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Metabolism 2.0



How To Lose Weight & Optimize
Your Health, Using Real Food

Your Metabolism Affects Your:

- ✓ Weight & Energy
- ✓ Brain, Gut & Heart Health
- ✓ Hormones
- ✓ Mental Health
- ✓ And So Much More!



Dr. M. Brandon Pettke

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PREFACE

The Why Behind the What: Why I Wrote This Book

Since the year 2000, when I first started studying nutrition and how it related to health, I heard and learned a lot of conflicting information. I was even formerly taught in my doctorate program different from what I have come to learn as truth, and what works in the real world for patients. It has taken me years to sift through the information and research to find out what is accurate and what truly works to improve patients' health. After speaking with patients through the years, I know that they are just as confused about nutrition. There are those who think they are eating healthy when, in fact, they are not. Their health is being negatively affected because of their lack of knowledge of nutrition.

I have come to realize over the years that what a person eats and drinks is the foundation of his/or her health. We can have the absolute best and most advanced medicine of all time, but if what we consume in food and drink is unhealthy, then even the best medicines will not overcome those unhealthy diets.

Throughout my years of practice as a doctor helping patients improve their health, I've seen a lot of "fad diets" come and go. Every few years there seems to be a new popular diet. For many, these fad diets provide only short-term results and no lasting health improvements. This book is not one of those. This book is intended to provide sound nutritional principles that will last the test of time, for centuries to come. This book is intended to be the foundation that people can rely upon as truth for many years to come.

So, I decided to write this book for that exact reason; to give people clarity on healthy nutrition, and on how to improve the health of the body by what we put in it for nutrition. Once you start improving the health of the body, it will naturally lose weight, abnormal blood work will begin to normalize, and a person can subsequently optimize their health to the fullest.

Many people will go on a diet to try and lose weight. If their primary intention is only to lose weight, and not necessarily to get healthy, then there is a very high probability that the excess weight will come back. I have seen this countless times over the years when patients do gimmick diets and programs. Therefore, throughout this book, I will be focusing on getting your body healthy.

We will also be discussing many myths that are commonly held as truths. Statements like the following are myths and are false:

- “I have to eat a low-calorie diet to lose weight.”
- “If I eat fat, it will make me fat.”
- Low-fat foods and drinks are healthier for you.
- Red meat causes heart disease.
- Cholesterol causes heart disease.
- Vegetable oil is healthier than animal fats.
- “I need to exercise an hour a day to lose weight.”
- “Smaller, more frequent meals will boost my metabolism and help me lose weight.”
- “I have to eat tons of fruits and vegetables to be healthy and lose weight.”
- Whole grains are good for you.

I know you are probably questioning me on some of these and thinking they are true statements. I even thought the same thing in years past, but they simply are not. The medical literature over the last several decades, and certainly in more recent years, is continuing to show what I have laid out in this book to be true, even though it may not be common knowledge... yet.

The Why Behind the What: Why I Wrote This Book

All truth passes through three stages.
First, it is ridiculed.
Second, it is violently opposed.
Third, it is accepted as being self-evident.

—attributed to Arthur Schopenhauer

With that quote said, I also realize that some of the topics I cover in this book are more controversial than others. I realize there are larger organizations that are very closely tied financially to the current food system and structure. Their profits depend on it. I also realize that those organizations will vehemently dispute and oppose what I write in this book if they were to ever read it. But my goal is not to please those organizations. My goal is to provide accurate information that can transform the health of your body. My goal is to keep this book relatively simple, so you can quickly read and understand the information and, more importantly, take action and implement it. For those who would like to know more details and research, I will provide resources at the end. You can see ample amounts of specific details on subject matters, data, and research this book covers.

I truly want this book to be LIFE CHANGING for you in three ways:

1. Improve your health.
2. Lose weight—get down to your ideal weight range (BMI) and maintain it for life.
3. Optimize your health to the fullest, through foundational nutritional principles.

So, let's get started!!

To Your Health!

Dr. M. Brandon Pettke

CHAPTER 1

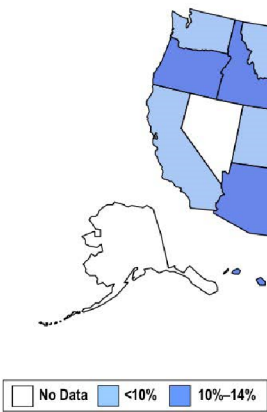
Something Needs To Change

Our country is clearly in a health crisis at this time in history. We spend more money per person on healthcare than any other country in the world, and we have some of the lowest health ratings and outcomes per dollar spent. Yet, our insurance premiums and deductibles keep rising. Amongst the decreased health of our country, we certainly have an obesity epidemic leading to much of the healthcare costs that we have.

Since 1990, the number of people who are clinically obese has risen dramatically. Just look at the below infographics from the CDC showing what percentage of a state's population is clinically obese (a BMI of 30 or more). See Figure 1.

In 1990, the highest percentage of obesity of any state was 10-14% of the state's population [1]. In 2016, just 26 years later, the lowest percentage of obese people in any state was 20-24% [2] with nearly half of the entire country's states having 30% or more of their population obese (Figure 2.) Never in this short amount of time in human history have we had this dramatic a change in obesity rates. It is not only costing us financially but more importantly it is reducing the quality of our lives and literally taking years off of our lives. And since 2016, it has only continued to get worse!

Obesity Trends* Among U.S. Adults, BRFSS 1990 ⁽¹⁾
(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



Self-reported Obesity Prevalence by US State and Territory, BRFSS, 2016.

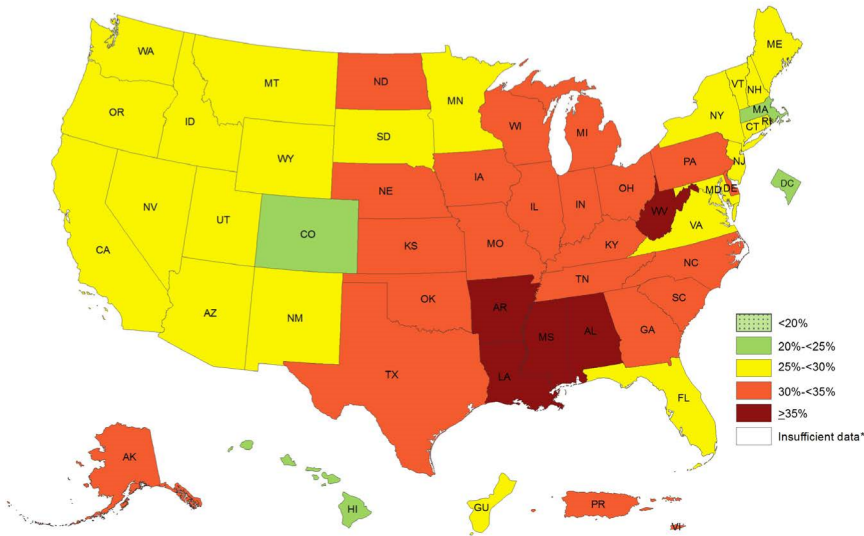


Figure 1

Source: Behavioral Risk Factor Surveillance System, CDC.

Figure 2

Source: [cdc.gov/media/releases/2017/a0831-self-reported-obesity-prevalence-infographic.html](https://www.cdc.gov/media/releases/2017/a0831-self-reported-obesity-prevalence-infographic.html)

The top 4 out of 6 killers in this country are [3]:

1. Heart disease
2. Cancer
3. Stroke
4. Diabetes

Over 45% of the people who will pass away in the U.S. will die from heart disease and cancer alone! Every single one of the above listed has a direct link to obesity. Yes, even cancer. The American Cancer Society states, “The World Cancer Research Fund estimates that about 20% of all cancers diagnosed in the US are related to body fatness, physical inactivity, excess alcohol consumption, and/or poor nutrition, and thus could be prevented.”[4]

The more underlying link is a condition referred to as metabolic syndrome. Metabolic syndrome is a name for a group of risk factors occurring together and increases the chances of having heart disease, stroke, and Type II diabetes [5,6]. Those risk factors include high blood pressure, abnormal cholesterol, high triglycerides, increased blood sugar, abnormal thyroid levels, and fatty liver.

The Mayo Clinic states, “If you have metabolic syndrome or any of the components of metabolic syndrome, aggressive lifestyle changes can delay or even prevent the development of serious health problems.” So, that is what I am going to lay out here—those lifestyle changes that must take place. It must be something different from what you have been doing. Something that actually works! Einstein is attributed to saying, “We can’t solve problems by using the same kind of thinking we used when we created them.” The current diets that continue to be promoted by the USDA and other national organizations frankly do not work. In the following chapters, I will lay out what has worked clinically.

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CHAPTER 2

What Causes Metabolic Syndrome?

In short, chronic ingestion of carbohydrates causes metabolic syndrome. Specifically, ingested in the form of high glycemic carbohydrates. Not all carbohydrates are the same, which we will discuss in a later chapter. When we have a high percentage of our diet and calories coming from high glycemic carbohydrates over many years, our body's adaptive response is to begin producing the risk factors that are associated with metabolic syndrome. But, just like the body adapts when we consume unhealthy things for our body, the body also adapts positively when we put healthy things into our body.

Carbohydrates are essentially complex sugars. How quickly our body can break carbohydrates down into sugars determines how quickly carbohydrates can raise our blood sugar. When our bodies break carbohydrates down into sugars rapidly, those carbohydrates are referred to as high glycemic carbohydrates. When our bodies break carbohydrates down into sugars more slowly, those are referred to as low glycemic carbohydrates.

The continuous and regular ingestion of high glycemic carbohydrates leads to obesity, metabolic syndrome, and Type II Diabetes[1-8]. When blood sugar rises quickly (ingestion of high glycemic carbohydrates), our body releases insulin rapidly in response. Insulin in the blood rises rapidly, and subsequently, our blood sugar levels drop. Unfortunately, insulin levels do not lower as quickly in the blood as do the blood sugar levels. When insulin is above a certain level, either insulin (the fat storing hormone) triggers our body to retain the fat storage

that it already has, or it packs on even more unhealthy fat. Hours later, when insulin has dropped below, or near, the fat burning level, we typically get hungry. Subsequently, we eat another high glycemic meal, spike our blood sugar again, and the process repeats itself all over again.

When people continuously spike their blood sugar repeatedly through the ingestion of high glycemic carbohydrates, they retain and gain weight over time. This leads to much frustration for an individual. Many people are simultaneously working out an hour or more a day and still not losing the weight they desire. Many times they plateau in their weight loss. An hour or more a day of working out does not necessarily lead to weight loss. Diet is the issue. Specifically, insulin (the fat-storing hormone) is not being normalized, so it ultimately does not matter how much they work out. They will not lose weight. This can easily lead to hopelessness when it comes to weight loss.

