Jesus, He has your best interest in view. Do you believe that? "Often your mind may be clouded because of pain. Then do not try to think. You know that Jesus loves you. He understands your weakness. You may do His will by simply resting in His arms."³⁷

HEALTH BY FAITH NECESSITATES TRANSFORMATION BY FAITH.

The heart must be in it or it is of no avail. "All true obedience comes from the heart. It was heart work with Christ. And if we consent, He will so identify Himself with our thoughts and aims, so blend our hearts and minds into conformity to His will, that when obeying Him we shall be but carrying out our own impulses. The will, refined and sanctified, will find its highest delight in doing His service. When we know God as it is our privilege to know Him, our life will be a life of continual obedience."³⁸ Given a new heart, we will want to engage in life

preserving health reform. "Those who would work in God's service must not be seeking worldly gratification and selfish indulgence. The physicians in our institutions must be imbued with the living principles of health reform. Men will never be truly temperate until the grace of Christ is an abiding principle in the heart. All the pledges in the world will not make you or your wife health reformers. No mere restriction of your diet will cure your diseased appetite. Brother and Sister Maxson will not practice temperance in all things until their hearts are transformed by the grace of God and they shall wear Christ's yoke and have Christ's meekness and lowliness of heart."³⁹ Following good health practices because you "have to" only makes you into an enemy of God. It is not health by faith. It makes God out to be an arbitrary tyrant. "A sullen submission to the will of the Father will develop the character of a rebel."⁴⁰ "The man who attempts to keep the commandments of God from a sense of obligation merely--because he is required to do so--will never enter into the joy of obedience." In fact, "He does not obey."⁴¹ True faith, in regard to health, is the whole-hearted engagement in the practices of healthful living while looking to God for strength and life.

MOTIVE POWER

It really comes down to motive. Paul, in the Bible, is a good illustration of the true motive which must underlie health by faith. "At the time of his conversion, Paul was inspired with a longing desire to help his fellow men to behold Jesus of Nazareth as the Son of the living God, mighty to transform and to save. Henceforth his life was wholly devoted to an effort to portray the love and power of the Crucified One. His great heart of sympathy took in all classes. 'I am debtor,' he declared, 'both to the Greeks, and to the barbarians; both to the wise, and to the unwise.' Romans 1:14. Love for the Lord of glory, whom he had so relentlessly persecuted in the person of His saints, was the actuating principle of his conduct, his motive power. If ever his ardor in the path of duty flagged, one glance at the cross and the amazing love there revealed, was enough to cause him to gird up the loins of his mind and press forward in the path of self-denial."⁴²

IN MANY RESPECTS, THE ONLY LIMIT ON YOUR HEALTH IS YOUR FAITH

Jesus has said, "According to your faith be it unto you."⁴³ A story that is illustrative of this point is of a father whose son was possessed of a demon. Jesus, "asked his father, How long is it ago since this came unto him? And he said, Of a child. And oftentimes it hath cast him into the fire, and into the waters, to destroy him:" The man then showed his lack of faith, "but if thou canst do any thing, have compassion on us, and help us." Jesus knew that the child was not going to be healed without faith—faith that this man did not have. "Jesus said unto him, If thou canst believe, all things are possible to him that believeth." At this the father realized that it was his unbelief that stood between his son and healing, "And straightway the father of the child cried out, and said with tears, Lord, I believe; help thou mine unbelief."⁴⁴ If we are having difficulty believing, this should be our prayer too, "Lord, I believe; help thou mine unbelief."

Healing and health are dependent upon faith; Jesus knew this. It was people's lack of faith that limited His healing ministry, as it does today. "And he did not many mighty works there because of their unbelief."⁴⁵ He was known to say, "And ye will not come to me, that ye might have life."⁴⁶ How often do we stay away when we could have life if we only came to Him in faith, believing that He does not want us to be sick, following His instructions and claiming His promises. "Who his own self bare our sins in his own body on the tree, that we, being dead to sins, should live unto righteousness: by whose stripes ye were healed."⁴⁷ Can we believe that by His stripes we are/were healed?

WE NEED MORE FAITH, BUT HOW?

"So, then faith cometh by hearing, and hearing by the word of God."⁴⁸ When do we have time for the word? "And ye shall teach them your children, speaking of them when thou sittest in thine house, and when thou walkest by the way, when thou liest down, and when thou risest up."⁴⁹ And then we will become strong in faith, not wavering, "But let him ask in faith, nothing wavering. For he that wavereth is like a wave of the sea driven with the wind and tossed. For let

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not that man think that he shall receive any thing of the Lord.”⁵⁰

One of the things we need to believe, have faith in, or, in other words trust, is the instruction God has given us regarding health found in the writings of His prophets. “Believe in the LORD your God, so shall ye be established; believe his prophets, so shall ye prosper.”⁵¹ And what kind of prosperity are we talking about here? How about prosperity in health? “Beloved, I wish above all things that thou mayest prosper and be in health, even as thy soul prospereth.”⁵² So you read the instruction, in faith practice it and leave the results, by faith, in the hands of God. In the words of AT Jones: “Well, then, you must eat good victuals in order to have good blood.... Therefore the Lord has told us what is good to eat. Here is the rule: Find out what God says is good to eat; ... Then thank the Lord for it, eat it with a glad heart. And THEN LET IT ALONE.... Be sure that it is good, and good for you, and when you have eaten it, let it alone. Of course it will not digest right when you are bothering it all the time, and keeping it from digesting. Let it alone. Having thanked the Lord for it, and asked His blessing upon it, believe that His blessing is upon it. Why do we ask the Lord to bless our food and bless it to its intended use, and then not believe that He does it? Where is the faith in that? That is not health reform. Let us quit it.”⁵³