The tremendous amount of high glycemic carbohydrates we consume in our Western society also creates an inflammatory response in the body. Specifically, the gastrointestinal (GI) tract, also known as the gut, is greatly affected negatively. When we inflame the gut, a number of symptoms begin to occur. Some of the most common are:

- pain or discomfort after eating
- gas or bloating
- constipation
- diarrhea
- reflux, GERD, or heartburn

Additionally, when we consume high glycemic carbs or highly processed carbs, we consume small amounts of water-soluble fiber. Water-soluble fiber is found in fruits and vegetables. Water soluble fiber can be dissolved by water in the gut and is what probiotics (the good bacteria found naturally in a healthy gut) feed on and proliferate from. If we don't have sufficient amounts of water-soluble fiber, this will alter our gut microbiome (the ratio of good bacteria to bad bacteria). This will, in turn, lead to an overgrowth of bad bacteria (and fungi/yeast), which leads to many of the previously mentioned symptoms. Additionally, it will lead to increased rates of infections, which lead to more antibiotics. Antibiotics kill not only the bad bacteria but also simultaneously kill the good bacteria [9,10]. This, in turn, leads to an even more negatively altered

gut microbiome, and a downhill spiral of health. Our bodies, and all of their organs and tissues, are ecosystems. And if we alter one part of the ecosystem significantly, it will have far-reaching effects on other areas of the ecosystem. Keep this in mind as we discuss the “Foundational Nutrition” principles throughout the book. Disease processes that may not seem related or connected to what we eat and drink, many times, have a direct connection to our health.

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CHAPTER 3

Simply Cutting Calories Does Not Cause Long-Term Weight Loss

I know there are many who have cut calories to lose weight and get healthy. Some have quite severely limited calories at times. Many do lose weight with this approach; however, it is usually short-term. As soon as those individuals go back to eating a more “regular” calorie diet, the weight comes right back on, and many times when they do this, the weight comes back on with a few extra pounds for “good measure.” This is commonly called “yo-yo dieting.” It is very commonplace, and it is not healthy for the body.

The problem is that simply cutting calories is not the long-term solution. Regulating hormones, metabolism, and normalizing physiology (how the body functions) is the solution. A person can actually eat a “high calorie” diet, not feel like they are starving, still lose weight, get to their ideal weight, maintain it, and be healthy. No, it is not too good to be true. Yes, it can be done as we will discuss in this book.

If we took 100 calories of white bread and compared them with 100 calories of pasture-raised beef, we would find them to be vastly different. Not only are the white bread calories vastly deficient in vitamins and minerals compared to the pasture-raised beef calories, but the white bread calories also cause a huge spike in blood sugar levels. When blood sugar levels rise, so does insulin (the fat storing hormone). Pasture raised beef calories do not spike blood sugar like

white bread calories, and also have healthy fats and cholesterol, which are precursors to a variety of hormones which regulate the body's physiology and homeostasis (body systems trying to stay in equilibrium). The sex hormones in the body are some of the main regulating hormones of body weight. Cholesterol is a precursor to ALL sex hormones. The fact that we, as the public, have been pounded in our heads to eat a low-fat, cholesterol-free diet has done innumerable damage to our health [1,2]. In clinical practice, this has been one of the toughest beliefs I have found for patients to overcome. And I purposefully use the word "belief". As you will learn, we have been marketed to for decades as this being the truth. In actuality, as you will learn in this book, it is not true. Additionally, the low-fat and cholesterol-free mantra that is still preached, is based on decades-old research that has been unproven over the last 10-15 years with more modern science. The majority of the general public still believes that a low-calorie, low-fat, cholesterol-free diet, is the healthiest. I'm telling you, it is absolutely not!

Gary Taubes, in his book *Good Calories, Bad Calories* [3], does an excellent job of explaining the controversial science of diet and its effects on health. He lists an exhaustive number of research articles spanning decades of nutritional research. He has a follow-up book that is not as voluminous, but it still does a great job of explaining why we have the obesity epidemic and health crisis in this country. The book is simply called *Why We Get Fat* [4]. Another book that explains this relationship greatly is *The Big Fat Surprise*, by Nina Teicholz [5]. If you are a details kind of person, these books are excellent reads and are listed in the resource guide at the end of this book. However, what I cover in this book is a synopsis of all of these and other books.

Remember, simply cutting calories, fat, and cholesterol is not the solution. Regulating hormones, metabolism, and normalizing physiology is the solution. Luckily, your body knows exactly what to do and how to do that. We simply must give it the right foods, which I will continue to outline as we go along.

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CHAPTER 4

The Importance of Healthy Fats

As alluded to in the previous chapters, healthy fats play an integral role in your body becoming healthy and subsequently losing weight. One of the biggest beliefs of people trying to lose weight is “If I eat fats, I will get fat.” For half a century, it has been pounded into our heads as the truth. It simply is not. Actually, eating healthy fats will do very little to have a person gain weight. In fact, healthy fats will help a person lose weight [1,2]!

Fats contain nine calories per gram. Proteins and carbohydrates each contain four calories per gram. So, at first glance, if a person thinks, “If I cut calories, I will lose weight,” then it appears to make sense. Unfortunately, as mentioned before, this is not the case. Simply cutting calories does not necessarily lead to weight loss. Hormonal, metabolic, and physiological control leads to weight loss. However, with this inaccurate line of thinking of cutting calories as equal to weight loss, one would then logically conclude that “Fat contains more calories, so if I cut fat, I will cut more calories and drop weight faster.” This second conclusion is precluded on the first assumption being correct. However, since the first is not accurate, the second is not either. Again, while this is the thought process of most Americans, the literature does not support this simple notion [3]. This is really good news for those who want to lose weight and be healthy because they do not have to starve themselves to obtain their goals. Gary Taubes explains this in detail in his books listed in the resource section at the end.

Not all fats are created equal. There are fats that are good and health-promoting, and there are fats that have the opposite effect on the body.

Let's list the good fats first:

- Animal fats (meats, cheeses, butter, ghee, dairy products)
- Animal lard
- Animal tallow
- Fish

***The previous 4 items, I will qualify what types of animal fats in Chapter 11. There, I write about the quality of food, and how it is raised, being vitally important to health.*

- Coconut/MCT oil
- Avocados & avocado oil
- Olive oil
- Tree nuts (not peanuts or peanut oil. They have too many Omega-6 fatty acids, which we will discuss later in this chapter)

Here are the unhealthy fats you want to stay away from:

- Vegetable oils (soybean, sunflower, cottonseed, canola, corn, safflower, peanut, sesame, palm, and rapeseed)
- Trans-fats
- Hydrogenated oils
- Margarine, shortening, and butter replacements
- Soy milk

Looking at the above lists, many people will question if these lists are accurate because they have heard the opposite most, if not all of their life. Additionally, they have been marketed too insidiously on which fat is healthier. I will discuss and explain more to clear confusion and long-held beliefs that are making people unhealthy and causing them to retain unhealthy fat.

The fats listed under the healthy list are rich in vitamins and minerals. The Inuit (Eskimos), Masai in Africa, and the Arizona Pima Indians all lived on a nearly 100% animal meats and fats diet (when they consumed their traditional diet) [4]. When they were studied, they were found to have none to very little

percentages of our current chronic disease processes (obesity, heart disease, cancer, diabetes, and stroke). When they switched to a diet that was more prevalent in carbohydrates and processed foods, the incidences of the aforementioned diseases rose greatly. The Pima Indian group has been studied extensively. Their ancestors were lean and very fit on their traditional diet. Those direct descendants are now predominantly overweight and obese, and diabetes is insidious in their tribe, among other chronic diseases. Scientists agree that genes do not change for 10,000 years or more; therefore, there is not a recent genetic mutation to explain the differences in health. They are directly related to their lifestyle habits, specifically their change in diet. The field of science that studies the effects of lifestyle habits on gene expression is called epigenetics. In the last decade, epigenetics has uncovered a lot of groundbreaking evidence that our lifestyle habits have a direct relationship to our gene expression and our overall health status.

The early 1900's are when the first vegetable oils came on the market as a potential food product. Proctor & Gamble came out with what would later be called Crisco. Prior to this, vegetable oils were used primarily in machinery as lubrication. It was not until the 1950's that they started being incorporated as part of the diet more regularly. This was after heart disease was seen to be on the rise, and scientists were trying to figure out the reason for the sharp increase in heart disease. Decades later, it was concluded that the increased smoking rates after WWII caused inflammation in the body, and subsequently the heart disease. When President Eisenhower had a heart attack in 1957 and was out of the Oval Office for 10 days, the national concern over heart disease was brought to the public's attention. Prior to this era, in the early 1900's, a physician could go his entire career and never see a patient who had a heart attack. This is unheard of today!

Today, heart disease is the leading cause of death in the United States. When the President's heart attack occurred in 1957, a scientist by the name of Ancel Benjamin Keys had been working on his diet-heart hypothesis and presented this as a reason for the increase in heart disease. Mr. Keys vilified saturated fat and cholesterol as the causes of heart disease [5]. Turns out, that neither of these causes heart disease. Mr. Keys was a prominent scientist of the day and continued to push his diet-heart hypothesis vehemently on colleagues, physicians, and prominent national organizations like the American Heart

Association. In the 1960's, the use of vegetable oils in food really began to gain traction as a possible solution to combat heart disease and replace the vilified saturated fat. By the 1970's, more and more food products were using vegetable oils, and the low-fat diet began to be pushed heavily. In 1977, the USDA adopted and promoted the low-fat and high-carb diet for increased health. In 1980, the first USDA food pyramid was released. At the base of the pyramid were loads of carbohydrates. Primarily high glycemic carbohydrates, in which many contained vegetable oils. The USDA food pyramid and guidelines are updated every five years. Only in recent years has any significant change been suggested to the guidelines and food pyramid. Unfortunately, it still does not reflect what should be consumed for optimal human health.

In the 1920's, the percentage of calories that were obtained from vegetable oils in the American diet amounted to 0%. Today, the percentage of calories has risen to 7-8% of the total calories consumed by the average American. During this same time, heart disease and cancer rates have risen as the public has consumed less saturated fat, increased its carbohydrate intake, and; subsequently, greatly increased the consumption of vegetable oils. Coinciding with these increased rates of disease, the obesity rates have mirrored them with a substantial rise in rates.

So, in approximately 100 years, we have dramatically changed what we consume as humans. We now consume a large number of our calories that were not even a food option, or readily available, a little over a century ago! This is significant because there are some critical issues with vegetable oils, which we will discuss.

First, vegetable oils were not originally called vegetable oils. They were called "seed oils", and they were only used in industrial machines prior to the early 1900's. In order to obtain and use vegetable oils, they all must be chemically extracted from grains, seeds, or beans. Hence the name "seed oils". They were given the name "vegetable oil" because the word "vegetable" appeared to be healthier when marketing the products. "Seed oil, "grain oil", and "bean oil" just don't sound as healthy in marketing! So "vegetable oils" are literally industrial oils. Things like animal fats/lard/tallow, fish oil, coconut oil, olive oil, and avocado oil do not have to be chemically extracted to be obtained and consumed; hence, they have been consumed for millennia by humans.

One of the concerns with chemically extracted vegetable oils is that they go rancid more easily, because they are in a liquid state at room temperature. This is why in human history they were not consumed as part of the diet. In more modern times, scientists created a solution to oils going rancid rapidly. A German scientist first discovered this process. Proctor & Gamble learned of this and filed for two patents in 1908 in America. In 1911, they came out with the first hydrogenated oil food product. This product would later be called Crisco [5]. Hydrogenation is a process where hydrogen is added to the oils and changes the molecular structure. Depending on the amount of hydrogenation that occurs, the more solid the oil becomes. This prevents degradation of the oils and to not go rancid as quickly, which extends shelf life of products and increases profits. It also produced what are called trans-fats. Most of the public now knows about trans-fats. In the mid-2000's, the USDA began requiring food manufacturers to label the amount of trans-fats in products because of the known health risks [6]. The largest health risk is that it creates increased inflammation in the body, which is a primary precursor to chronic diseases if inflammation levels are elevated and sustained chronically. This is also why there is a direct correlation to an increase in heart disease with trans-fats. Even with the general public knowing more about them, they are still in numerous packaged foods. When you look at labels, look for "hydrogenated ____ oil" or "trans fats." The unfortunate thing is that the USDA allows the packaging to claim "0 grams trans-fats" when there is .5 or fewer grams per serving. Food manufacturers then began to reduce the labeled serving size to stay within the requirements. They did not alter the amount of trans-fats in many cases. So many in the public are still unknowingly consuming these unhealthy fats because they read "0 grams trans-fats" on the packaging. It's a marketing trick used by some food manufacturers. In addition to the trans-fats and their ill health effects, scientists state there are about 50 other chemicals that are produced when vegetable oils are hydrogenated and heated [7]. So, there is potential for further ill health effects that we are not fully aware of, yet.

Vegetable oils are also full of Omega-6 fatty acids. Think of Omega-6's as pro-inflammatory. Animal fats/lard/tallow, fish, avocados, olive oil, and tree nuts (particularly walnuts and almonds) are full of Omega-3 fatty acids. Think of Omega-3's as anti-inflammatory.

The most important aspect, according to the research, is the ratio of Omega-3's to Omega-6's. In the human body, the Omega-3 to Omega-6 ratio should be 1:1, up to 1:4, for optimal human health. It has been shown that those who have a ratio of 1:10 or higher will have chronic diseases. Chronic diseases include heart disease, diabetes, cancer, stroke, obesity, gastrointestinal disturbances, increased pain levels, and the list goes on and on. Unfortunately, most Americans have a ratio of 1:15 to 1:30+. Most Americans consume so many more Omega-6 fatty acids ("vegetable oils") than Omega-3 fatty acids that their body is literally in a chronically inflamed state. The most recent research is showing that the aforementioned chronic diseases have a large correlation to and causation from chronic long-term inflammation in the body [8]. This is why the associated increase in cigarette smoking (which also causes inflammation in the body) led to increased rates in heart disease in the 1940's and 50's. Once the public was told that they should eat less saturated fats and increase carbohydrate intake, the rates of heart disease and cancer continued to rise not decline as predicted. Both of these led to increased inflammation systemically in the body, amongst other things. Then vegetable oil use in the American diet began to increase in the 1970's. This, too, led to more inflammation in the body, and also led to more heart disease and cancer rates. Sadly, the trend has continued.

In the 1990's, genetically modified organisms (GMO's) were first introduced to our food supply. This, too, led to increased inflammation in an individual's intestinal tract and body. Since then, there has been a direct correlation to the increase in disease rates of the intestinal tract specifically [9, 10]. Diseases like Celiac's, Crohn's, Intestinal Bowel Syndrome, diverticulitis, diverticulosis, gastritis, GERD, and gluten sensitivities are just a few examples.

Just think, 15 years ago, did you ever see a gluten-free menu, or hear of gluten-free food items? The plethora of Omega-6's ("vegetable oils") we now consume as a nation is part of the reason for this. Also, did you hear of so many children having food allergies of all kinds? There is a reason for this, and it is not simply bad genes. Remember, scientists agree that genes do not change for 10,000+ years. Our environmental changes, what we now consume as food, is what has DRASTICALLY changed in the last 100 years.

In addition to the high Omega-6 fatty acid content in the aforementioned vegetable oils, the vast majority of these oils are genetically modified organisms

(GMO's). More and more healthy food labeling contains "GMO-free." This is important because GMO's take genetics from different species and combine them to create traits that are more beneficial economically for the seed manufactures and allegedly the farmers, but some farmers would argue this. Unfortunately, GMO's do not have long-term health studies, and there is research to show that they cause detriments to human health. Specifically, there is a link to increased inflammation in the gut. The strongest connection is to the GMO plants that contain "glyphosate-ready" seeds. They are also known as "Roundup Ready" seeds, meaning DNA from other organisms are spliced into the DNA of corn, for example, and this allows the corn plant to be sprayed with Roundup weed killer. Yet, it does not kill the corn because of the resistant spliced-in DNA of the other species. The idea is this will keep weeds from growing in the desired crops, which will lead to more yield of the plant and higher profits; however, consuming produce that is sprayed with Roundup and other chemicals clearly inflames the intestinal tract and causes all kinds of issues. Would you knowingly consume Roundup? The majority of Americans do....daily.

There is a strong recent link in the research showing that glyphosate (Roundup) is the precursor to a lot of the gluten sensitivities and allergies that have been occurring [10]. As stated earlier, 15 years ago, did you ever see "gluten-free" menus? Now, these menus are everywhere, and food packaging is regularly labeled "gluten-free." GMOs started being used in the late 1990's and have progressively been used more and more. About 96-98% of all soybeans grown in this country are now GMOs. About 94-96% of all corn grown now are GMOs. Combine the chemicals sprayed on these plants with the ingestion of pro-inflammatory Omega-6's found in the oils, and you have a recipe for disaster in regard to human health. Can you start to see the puzzle pieces coming together as to why our disease and obesity rates keep rising each year?

Here is a list of GMO crops: alfalfa, canola, corn, cotton, papaya, soy, and sugar beets (for refined sugar). Think of how many of these items listed are in the foods that we, as Americans, regularly eat. They are everywhere now! One might ask, "Well if they are so bad for our health, why would they be used so much?" That is a complicated answer, but in short, there are powerful lobbying groups with lots of money who are persuading lawmakers in Washington D.C. You may not know it, but GMOs are outlawed to be grown and cultivated in many European countries, because of their health risks. With all of the GMO

seeds, once the plant is grown, the seeds from that crop cannot legally be replanted to grow another plant. This alone should logically tell us something. Instead, farmers have to go back to the seed manufacturers and purchase seeds from the company each year. In short: avoid GMOs as much as possible to improve your health.

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Cholesterol Does Not Cause Heart Disease

The idea that cholesterol causes heart disease was first hypothesized in the 1950s and 60s when the rates of heart disease started rising. A scientist, Ancel Benjamin Keys, had hypothesized in his “diet-heart hypothesis” that saturated fat and cholesterol caused heart disease. As mentioned before, the research does not support that this is the case. In fact, the new USDA 2015-2020 Dietary Guidelines state, “cholesterol is not a nutrient of concern for overconsumption. [2]” Research has been showing this for over a decade, now. Research has also shown that blood cholesterol levels are primarily a result of the liver producing cholesterol, not cholesterol from the diet. But even the body producing increased cholesterol levels is not what causes heart disease. Increasing levels of specific cholesterol is the body’s adaptive mechanism to repair damage in the body. What is causing the damage in the body, specifically the arteries is chronic inflammation. Chronic inflammation creates damage in the walls of the arteries. The body recognizes that the walls are damaged and produces cholesterol to “patch” the damage. As the body continues to exist in a chronically inflamed state, more cholesterol is produced to “patch” the continually damaged arterial walls. Layer upon layer of “patching” creates the plaquing of the arterial walls. If this plaque becomes too thick, it occludes the passage of blood in the artery, which is the main function of arteries. If blood cannot pass in one of the arteries of the heart, it is called a heart attack (myocardial infarction). In approximately 37% of all heart attacks, the first sign is death, unfortunately.

This is why, in the 1950s, it became such a national concern, because 50 years prior to then heart attacks were practically non-existent.

Cholesterol is analogous to chronic inflammation, like smoke is to fire. If we keep trying to limit smoke, we are looking at the wrong source for the problem. We obviously would not focus on the smoke, but we would address the fire. Once we address the fire, the smoke goes away on its own. The same thing occurs in heart disease. Once we address the chronic inflammation, the cholesterol issues take care of themselves. This is why, in the literature, cholesterol lowering medications for years have done a fantastic job at lowering LDL (low-density lipoprotein) and overall cholesterol but have had no appreciable reduction of deaths due to heart disease [3]. The actual problem (chronic inflammation) was never addressed. For this same reason, this is why Omega-3 fatty acids have shown a positive appreciable effect on heart disease in the literature. It is due to their anti-inflammatory properties.

Additionally, cholesterol is important in the body. It is necessary for proper brain function. It is also a precursor to ALL sex hormones in the body: testosterone, progesterone, estrogen, etc. If we really look at weight loss and metabolism, it is primarily a hormonally driven physiological process, and cholesterol is needed for a body to be optimally healthy. As mentioned earlier, heart disease boils down to essentially chronic inflammation in the body, but it is not the only disease process due to chronic inflammation. Here are some other diseases that have their root cause in chronic inflammation: gut issues (IBS, diverticulitis, diverticulosis, Crohn's, GERD, Celiac's and gastritis), rheumatoid arthritis, dementia, Alzheimer's, gout, asthma, chronic sinusitis, chronic bleeding gums or chronic gingivitis, fibromyalgia, lupus, eczema, psoriasis, Type II diabetes, and allergies, to name a few. This is not an exhaustive list, but these are some of the more common ailments from which our society certainly suffers.

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CHAPTER 6

The Importance of Proteins

Calories from protein affect your brain, your appetite control center, so you are more satiated and satisfied.

—Mark Hyman, M.D.

Proteins are important for many reasons. One important reason is that they contain amino acids. Amino acids are the building blocks of repair in the body at a cellular level. There are 20 amino acids needed for construction and repair of tissues in the body. Nine are essential amino acids, meaning the body cannot make them and they must come from our food sources. The other 11 are non-essential, meaning our body can make them. There are proteins in both plant and animal foods. Animal foods contain all the essential amino acids; therefore, they are considered “complete” proteins. Most plants do not contain all nine essential amino acids that the body needs to function optimally. They are considered “incomplete” proteins. A person can create different combinations of plant proteins to provide the body with all the essential amino acids needed. This usually requires a person to consume larger quantities to achieve the needed levels.

Many people suffering from gut issues, food sensitivities, allergies, and diseases, like Celiac disease, have an issue with proteins passing through the gut wall. In a normal, healthy, functioning gut, proteins should not pass through the gut wall. They are large molecules. Proteins should first be broken down inside the gut into smaller molecules, called amino acids (as mentioned previously). Once they are broken down into these smaller molecules of amino

acids, the amino acids can then go through the tight junctions of the healthy intestinal tract, and into the bloodstream. Once in the bloodstream, the body can then take the amino acids to where they need to go, and reassemble the amino acids into proteins for repair, regeneration, and maintaining homeostasis in the body. When the gut has inflammation, or the gut microbiome becomes altered, people can get what is referred to as “Leaky Gut Syndrome,” also known as intestinal hyperpermeability in the research. In Leaky Gut Syndrome, those tight junctions become large “holes.” The large “holes” can now allow large protein molecules to pass through, when they normally should not, hence the name “Leaky Gut.” Once the protein molecules are in the bloodstream, which they should not be, the body senses the proteins as “foreign invaders,” so the body mounts an immune response to attack these “foreign invaders.” Sometimes the immune response is smaller in nature, and the person notices some minor changes in symptoms; like, stuffiness, runny nose, sneezing, etc. In other cases, there is a heightened immune response, and the body goes “crazy.” Then the body starts attacking not only the proteins, but other proteins in the body that look the same, or similar, to the proteins that were able to get through the gut wall. In the case of Celiac Disease, the protein is gluten. In other autoimmune diseases, it is other proteins, and other systems of the body are attacked. Most allergies and autoimmune diseases have a close tie to the function of the gut. If the function of the gut is not optimized, the patient won’t have the full ability to optimize their health.