The insightful statement, “According to your faith be it unto you.”⁵⁴ goes both ways. You will receive no greater results than your faith encompasses, be it good or be it otherwise. “If you are in constant fear that your food will hurt you, it most assuredly will.”⁵⁵ How instructive is that! And how about this? “Disease is sometimes produced, and is often greatly aggravated, by the imagination. Many are lifelong invalids who might be well if they only thought so. Many imagine that every slight exposure will cause illness, and the evil effect is produced because it is expected. Many die from disease the cause of which is wholly imaginary.”⁵⁶

AT Jones goes on in his comparison of healing to salvation. “Health reform, then, is just as certainly—I do not say as much but as certainly—a part of God’s plan of salvation as righteousness by faith. He wishes us our souls prosper; but how can our souls prosper without

righteousness by faith?—They cannot do it. He wishes above all things that we may prosper and be in health even as our souls prosper. Then how can our health prosper as he wishes it without health reform by faith?—It cannot do it.”⁵⁷ Can you make yourself righteous? Can you make yourself healthy? Can you have a settled faith in the righteousness of Christ? Can you have a settled faith in the outcome of health you experience upon diligently following all God’s health instructions for you? Salvation is freedom from sin (which is disobedience). “No one can believe with the heart unto righteousness, and obtain justification by faith, while continuing the practice of those things which the Word of God forbids, or while neglecting any known duty.”⁵⁸ Likewise, true health only comes in freedom from sin (which includes disobedience to natural health laws). Are you willing for God to save you, not only from your moral sins, but from your transgressions of His natural laws—are you willing to have a salvation that includes not only forgiveness, but a will and strength to do the right things?

The healing message of God is a classroom, a lesson book, for the saving message of God! It is righteousness by faith in action. “From the simple Bible account of how Jesus healed the sick, we may learn something about how to believe in Him for the forgiveness of sins. Let us turn to the story of the paralytic at Bethesda. The poor sufferer was helpless; he had not used his limbs for thirty-eight years. Yet Jesus bade him, ‘Rise, take up thy bed, and walk.’ The sick man might have said, ‘Lord, if Thou wilt make me whole, I will obey Thy word.’ But, no, he believed Christ’s word, believed that he was made whole, and he made the effort at once; he willed to walk, and he did walk. He acted on the word of Christ, and God gave the power. He was made whole.”⁵⁹ “Well then, I say again that the object of health reform is not merely for health’s sake, and that that is not God’s view of it. When it is practiced and taught anywhere merely for health’s sake, it is not meeting God’s mind. Of course, the person who practices it will have better health, but will he be prepared for what it is to prepare him? —No. Getting people ready to meet Jesus Christ, to be translated, ready for the Lord, —that is the Lord’s idea and purpose in health reform.”⁶⁰

AT THE TIME OF THEIR IGNORANCE GOD WINKED AT

Now suppose in the past you have ignorantly (or not so ignorantly) transgressed the natural health laws of life established by God and are now reaping the results of ill health. What then? Well, God has a solution. If you return to Him in contrition and obedience, His promise is, "And I will restore to you the years that the locust hath eaten,"⁶¹ In such case we have a job, a duty, we are to work to recover the loss. "Wherefore, O king, let my counsel be acceptable unto thee, and break off thy sins by righteousness, and thine iniquities by shewing mercy to the poor; if it may be a lengthening of thy tranquillity."⁶² We are to replace bad habits with good ones. "Bring forth therefore fruits meet for repentance:"⁶³ If in the past we have doubted God's methods of healing, are we now willing to take His Power, and "Break off our sins by righteousness"?

I am reminded of a dear lady who was a member of the team which hosted one of our health seminars. While she was helpful and worked hard in the meetings, her personal acceptance of the health message was superficial. This all changed a year later when she received a diagnosis of cancer. Now she was all ears, now the health message was a priority. All of a sudden, she was a believer and diligent to apply all the information she could get. And

she did adopt standards of healthy living, and she was blessed of God, and she did have a remission in her cancer. And was she delighted. But as time went on and things seemed to be all good in the health department, she let her standards down, it was then that the cancer returned, and it returned with a vengeance, and her funeral was a sad one.

We are talking here about health by faith, a faith that intelligently applies the remedies given. We trust in God and in the wise implementation of His guiding principles for our health. Having done all in our power to align ourselves with God's principles of life, we commit the keeping of our health to Him and rely on His strength to be happy whatever the apparent results. As with salvation we can say, "Nothing in my hand I bring; Simply to thy cross I cling."

In conclusion, there is no health or salvation in neglect of faith-based health reform. God includes health with salvation. Salvation is by truehearted obedient faith. Health is by truehearted obedient faith. There is no salvation in disobedience. There is no health in disobedience. A saving relationship with Jesus is a healing relationship with Jesus. Do you want to ask God to give you complete faith in His health care plan for you? Do you want Jesus to be your all-encompassing Saviour today of mind, body and spirit?

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Chapter 5 – References

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