With so many suffering from food allergies, and with rates of auto-immune disease continually rising each year, many people seek to understand what causes the inflammation and altered gut microbiome (Leaky Gut Syndrome) in the digestive tract. The short answer is: it’s not one single thing. Leaky Gut Syndrome is typically multifactorial, which can make it challenging to pinpoint the cause of an individual’s ailments and symptoms. Leaky Gut Syndrome may also be the reason it is difficult for some to lose weight.

Without going into exhaustive detail, (because this topic could be a full book in itself!), here are the most common things that can lead to Leaky Gut Syndrome:

- Processed Sugar
- Highly Processed Foods

- High Glycemic Foods
- Inflammatory Foods
- Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)—Advil, Aleve, aspirin, Celebrex, ibuprofen, Motrin, and others
- Broad Spectrum Antibiotics
- Artificial Sweeteners—aspartame, Equal, NutraSweet, saccharin, Splenda, sucralose, Sweet’n Low, and others (this topic will be covered more in Chapter 8)
- Artificial Ingredients, Food Coloring, and Preservatives
- Herbicides, Insecticides and Pesticides
- High Lectin-Containing Foods—legumes (beans, peanuts, soy, etc.), grains, corn, and nightshade vegetables, to name the most common
- Meat and Dairy Products—specifically, consuming animals that are fed a diet predominantly from high lectin-containing foods (this topic will be covered more in Chapter 11).

When looking at the above list, it becomes apparent why so many people have digestive issues, and sensitivities to various proteins. We are bombarding our systems with many items that were not present in our environment prior to World War II, and if an individual’s body was exposed to some of the above prior to World War II, it was not exposed in the amounts and frequency that a person is exposed to today.

Three good books that cover the general topic of gut health, in much more detail than this book will cover, are *Bruin Maker* by Dr. David Perlmutter, *The Plant Paradox* by Dr. Steven Gundry, and *Sweet Deception* by Dr. Joseph Mercola [1, 2, 3].

Know this: If the digestive tract is not healthy, then proteins and other substances can get through the gut wall, and this can wreak havoc on an individual’s health, which will subsequently cause a plethora of symptoms. Clinically, this is why I focus so much attention on improving the gut health of individuals.

In regard to weight loss, proteins do not spike blood sugar levels like carbohydrates (which we will learn about in the next chapter); therefore, they do not spike insulin levels as discussed previously. This means that they do not

lead to weight gain, so consuming enough protein will not only allow your body to heal and repair, but it will also allow you to continue losing weight until you reach your ideal, healthy, body weight.

The one caveat to this is when we isolate proteins from their natural, whole-food, real-food state. In particular, we consider the protein whey. When whey protein is isolated, and consumed by itself, not in its natural, whole-food state of real dairy, it spikes insulin the highest when compared to other isolated protein molecules. Many people consume protein shakes that are whey protein based. As you will learn in the subsequent chapter, regulating insulin and keeping it low, will not only help those trying to lose weight, but will help those trying to reduce inflammation. If you are wanting to lose weight or decrease inflammation, I would encourage you not to consume whey protein products/shakes. I would encourage you to look into an alternative product known as “bone broth protein”. Not only does bone broth protein have a healthy amino acid profile, but it also has various types of collagen, which helps with gut, skin, nail, connective tissue, and joint health. Additionally, look for bone broth proteins that are sweetened with honey powder, stevia, or another sweetener that does not spike insulin.

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CHAPTER 7

Carbohydrates: They Are Not All The Same

Carbohydrates generally consist of the following: vegetables, fruits, legumes, and grains. Of the three macro-nutrients (fats, proteins, and carbohydrates), carbohydrates have the largest effect on weight gain, and subsequently, the largest effect on weight loss. This effect comes from carbohydrates interaction with blood sugar and related insulin spikes, as discussed in chapter two. In the 1940s and 50s, it was fairly “common knowledge” that carbohydrates made you put on weight.

Many people think that all “complex carbohydrates” are good, and “simple carbohydrates” are bad. This generalization is not completely accurate. Simple carbohydrates typically refer to processed and refined foods that are not in their whole state (white flour, table sugar, etc.). Potatoes and rice fall under the category of simple carbohydrates as well. Complex carbohydrates refer to whole grains, most vegetables, and most fruits. Granted, complex carbohydrates are typically a healthier option to consume over simple carbohydrates, but that does not mean that they will help you lose weight.

What is more important to identify is if a carbohydrate is “high glycemic” or “low glycemic.” If they are high glycemic, this means that they spike blood sugar rapidly, which in turn spikes the hormone insulin in the body. Spikes in insulin cause unhealthy weight gain of fat, increased inflammation, and a whole host of other negative metabolic processes [1]. Low-glycemic carbohydrates raise blood sugar slowly, instead of the rapid spike in blood sugar like high

glycemic carbohydrates do. This keeps insulin from rapidly spiking. If insulin is not spiking high in the body, the body can burn its unhealthy fat stores for energy, lower inflammation, and begin reducing all the other negative metabolic processes. This allows you to lose weight and maintain it once you reach your ideal body weight.

The following are the highest glycemic carbohydrates. They will cause the most rapid spike in blood sugar, insulin, and the inflammatory processes in the body. They are also the carbohydrates that will definitely curb your ability to lose weight. They are grains (pasta, white bread AND whole grain bread, cereals, tortillas, rice, etc.), ground corn products, white flesh potatoes, and sugar.

I know that these items are ubiquitous to our western American diet. I also know that when some people read this list they ask, “So can I never eat these again!?” In short, “yes”, you can eat them, just very sparingly. HOWEVER, know that the more you stay away from these, ideally avoiding them all together, the quicker you will experience improvement in your health. In fact, those cultures that consume the previously mentioned items the least are some of the healthiest and most long-lived people in the world. This makes sense when you look at normal human physiology and epigenetics. Epigenetics is the environmental influences on our genes, and how the genes express themselves.

Other carbohydrates that are higher on the glycemic index, and that should be consumed more sparingly, are very sweet fruits (bananas, pineapples, mangoes, peaches, nectarines, etc.), starchy tuber-vegetables (carrots, beets, yams, sweet potatoes, etc.), and legumes (beans (excluding green beans), lentils, peas, and peanuts). These food items more easily raise blood sugar levels, and subsequently insulin. This leads to decreased metabolism, a more negative physiology, and leads to weight gain. It is not that you can never consume them; just be cautious and limit their consumption. The more you eat of these items, the more likely you will have trouble regaining your health, losing weight and subsequently optimizing your health.

Many people have begun the habit of juicing fruits and vegetables for increased health and vitality. The thought is that they will get a more concentrated amount of vitamins and minerals. This is true; however, what also

occurs is that the fiber gets stripped out of the food when juiced. So, even with those foods that have a lower glycemic index, like apples, berries, etc., once the

fiber is removed, those juices then spike blood sugar quite a bit. This leads to increased insulin release. When insulin spikes, subsequently weight retention and weight gain occur. Carrots have a higher glycemic index in their whole form, but if you juice them, they are even sweeter tasting than some juiced fruits. Which, of course, will rapidly rise blood sugar and subsequently insulin. Unless you are adding juices to sauces or dressings as a smaller volume ingredient, you would be wise to stay away from consuming them. Juices from celery, cucumbers, and green leafy vegetables will not have the same effect.

This brings up the topic of fiber. Fiber is an important nutrient within food. Fiber can essentially be broken down into 2 categories: water soluble fiber, and insoluble fiber. Water soluble fiber is a fiber that can dissolve in the water in the colon. When this occurs, it leads to fermentation. Fermentation is what allows good bacteria (probiotics) to proliferate, grow, and optimize. Fermentable, water-soluble fiber is primarily found in fruits and vegetables. Getting sufficient amounts of water-soluble fiber is vitally important to our health. Insoluble fiber is a fiber that cannot be dissolved in water. It can absorb water and give bulk. Since it cannot be dissolved in water, most insoluble fibers cannot be fermented. Most insoluble fibers are found in grains. Corn also has a high ratio of insoluble fiber to water-soluble fiber. Not to use “potty talk”, but there is a reason that you see whole kernel corn in the toilet when you use the restroom!

While many people think “whole grains” are an essential part of a healthy diet, the research simply does not back that up [1-7]. For centuries, people have consumed whole grains, but until recent modernization in farming practices, they were consumed very little. Typically, whole grains were consumed during times of famine or during religious practices/festivities.

Prior to 150 years ago, it took a lot of energy, and time, to grow and process grains. First, a person had to have plenty of land to grow grains. Then an owner of the land had to have the manpower to harvest all the grain. Then the workers had to dry out the grain for days in the sun. Once dried, they had to beat the plants on the threshing floor to release the grain. Then, there had to be a windy day so the seeds and chaff could be thrown into the air, and the chaff.

would blow away. Then, the seeds would fall to the ground. Then, the seeds of the grain had to be gathered and ground by more manpower or animal power. Finally, you ended up with a little amount of grain for all the work that was expended. The grains were not as filling and satiating as protein and fat.

Therefore, grains were a rare commodity until the Industrial Age. Grains were also quite pricey because of their limited supply and amount of resources needed to produce them. There is a Biblical account in the book of Hosea chapter 3, where a prostitute was bought with silver and grain because it was not a common commodity and was expensive. Therefore, it was rarely consumed except for special occasions, religious ceremonies/festivals, or in times of famine, when other regularly consumed food was not available. Even our modern custom of birthday cakes occurs because, until a century or so ago, it was only a special occasion to purchase flour (and sugar) and make something with it. Hence, a birthday cake.

Additionally, when grains were consumed in more ancient cultures, and even up to 150 years ago, they were almost always sprouted or long-fermented first. This was important for human consumption. Unlike birds, who have crops and gizzards, humans don't have the ability to easily break down the outside kernel of grain seeds. So grains were soaked in water for 24 hours or more until they sprouted. This not only opened up the grain kernel to be more easily digested by humans but also increased the nutrient content of the grain. The other process that has been used for centuries is fermentation. This occurred when natural yeasts in the air would combine with the starches in the grain when ground. Fermentation breaks down the starches in the grains, increases nutrient content, and increases probiotics. Usually breads and similar products were fermented for 24-72 hours, prior to being baked. In our modern industrialization, we utilize many processed grains in products, and the time it takes from raw product to out the door and packaged can take 3 hours or less! This process is vastly different than what has been done for centuries of human history, and our health is taking a toll with the change.

In the books, *Wheat Belly* by William Davis, M.D. and *Grain Brain* by David Perlmutter, M.D., the authors describe in great detail how wheat and other grains have had a negative effect on our health as a nation. I highly recommend these books to those who think that wheat and grains are essential for human health. Simply stated, they are not essential. How most grain products are grown, processed, and prepared have deleterious effects on our health. They should be consumed infrequently for weight loss and optimal health. When I personally started vastly limiting them in my diet, I felt better overall. On the occasion that I do eat them, I always feel less energetic, groggy, and overall not as vitalized. If you are going to consume bread occasionally, try to always

consume organic sprouted or long-fermented bread, like real sourdough, when possible.

Typically, when this topic of conversation comes up, someone will ask “How come people in Asia can eat a lot of white rice and stay healthy and thin?”. It is a common question and one that I previously asked too. However, it is not true. Asian cultures have been eating white rice for many decades, but many of those same cultures are not thin and healthy any longer. Type 2 Diabetes has skyrocketed in China and India in recent years. In China, Type 2 Diabetes is now more common than in the United States!

In China, in 1980, the Type 2 Diabetes rate was less than 1%. In a study published in the Journal of the American Medical Association in 2017, it showed that in 2013, China’s Type 2 Diabetes rate had catapulted up to 10.9% [8]! This has since surpassed the United States! In that same published study, the prediabetes rate of China was estimated to be at 35.7%. Nearly 4 out of every 10 people in China, which has over a billion-person population, and growing! This is due to 3 main cultural changes in China, and India too: 1) added refined sugar to the diet 2) sedentary lifestyle, and 3) 24-hour access to food.

Dr. Jason Fung in his book *Obesity Code: Unlocking the Secrets of Weight Loss*, provided my first connection with the Asian cultures and the rice question, that I would get from patients. Basically, Type 2 Diabetics are more of what are called insulin resistant. They are not insulin sensitive. I will try to keep the explanation very simple. Insulin resistance means that a person does not utilize the hormone insulin very effectively to drive blood sugar into muscles, but instead more into fat tissues. This is why many times Type 2 diabetics are carrying extra weight, obese, or even morbidly obese. People who have a high insulin sensitivity are better at utilizing the hormone insulin to drive blood sugar into muscles to utilize. The reason that Type 2 diabetics have high insulin resistance is because of an overproduction of insulin in the body, over a long period of time. Overproduction of insulin in the body is primarily due to the consumption of processed sugars and processed grains, causing a spike in blood sugar. Chronic overproduction of insulin in the body is like someone continuously screaming. Just like continuous screaming would become annoying, continuous over-production of insulin becomes annoying to the body. So the body becomes more resistant to insulin. However, if there is still an over consumption of processed sugars and grains, then that will still raise

blood sugar. And the body can't survive with too high of blood sugar levels. So the body produces more insulin ("more screaming"). When this occurs, the body becomes more insulin resistant. And the process continues until the body can't produce enough insulin to keep up with the blood sugar demand. At that time, a person goes to a doctor and has blood work, they are diagnosed with prediabetes, or Type 2 Diabetes. If the person only addresses their condition with medications, they are never addressing the root cause of the issues. And they are not going to improve their insulin resistance. But the good news is that there are ways to reverse insulin resistance and become more insulin sensitive!

So, when the Chinese and Indian cultures started adopting the western diets of increased processed sugar and processed grain consumption, and combined that with their culture's already high white rice consumption, it was a recipe for disaster. Hence, their rates of Type 2 Diabetes and Prediabetes have skyrocketed in recent decades.

In 2016, the Journal of the American Medical Association of Internal Medicine released a paper that was very shocking [9]. In the paper, it was discovered and revealed by a researcher at the University of California, San Francisco, that the sugar industry paid three scientists at Harvard to publish a review of the research on sugar, fat, and heart disease. This payoff and bribe were done in 1967, and the scientists were paid about \$50,000 in today's money. The group that paid the scientists was called the Sugar Research Foundation and is today known as the Sugar Association. The Sugar Research Foundation hand-picked the studies for the scientists, and then the research review article was published in the prestigious New England Journal of Medicine. The "research" article downplayed the link between sugar and heart disease and pointed towards saturated fat as the culprit. More recent documents show how the sugar industry, and others in the food industry, have continued to influence nutritional science over the last 5 decades. Sadly, the sugar and food industries have greatly influenced and impacted many of today's governmental dietary recommendations. The worst part is that the American population's health has been affected drastically. The statistics concerning the rapid rise of practically all chronic diseases prove this effect. The influence that the American culture has around the world, has ultimately affected the dietary habits and health of cultures and individuals all around the world.

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CHAPTER 8

Liquid Sugar, Fluids & Hydration

Refined sugar, we all know, is not healthy for us. Around 1900, the average American consumed around three pounds per year. Today, the average American consumes almost three pounds per week! That is over 120 pounds of sugar, per year, for each American. Sugar is definitely a main contributor to our obesity rates as a country. Not only does it clearly spike blood sugar and insulin, which leads to weight gain, it is also one of the most pro-inflammatory items we can consume. This inflammation wreaks havoc on our digestive tract, our brains, and the rest of our bodies. The problem is that sugar is added to so many different food items, and most people are not even aware of it. We will discuss how important sugar is to the manufactured food industry in the next chapter. It is one of the key ingredients that, they know not only has you consuming more of their products, but also literally gets your brain addicted [1]. Therefore, it is added and “hidden” in many products of which people are completely unaware. The most detrimental sugars, beyond plain table sugar itself, are liquid sugars. They spike blood sugar quickly. This, of course, leads to weight gain as discussed before. Liquid sugars are soft drinks, sweet teas, sports drinks, coffee with added sugar, fruit juices, and other beverages sweetened with sugar.

Most soft drinks consumed in this country no longer contain real sugar. The companies use a chemical sugar called high fructose corn syrup (HFCS). They use it because it is sweeter and cheaper to produce, which means more competitive pricing or higher profits for the soda companies, or both.

It is strictly economical in their eyes. However, from a health and weight loss standpoint, it is horrible for your body. The ill effects of HFCS are well-documented in the research, no matter what marketing campaign the corn industry tries to come up with. The backlash from the public has forced soda companies to carry different lines of sodas made with “real sugar.” Granted, the body can process real sugar better than the chemical concoction of HFCS, but it still does not make “real sugar” healthy.

Soda manufacturers and the general public realized the ill effects of sodas and their consequences with weight gain. So, in 1962, the first diet soda (Diet Rite) was introduced to the general public. The following year, Tab was released from the Coca-Cola Company. The idea was that artificial sweeteners would be used in place of sugar. These artificial sweeteners did not have any calories, but they had the sweet taste. Now, consumers could have their sweet drink, but be “worry-free” with weight gain. Unfortunately, this is not the case. Research shows that almost every single artificial sweetener does not raise blood sugar, but DOES raise insulin. This is why the research has also shown that diet drinks have actually been linked to weight gain in individuals, not weight loss! In addition, artificial sweeteners are now known to be what are called excitoneurotoxins [2]. Meaning, that they literally excite the neurons in the brain so much that they cause them to die off! There are strong links connecting artificial sweeteners to chronic cognitive diseases like dementia and Alzheimer’s. The problem is that these diseases typically take decades to develop, and it is tougher through research to show direct causation from artificial sweeteners to these diseases. However, many people have headaches and other neurological symptoms that they cannot figure out. When they remove artificial sweeteners from their diets, the symptoms go away. A great resource, if you want more information on this topic, is *Sweet Deception* by Dr. Joseph Mercola. It is listed in the Resource Section at the end of this book.

A natural sweetener that does not contain calories is Stevia. It also does not increase blood sugar or insulin. I utilize Stevia in our clinical weight loss program. It is a sweetener that is a much healthier option, however, it still has some minor drawbacks. Some manufacturers add unhealthy additives to Stevia crystals, like maltodextrin or dextrose. Additionally, Stevia consumed in excess can upset the stomach. But, if you need a little sweetener, Stevia is going to be your best option; however, you should use it as minimally as possible. Two

other options are monk fruit extract and allulose. If you can restrict yourself from adding any sweeteners at all, this would certainly be your best option for optimal health and weight loss.

Sports drinks are not health drinks. They are full of sugars. Water is a much better option. Many athletes and weekend warriors use sports drinks to replace their electrolytes. If an athlete is worried about electrolytes or cramping, pickle juice is a MUCH better option because it is very high in electrolytes. This is why they sell pickle juice at marathon races, and professional sports teams have it on hand for muscle cramping. Coconut water is also a great option.

Fruit juices are essentially not any healthier than other liquid sugar drinks. Many individuals think this is a better option, but really it is not much better just because it is labeled “fruit.” When you remove the fiber, fruit juices spike blood sugar tremendously. Many commercial fruit juices add even more sugar to the juice than it would naturally contain. Other than on rare occasions, stay away from fruit juices because they will not help you achieve and maintain your health and weight loss goals.

The body is approximately 75% water. So, it is important to stay well-hydrated, so that your body can work optimally. What you will want to focus on drinking is water (purified, reverse osmosis, or bottled are some good choices). Stay away from chlorinated water and water containing fluoride. Chlorine is used to keep pools clean by killing the bacteria. It does the same thing to your gut bacteria. But it can kill both the probiotics, along with the bad bacteria, which will lead to an altered gut microbiome, and decreased health. Research indicates that fluoride mimics some of the thyroid hormones and can block some of the thyroid cofactors like iodine [3,4]. Sufficient iodine is needed for the thyroid to fully, and optimally, function. If this is altered, it will affect your metabolism and overall health. Besides the above-mentioned water sources, unsweetened coffee, tea, and herbal teas are also good sources for hydration. A good general rule of thumb is to drink half of your body weight in ounces, up to 100 ounces, each day. Out of that total, two-thirds of the fluid intake should be water, and the rest can be coffee, tea, and herbal teas.

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CHAPTER 9

The Bliss Point and Food Addiction

In the 21st century our tastes buds, our brain chemistry, our biochemistry, our hormones and our kitchens have been hijacked by the food industry.

—Mark Hyman, M.D.

The food industry profits from providing poor quality foods with poor nutritional value that people eat a lot of.

—Mark Hyman, M.D.

People are fed by the food industry, which pays no attention to health... and are treated by the health industry, which pays no attention to food.

—Wendell Berry

Read the above 3 quotes again. They are powerful!....and sadly, true. Food manufacturing is a HUGE business in this country. “Big Food” is in business to make profits. The largest “Big Food” companies are publicly held companies, meaning that they must show profits to shareholders. The more profits that they make, the better for their shareholders and executives. From a business standpoint, the more food that the public consumes from their

company, the more profits are made. For them, it is strictly economics, but that does not mean that it benefits your health.

There are two main goals of “Big Food” companies: 1) to have you consume more at one sitting and 2) to have you wanting more of that product as a repeat customer. They know that if they can accomplish these goals, that they will do better with profits. Unfortunately, for your health and your weight, they have done a fabulous job of accomplishing these two goals. Sadly, they know it affects your health and weight directly.

Three main nutrients/ingredients give an abundance of taste to foods. They are sugar, salt, and fat. The “Big Food” companies know this, and they know that just in the right combination of these ingredients, you will not only want more of their product, but you will have a neurological and biochemical desire to want to consume more [1]. In the industry, it is called the “Bliss Point.” “Big Food” companies know this, and they literally spend tons of money and test on thousands of people before they ever take a product to market. They know exactly what combination will give that heavenly bliss to an individual when they consume the product, and they know what those ratios are to get people literally addicted and wanting to come back for more. If the common fad is “low fat,” then they strip out the fat, but in order for the food to taste good and to sell, can you guess what they add in? They add in either sugar or salt... or both. If it is “sugar free,” they add in artificial sweeteners, fat, and salt. If it is “low sodium,” then they add in fat or sugar, or a combination of both. It is always some mixture of these three ingredients that food manufacturers are engineering into food to be the tastiest and most addictive. Michael Moss writes of this topic in his book *Salt, Sugar, Fat: How The Food Giants Hooked Us* (listed in the Resource Section at the end of this book). He goes on to share, in this book, how in April of 1999, CEO’s from the largest food manufacturers in America, and around the world, met at Pillsbury headquarters in Minneapolis to discuss the growing epidemic of obesity in America and what they could do about it. There were no reporters present. There were no minutes taken of the meeting, and it was essentially a hush-hush meeting. Some of the companies represented were Coca-Cola, Nabisco, Kraft, Frito Lay, General Mills, Proctor & Gamble, Nestle, Kellogg, Lunchables, and Mars. These companies represented over \$280 Billion in annual sales and over 700,000 employees. One of the executives from Pillsbury was the one who spearheaded the meeting and

was the main opening presenter. He gave a 162-slide presentation on exactly how each of their companies was a major and direct cause for the obesity epidemic, not only in America but in all other countries that adopted the American, Western eating lifestyle (remember China & India mentioned earlier?). He even made the analogy comparing their companies to cigarette companies in terms of their detrimental effects on America's health. At the end of his presentation, the CEO of General Mills, who was one of the largest and most influential companies, stood up and said amongst other things, "Don't talk to me about nutrition. Talk to me about taste, and if this stuff tastes better, don't run around trying to sell stuff that doesn't taste good." Essentially, he went on to say, "We are not going to disrupt company profits because some scientists in white lab coats are worried about nutrition and obesity."

It is a very eye-opening book. To this day, the "Big Food" companies' objectives are still to sell as many products as they can and produce the most profits. Your health is not their priority.

There is research that shows these three main ingredients are addictive in nature, particularly sugar [2]. Many people crave sweets. It is not just a mental willpower issue. It is literally a biological addiction. The same areas that sugar targets in the brain are the same addictive areas for nicotine, alcohol, cocaine, and heroin. Sugars are literally targeting the exact same location in the brain! So, when a person has these overwhelming cravings, it is because for so long they have been consuming these processed, fake, foods, and their brains are addicted. The good news is that food addictions can be overcome. Some people literally go through a withdrawal period and have headaches, lethargy, feel awful all over, etc. For others, the symptoms are not as strong. That is partly why we follow up so closely with our patients in the clinical programs, to help them through this period. The good news is that the longer patients stay away from these food items, the less cravings they have. Many of my patients over the years have routinely noticed their sweet and bread addictions gone after 2535 days on our clinical programs. Research shows that for some individuals it can take 12-18 months to fully overcome the addictive tendencies and become "un-addicted." Some people are okay afterward and can have sweets/sugars sparingly and not "relapse". Others must be more intentional and stay away from sugar altogether, otherwise, they start going down a slippery slope that is deleterious to their health.

If you do feel like you have these strong cravings or possible food addiction, I would highly encourage you to 1) read Michael Moss's book *Salt, Sugar, Fat: How the Food Companies Hooked Us* and 2) follow a program that coincides with the nutritional principles outlined in this book. I think that the book will be particularly eye-opening to you, and both steps together will ultimately help you overcome the cravings/addictions.

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CHAPTER 10

Alcohol: Are There Health Benefits?

There are those who choose to drink alcohol and those who do not. Those who do drink sometimes claim different health claims and justify drinking alcohol. While various claims have been made, there are no clear-cut health benefits for consuming alcohol. The most commonly quoted claim is related to resveratrol, found in the skin of red grapes and, therefore, in red wine. When isolated out, resveratrol has indicated benefits. When combined with the alcohol portion of wine, the benefits do not clearly outweigh the potential risk of the alcohol.

Then there are those individuals, not claiming health benefits, but who just like the consumption of alcohol occasionally. Either way, I would like to give you some guidance if you do consume alcohol. If you don't drink alcohol you can skip to the next chapter unless you like having information.

One of the biggest processes we want to try to regulate for weight loss are spikes in blood sugar. All alcohol will raise blood sugar. Some alcohols cause sharper rises in blood sugar than others. The following is a list of highest glycemic (worst) alcohols, to lower glycemic (better) alcohols in regard to negative effects on blood sugar and insulin.

1. Sweet Mixed Drinks
2. Beers
3. Wines
4. Hard Alcohol

The reason ‘Sweet Mixed Drinks’ is the first listed is because processed sugars are added to the alcohol. Just like foods, when a person adds processed sugars, in the forms of mix-ins, simple syrups, fruit juices, high fructose corn syrup-based mixes, and the like, you really spike blood sugar and insulin a lot. It’s the equivalent of combining processed refined sugars and high glycemic carbohydrates. This was covered in a previous chapter. Remember the Chinese rates of Type 2 Diabetes skyrocketing when they began combining processed sugar and white rice? It is a similar concept to alcohol and ‘Sweet Mixed Drinks.’

Beer has the next highest capacity for a spike in blood sugar. It is like liquid bread. Typically, the darker the beer the higher the blood sugar spike. If consuming beer, try to stick with “low carb” beers. They will have a little less effect on blood sugar. With beer, it is not hard to see the effects that it has on weight. Have you ever heard of a “beer belly?” This is due to continual blood sugar spikes that cause the body to store both subcutaneous fat (under the skin) and visceral fat (located in the abdominal and chest cavity). Visceral fat is the unhealthiest of the unhealthy fat in the body because this fat surrounds your vital organs.

Wines typically have less effect on blood sugar spikes than beer. Even within wine categories, there is a difference between the amount of blood sugar spikes. Sweet wines will spike blood sugar levels just like some beers. The better choice for wine, whether white or red, is to consume “dry” wines. They do not have as high of a sugar content; hence, the more “dry” taste. There is no appreciable difference between a dry white and a dry red. The red wines only get their color from the red grape skins that are left on during the fermentation process.

Typically, the alcohol with the least effect on blood sugar spikes is hard alcohol. Even within hard alcohol categories, there are differences in their effects on blood sugar. Sweeter alcohols, like rum, will spike blood sugar the most. Whiskey, bourbon, brandy, gin, and vodka will spike blood sugar less. Obviously, if you mix sweeter beverages with the hard alcohols, you will create a larger spike in blood sugar, so a 2 oz. rum and coke will spike blood sugar more, raise insulin more, and subsequently pack on more weight than compared to a 2 oz. bourbon and water. Again, bourbon and water will still have a negative

Alcohol: Are There Health Benefits?

effect on health and weight gain, it will just have less of an effect than some of the other choices.

I will not end this chapter without stating the obvious: alcohol does have negative effects on the liver and other organ systems when consumed in excess. Always consume alcohol in moderation. If you are a consumer of alcohol, try and limit it to only occasional consumption. The more you consume, the more negative effects it will have on weight loss and your health.

CHAPTER 11

The Quality of Food is Vitaly Important

While weight loss is important, what's more important is the quality of food you put in your body—food is information that quickly changes your metabolism and genes.

—Mark Hyman, M.D.

Not all foods are created equal. Specifically, how they are grown, or raised, affects the results, and creates these inequalities. Sustainably grown, and organically-grown vegetables, have a higher nutrient profile than vegetables that are conventionally grown. In conventionally grown agriculture, petroleum-based fertilizer inputs are continually required. Petroleum fertilizers generally consist of some combination of nitrogen, potassium, and phosphorus. Over time, with only these specific nutrients put back into the soil, the soil slowly becomes depleted in other minerals and nutrients, which the plants need to grow. This leads to needing more petroleum-based fertilizers to grow the produce. Without the necessary minerals and nutrients, plants are not as resistant to pests, fungi, bacteria, etc. Therefore, pesticides and herbicides are necessary to spray on the plants to keep them alive. These are chemicals that are designed to kill certain species of insects or invading plants so that the target plant can grow and produce a crop. Those same chemicals land on the produce and are later consumed. Pesticides and herbicides do have cumulative effects

on the gastrointestinal tract. Petroleum-based fertilizers were not always used. In fact, throughout the majority of human history, they were never used. They primarily began to be used after WWII. This was after large chemical companies, that were producing petroleum-based products for the war, no longer had products to make. They became resourceful and started making petroleum-based fertilizers for farmers. The long-term ill effects were not known fully at that time. In addition to the petroleum-based fertilizers, the plants that are “Roundup Ready” have even more chemicals, in the form of glyphosate (Roundup), sprayed on them. Research shows a direct connection between glyphosate and gluten sensitivities [1-4].

Contrast this to sustainably grown or organically grown produce. These farmers nurture the soil to have beneficial bacteria that produce nutrients. These farmers plant what are called nitrogen-fixer plants to fertilize the soil naturally. They utilize organic compost to fertilize the soil. They add soil amendments, like rock dust and ground oyster shells, to re-mineralize the soil. All these, and other techniques, provide an environment for the plants to thrive. This, in turn, allows the plant to be healthier and naturally ward off harmful pests, fungi, and bacteria. Therefore, chemicals are not sprayed on the plants to kill various species. This means that we do not consume these chemicals. It is analogous to the human body being healthy. The healthier the human body, the more disease processes it can naturally ward off. Plants are the same. The edible food that those plants produce has a direct health correlation to the human body, good or bad, depending on what you consume.

For produce, the pecking order for produce purchases, from healthiest to least healthy, is as follows: local farmer that you know is growing organically or sustainably (lacking organic certification), non-local organic produce, conventionally grown non-GMO produce, and finally, conventionally-grown, GMO produce. If possible, try to stay away from GMO produce altogether.

Animals, fowl, and fish have a very similar nutrition profile as plants, based on how they are raised. Animals, fish, and fowl that are in their natural, genetically congruent environment thrive and are healthy. Those who are taken out of that environment and put in an unnatural environment with a genetically non-congruent diet are not as healthy. When humans consume these unhealthy

types of animals, humans are the recipients of the unhealthy flesh of the animal, which, in turn, directly affects our health.

A prime example is cattle. What should cattle eat? This is NOT a trick question! Any 5-year-old will answer, “Grass!” which is, of course, correct. The grass is part of their genetically congruent diet. Cattle are herbivores, with a specific 4-chamber stomach, which should consume grass. However, what do the majority of cattle consumed in America eat? Well, they do eat grass; HOWEVER, before they go to slaughter, they go to feedlots for many weeks, to fatten them up. This fattening process produces more weight on the cattle and then produces more revenue for the rancher. What do they feed the cattle at these feedlots? They feed them corn (mostly GMO), soy (mostly GMO), sorghum, wheat-by products, and occasionally, even other animal byproducts! Obviously, this is not what cattle would consume in their natural environment, with a genetically congruent diet. This has a direct effect on the health of the animal and the tissues of the animal. What the feedlots do feed the cattle is high in Omega-6 fatty acids (pro-inflammatory), which means that the cattle’s flesh is higher in Omega-6’s. This means that when we consume conventionally grown cattle, we are consuming more Omega-6 fatty acids, unknowingly. Chronic inflammation is one of the main precursors of chronic diseases. This is another reason why it has been reported that “red meat causes heart disease.” This is not entirely true (see Chapter 4). The consumption of conventionally raised feedlot cattle does have more of a propensity to cause heart disease because of the inflamed tissues in the bodies, of the cattle, that we then consume. Healthy grass naturally contains Omega-3 fatty acids. Grass-fed cattle have a much higher Omega-3 fatty acid profile (anti-inflammatory), amongst other healthy vitamins and nutrients; therefore, they do not have the heart disease risk factor. Conventionally raised feedlot cattle are not as healthy animals as organic and pastured cattle; therefore, feedlot cattle are more prone to be sick and need antibiotics, that humans then unknowingly consume because the antibiotics are in the cattle’s system and flesh. Just like produce, this is a vicious cycle that leads to less health overall.

On the contrary, organic, grass-fed and grass-finished cattle eat a genetically congruent diet and live in a genetically-congruent environment. They have two to four times as much Omega-3 fatty acids and higher levels of conjugated linoleic acid (CLA). They also have higher levels of vitamin B6 and

beta-carotene. No hormones are administered. No antibiotics are needed. Overall, their beef is much healthier for you. Grass-finished beef will help your body stay working optimally and allow you to lose weight and maintain your ideal weight.

I want to clarify some terms on beef:

“Certified USDA Organic” [5]—means that the producer is certified by the USDA to not use hormones or antibiotics on the cattle. The cattle are not confined to feedlots, and they eat primarily grass for their diet, prior to slaughter. Organic does allow some grains to be consumed, but they must be certified-organic feed (free of synthetic fertilizers, pesticides, herbicides, and fungicides).

“Organic”—see above explanation. This term means that the producer is not certified by the USDA, but simply certified by another governing board, which can sometimes be at the state or local level.

“Pastured”—see above explanations, except that the animals are not given grain. They also have not paid the USDA to receive the official organic certification stamp. Additionally, these farmers typically utilize what is called nutritional grazing, high-intensity grazing, or mob grazing. This allows the cattle to receive optimal nutrition from the grass and allows the grass to fully grow back before the cattle are brought back there to graze again. This is a sustainable model for raising healthy cattle.

“Grass-finished”—means the cattle eat grass their entire life, all the way up to their slaughter.

“Grass-fed”—typically means the same thing as “grass-finished.” However, some perceptive marketers are using this term deceptively because all cattle are fed grass at some time during their lives. Just those that are at feedlots are fed grain at the end of their life, which completely changes the fat structure of the animal tissues. So technically, these perceptive marketers are correct but not fully disclosing the truth to consumers about what they are purchasing. However, for the most part, “grass-fed” and “grass-finished” mean the same thing currently.

So, for beef, the pecking order for most healthy to least healthy is: Pastured, organic, grass-finished, grass-fed, and then conventionally raised.

For by-products of cattle, like milk, butter, cheese, yogurt, etc., you want to look for the same pecking order as above. Specifically, on milk and milk products, there is more nutritional value from raw milk products. Raw milk essentially means that the milk is not pasteurized or flash pasteurized. Pasteurization kills beneficial bacteria and various enzymes, like lactase, which aid in milk digestion. Those who are lactose intolerant can usually consume raw milk products without the typical side effects of pasteurized milk products. Many major grocery store chains, and specialty grocery stores, have raw milk cheeses. Some states allow you to buy raw milk directly from grocery stores, while other states do not. RealMilk.com is a great website that gives information on the health benefits of raw milk and provides a directory of local farmers who sell directly to the public for milk and milk products.

Sheep and goats are also herbivores, like cattle, so, for lamb and goat meat, the pecking order is the same as beef: Pastured, organic, grass-finished, grass-fed, and then conventionally raised.

Let us cover chicken, and other poultry, too. Chickens are omnivores, meaning they should eat plants, seeds, small animals, and insects in their natural environment. Chickens raised in industrial chicken farms, called CAFO's (concentrated animal feeding operation), consume grains only. While a chicken in its natural environment does not eat a diet of 100% grains, grains are not necessarily deleterious to the chicken's health. Unlike cattle, chickens have crops and gizzards, which allow them to digest and utilize grain better. However, there are still a lot of GMO seeds in the chicken feed of conventional industrialized chicken operations, along with other industrial byproducts. Also, GMO seeds are typically sprayed with chemical fertilizers, herbicides, pesticides, and fungicides. Additionally, chickens raised in CAFO's typically have a half of a square foot, to a few square feet, per bird with hundreds to thousands of birds in a barn. In grocery stores, you will see these types of chickens marketed as "vegetarian diet only". Chickens do not eat only plants and grains in their natural environment; therefore, those that have a "vegetarian only" diet are not going to be as healthy as those chickens that are organic or pastured, which eat both plants and bugs. Compared to conventional chickens, organic chickens

must be given grain that is 100% organic, meaning it has no artificial fertilizers, pesticides, fungicides, or herbicides, from two days old and older. Finally, organic chickens must be given reasonable access to the outdoors [5]. Pastured chickens, which spend their days in open grass areas, are typically from smaller farming operations that do not seek the “organic” certification label, but, in essence, are organic chickens. Just make sure that you are familiar with the farmer’s practices, if buying locally. In terms of health, in-between industrial chicken farms and organic/pastured chicken farms are farms raising “free-range” chickens [6]. Free-range chickens do not have to consume certified organic grain feed. They also must be given access to the outdoors for over 50% of their lifetime, meaning they will not consume as many bugs and plants as their pastured counterparts, which will affect their health.

The eggs produced by chickens have a direct link to the quality of the hen’s diet and to their environment. In eggs alone, you can tell the health of the chicken’s diet by looking at the color of the yolk. If it is a pale-yellow color, it does not have a higher-quality, healthy, fat content. If it is a rich golden color, the eggs contain healthier fats, like Omega-3 fatty acids, and the chickens have a more genetically congruent diet. Contrary to popular belief, based on the color of the shell alone, there is no nutritional difference between eggs that are brown or white. You ideally want to consume organic or “pastured” eggs.

So, for chickens (this includes other fowl, too) and eggs, the pecking order for the healthiest to the least healthy is: Pastured, organic, “free-range,” and conventionally raised.

Pigs are also omnivores, like chickens, so most of the recommendations and concerns regarding chickens, apply to the raising of pigs and to the health of the pork. The biggest difference between chickens and pigs is that pigs do not eat a lot of grain in the wild, so that is not the best type of feed for them. Just like chicken, the pecking order for the healthiest to the least healthy pork is: Pastured, organic, “free-range,” and conventionally raised.

Finally, let us discuss fish and seafood. Fish and seafood that are wild-caught are healthier than those that are farm-raised. Those that are farm-raised cannot mimic the natural environment of the fish. The farm-raised fish and seafood have less Omega-3 fatty acids in their flesh, compared to the wild caught, and

are fed grains with inflammatory Omega-6 fatty acids. Ideally, you would want to focus on consuming wild-caught “fatty” fish. Wild-caught “fatty” fish have more health benefits because of their higher fat and Omega-3 content. Examples of “fatty fish” are salmon, trout, mackerel, sardines, and tuna, in moderation. Larger, predatorial fish, like shark, swordfish, and tuna, tend to have more unhealthy levels of mercury, so should be consumed in moderation.

Therefore, for fish and seafood, the pecking order for the healthiest to the least healthy is: wild-caught “fatty” fish, wild-caught fish & seafood, and then farm-raised fish and seafood.

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CHAPTER 12

Healthy Gut Bacteria (Probiotics)

Probiotics are the good bacteria that inhabit your intestinal tract. Some of the most recent research shows that there are about 30 trillion cells in the human body, and there are about 39 trillion probiotic bacteria inhabiting a healthy digestive tract alone [1]. However, many Americans have only 20-25 trillion probiotic bacteria in their digestive tract. This leads to an unhealthy digestive tract, decreased ability to assimilate and absorb food, decreased immunity, and a number of other ailments and symptoms. The decreased number of probiotics is due to a variety of reasons: we do not consume as many fermented foods as our ancestors did, we consume much more sugar, we take antibiotics, which kill both the bad and good bacteria, we take steroids which disrupt the normal, healthy, gut bacteria, we drink chlorinated water (the chlorine kills bacteria and pathogens, so that we don't get sick from non-potable water, but the chlorine also disrupts normal gut bacteria), amongst a number of other reasons.

More recently, the public has heard more about probiotics and how they can help with certain digestive issues. Probiotics have been marketed by various companies and food products. Not only do probiotics help with digestive tract function, but they also, ultimately, help with brain function, because there is a direct gut-brain connection neurologically. Dr. Perlmutter talks about this topic in great length in his book *Brain Maker: The Power of Gut Microbes to Heal and Protect your Brain for Life* [2].

Yogurts are probably the most well-known food product when people think of consuming probiotics. While there are probiotics in yogurt, there are not as many as there are in other foods. In addition, many of the well-known yogurt brands have added sugar and other non-necessary ingredients that do not help promote optimal gut health. This is why I have always suggested that patients get full fat (whole milk), plain yogurt. The patients can then add their own blueberries, strawberries, etc. and a sweetener, like stevia, if they choose. This way they know exactly what they are putting into their body.

The highest amounts of probiotics are found in fermented foods, particularly vegetables. The most common fermented vegetable is sauerkraut. However, if you are not a sauerkraut fan, there are many other options. You can ferment carrots, green beans, tomatoes, beets, lettuces, basil, and just about any vegetable, really. Fermented foods have been around for millennia, and are in almost every ancient, recorded history of every culture around the world. Here are food items that are fermented: vegetables of all kinds, vegetable krauts, kimchi (Korean dish), vinegars, yogurts, cheeses, dry-aged meats, brined meats, misos, tempeh, kombuchas, kefir, water kefir, beers, wines, meads, sourdough bread, and the list goes on! Prior to canning and pasteurization, fermentation was the method that people used to preserve foods to be consumed later. Not only does fermentation preserve food very safely, but it also produces more vitamins and nutrients within the food, and it produces a tremendous amount of probiotics in the food. Probably the most comprehensive book on this subject is *The Art of Fermentation*, by Sandor Katz [3]. It is a very in-depth historical account and a how-to resource of fermentation at home. His previous book, *Wild Fermentation* [4], is shorter and has plenty of recipes to begin trying yourself. I started fermenting foods after reading his book. My kids enjoy helping, and they like the dill carrot sticks, pickles, kombucha, and water kefir the best, so far.

Kombucha is another food item that more and more people have heard of and are beginning to buy at grocery stores. Kombucha is a fermented, probiotic tea. Kombucha is made with numerous flavors, it has a slight vinegar “kick”, it is carbonated like a soft drink, and contains many good, healthy probiotics. It can be a little pricey to buy regularly at the grocery store; however, if you try it and like it, it is easy to make at home, and a lot cheaper. The website KombuchaKamp.com has all the at-home start-up supplies you would need and directions. You can literally buy just a starter “mother,” also known as a

“SCOBE” and get started. Most everything else that you would need, you would probably have around the house, beyond possibly plain green or black tea bags/leaves. I also personally bought “water kefir grains” from KombuchaKamp.com. This, too, is very simple to do, is quicker to make than kombucha, and my kids love it just as much.

If you want to optimize your gut health, and subsequently, your immunity and overall health, you really should consider incorporating fermented foods into your dietary habits. The healthier your gut is, the quicker you will improve your health, lose weight, maintain your ideal body weight with ease, and optimize your health to the fullest.

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3. Katz, Sandor. "The Art of Fermentation: An In-Depth Exploration of Essential and Processes from Around the World." 2012.
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CHAPTER 13

The Importance of Intermittent Fasting

Intermittent fasting describes limiting our eating to 1 or 2 meals a day, over a small window of time. Most commonly, it is done by skipping breakfast, eating lunch around 12 noon, and eating dinner no later than 8:00 pm. This shortens your consumption of food down to about an eight-hour window, or less, allowing your body 16 hours to not only process and digest food but more importantly, spend energy and resources on repairing and healing your body.

The brain uses the most energy in the body. The digestive tract uses the second most amount of energy, when we are consuming food and drinks “around the clock.” When we limit our food intake to an eight-hour window, or less, the body can then use those energy resources to promote health and keep you healthy, instead of breaking down more food. This also has a dramatic effect on insulin release and down-regulating insulin resistance into the cells, both of which are a great tool to help you improve your health, lose weight, keep it off, and ultimately, optimize your health.

Not only does intermittent fasting have positive effects on insulin release and lowering insulin resistance in cells, but there are some additional benefits: detoxification in the body, hormone regulation, faster weight loss, easier-maintained weight loss once at an ideal body weight, cutting down disease risks, like diabetes, heart disease, stroke, and some types of cancer, triggering stem cells to repair damaged immune cells, preventing inflammation and free radical

damage, supporting healthy bacteria in your gut, and preventing food cravings, amongst a number of other benefits!

Another common way to perform intermittent fasting is to eat breakfast, skip lunch, and then eat dinner. This gives about a 12-hour window for your body to do the aforementioned health promoting work. Some even choose to do 1 meal a day, which results in a 24-hour fast from food, with only fluid intake between meals.

Finally, a “modified” intermittent fast protocol exists. This is typically performed by drinking a high, healthy-fat coffee in the morning. Many times, this type of coffee is referred to as “Bulletproof” coffee as coined, and made popular, by Dave Aspry [1]. Traditional “Bulletproof” coffee is made with coffee beans that do not contain mycotoxins (mold toxins), grass-fed butter, and MCT oil, a derivative of coconut oil. You take the above ingredients and blend them in a high-speed blender, to make a very frothy and creamy coffee. People who consume coffee, made this way, state that it prolongs the energy burst that coffee provides and keeps down hunger pains prior to lunchtime. It is not necessary to do a “modified” intermittent fast, but it is a tool that some individuals find helpful when they choose not to consume breakfast. This style of coffee will also not raise blood sugar levels, and it will subsequently not raise insulin levels in the bloodstream.

To make a “Bulletproof”-style coffee, you can simply steep organic coffee beans and mix with grass-fed butter, and even coconut oil. Some just use steeped coffee and grass-fed butter. Put the ingredients into the blender and blend on high until frothy! While most people first turn up their noses to butter in their coffee, those who have tried it, state “It’s like a latte on steroids!” If you are interested in learning how to make this style of coffee, you can search on YouTube “How to make Bulletproof” coffee and find a 5-minute how-to video [2].

Who should NOT do a full intermittent fast?

- Those who are under a tremendous amount of stress and their cortisol levels are already very high. Consider doing a “modified” intermittent fast as described above.

- Those who have a chronic issue with hypoglycemia.
- Women who are pregnant or nursing. There are many hormonal changes that occur in a woman's body when pregnant or nursing and a full intermittent fast is not the most ideal or safe plan. Typically, a "modified" intermittent fast, as described previously, or a full breakfast would be best. However, you would want to consult with your physician first.

REFERENCES

1. <https://blog.bulletproof.com/about-dave-asprey/>
2. <https://www.youtube.com/watch?v=4YjLMdx3YZY&t=4s>

CHAPTER 14

Everything in a Nutshell

To summarize all key points related to foundational nutrition, I would conclude, “Consume a lower carbohydrate (focused on low glycemic carbohydrates), moderate protein, and higher, healthy fat diet, which utilizes intermittent fasting while keeping well-hydrated with unsweetened water, teas, and coffees, to not only help you lose weight and maintain an ideal body weight, but to also allow you to improve your health and heal your body from the inside out.”

The amount of carbohydrate sensitivity (insulin response to carbohydrates in the diet) will vary from individual to individual. However, to provide a general percentage of calories to eat based on the three macronutrients, it would be somewhere around: 50% of calories from healthy fats, 30-35% of calories from proteins, and 15-20% of calories from low glycemic carbohydrates. Yes, these percentages are not exactly what everyone needs; however, it is a good starting-point estimation for a majority. The reason that these recommendations are different from the current recommendations put out by the USDA [1], is because the USDA is a slow-turning ship when it comes to official policy change. The USDA is 10-20 years behind the most current research.

With this said, most people do not want to look at labels and count percentages of macronutrients or calories as a new, lifelong hobby. So, they ask, “What food should I eat?” Below is a general guideline. Choose the majority of the fats that you’ll eat from full-fat animal products, ideally pastured and organic. By ‘full-fat’ animal products, this means whole-milk yogurts, cheeses, sour creams, cottage cheeses, heavy creams, and the like. This also means

consuming the entire egg. This means that meats should NOT have the fat trimmed....don't use the leanest ground beef that you can buy. Buy 85% ground beef. This means to buy and eat chicken with the skin and fat on. This means bacon, sausages, salamis, etc. should be consumed. Definitely buy pastured and organic on these choices. Cook vegetables, and the like, in grass-fed butter. Kerrygold, Anchor, and Organic Valley brands are readily available in most grocery stores, amongst other organic brands. Other healthy fats, like coconut oil, olive oil, avocados, and tree nuts are also advisable. Cook using coconut oil, olive oil, lard or bacon drippings. For these oils, look for extra virgin, unrefined, and/or organic.

When you consume meats that still contain their traditional fats, and are not trimmed, it is amazing that the portions end up falling into the abovementioned ratios as related to the percentage of calories! Chicken and turkey will have the lowest fat to protein ratio while ducks and geese have the highest, for fowl.

For vegetables, mostly select the ones that grow above the ground. If you are unaware, potatoes, carrots and other tubers grow below the ground. The exception to this would be onions, garlic, and others in the allium family. If cooking vegetables, use traditional, healthy, fats to cook with such as olive oil, coconut oil, butter, lard, or bacon drippings.

When consuming tree nuts (every nut other than peanuts), try to consume raw nuts. Raw nuts have not been roasted. Roasting changes the fats, at a molecular level, and is not as healthy. Also, try not to consume salted nuts. Commercial nuts are salted with iodized table salt, which is chemically made in a factory. For your salt consumption, always use Himalayan sea salt, which has an additional 84 minerals and trace elements in it beyond the actual salt, sea salt, or kosher salt. If you really want a roasted tree nut, try roasting your own nuts in healthy fat and adding some Himalayan or other sea salt.

In addition to the above, also look at increasing your consumption of fermented foods and fermented drinks. They contain a wide variety of probiotics (the good bacteria) for your gut health, and they aid in digestion and overall health. Humans, for millennia, have consumed them, and only until the last half century have they been consumed less and less. However, they are making a resurgence because they are so healthy and beneficial.

Focus on drinking primarily purified water, herbal and organic unsweetened teas, and organic coffee. In addition, fermented drinks like kombucha, are advisable. If a sweetener is absolutely needed, use Stevia, monk fruit extract, allulose or small amounts of raw and unfiltered honey.

Greatly limit your consumption of sugar, grains, high-glycemic carbohydrates, and vegetable oils. Focus on low-glycemic carbohydrates or sprouted and fermented whole grains. Consume only during special occasions or infrequently. They will have a more detrimental effect on your overall health, on your ability to lose weight, and on your ability to optimize your health.

While I try to provide as much useful & applicable information in this book as possible, I know there are a certain percentage of people who want a more “recipe-like” plan. One that is proven and has worked for 1,000’s of people across the world. And one that is simplified & easily implemented.

That program has been created, and it was made specifically for those who have the following 3 issues:

- Stubborn weight they can’t seem to lose
- Low energy... or no energy
- Gut dysfunction

If you are needing specific help, you can learn more about this program and how to work directly with me by going to www.MetabolicMasteryTransformation.com

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1. https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf

CHAPTER 15

Ketosis vs. Ketoacidosis

There has been more awareness of ketosis, commonly referred to as “keto,” in recent years. Ketosis is sometimes confused with ketoacidosis, so I will clarify the two because they are not the same. Ketosis is a benign, physiological change in the body as a result of dietary changes. It is a controlled, insulin-regulated process that produces a mild release of fatty acids and ketone body production in response to low carbohydrate consumption and a higher, dietary fat consumption. Additionally, everyone goes into a mild ketosis at night when sleeping and fasting from food. It is a normal, physiological process.

Ketoacidosis, on the other hand, is a serious, medical condition. It is not a normal physiological process. This is when the body produces an abnormal level of ketone bodies, in an unregulated biochemical situation. For the body to reach ketoacidosis, the body is not producing enough insulin to regulate the flow of fatty acids. Therefore, the body produces too many ketone bodies. Too many ketone bodies, in the bloodstream, lead to a low pH and an acidic environment. This is dangerous, and hence the term “acidosis” in ketoacidosis. Ketoacidosis is typically seen in diabetics where there are issues with the pancreas not producing enough insulin.

CHAPTER 16

But What If My Gallbladder Has Been Removed?

If your gallbladder has recently been removed, you will not initially be able to consume a higher amount of healthy fats in your diet, compared to others who have their gallbladder intact. The gallbladder is the organ that produces bile, which is one of the main substances in the body that helps break down fats in the digestive tract. So, if you do not have a gallbladder, you will not have as much bile to utilize. Many individuals, who have had their gallbladders removed, realize that if they eat “too greasy of food,” they have digestive issues.

Prior to the gallbladder being removed, it held extra bile to break down fats. The liver produced a certain amount daily, based on your dietary habits. Then, when you had an influx of dietary fats, the stored bile in the gallbladder would release the “reserves” to help break down the fats that were ingested. If you don’t have a gallbladder, then this process won’t take place. However, in time, the liver will upregulate its production of bile to meet the demand of the increased dietary fat intake. And the gastrointestinal issues will no longer occur on account of a lack of bile production. So, ramp up your consumption of healthy fats over time, and your liver will adapt its production of bile.

CHAPTER 17

But What If I'm Vegetarian or Vegan?

If, for religious or ethical choices, you do not consume animal meats, there are still many options for you. If you are a strict vegan and do not consume eggs or milk products, then it will be a little more difficult, but not impossible, for you to follow the recommendations of this book. If you are a vegan, you will want to consume a large amount of coconut oil, avocados and avocado oil, olive oil and tree nuts (not peanuts), while focusing on low glycemic carbohydrates.

For those that are lacto-ovo vegetarians, you will want to put more emphasis on egg and whole milk product consumption, to raise your healthy fat intake and a broader amino acid profile. Plus, you will be able to obtain vitamin B12 found in animal products. You will also want to cook with coconut oil, olive oil, and butter to increase your healthy fat intake. Avocados are also a great resource for healthy fats, along with tree nuts (not peanuts). A lacto-ovo vegetarian will want to especially focus on the low glycemic carbohydrates, since a larger percentage of the calories will come from the carbohydrate macronutrient.

For meat protein substitutes, if consuming soy products, make sure that they are tofu or tempeh. These both are fermented and are easier for the human body to digest. Also, make sure that they are non-GMO/organic.

If you are a lacto-ovo pescatarian vegetarian, then you will obviously follow the above and focus on consuming more fatty fish (salmon, trout, mackerel, sardines, and tuna). In addition, you can cook your fish in coconut oil or butter to increase your healthy fat intake.

Supplementation Considerations

I always encourage patients to get their nutrition from whole, real foods. However, if you are a vegan or vegetarian and do want to supplement with a protein powder, I would suggest using a protein powder that contains no additives, fillers, colors, artificial sweeteners, or GMO's. If utilizing a protein powder based on dairy proteins, I would highly suggest getting a product from grass-fed animals, with no hormones or antibiotics.

CHAPTER 18

Supplementation Considerations

Today, there are countless supplementation products on the market. Some are beneficial, but many, unfortunately, are mostly hype, filled with synthetic vitamins, fillers, artificial coloring, and other non-health promoting ingredients. For the most part, if you start with a strong foundation of a healthy diet, you will need very little, if any, supplementation.

The following are some to consider depending on your particular situation.

Vitamin D3—Vitamin D acts more like a hormone than a vitamin and is involved in so many physiological processes in the body. Vitamin D is produced when the sunlight meets the skin; however, in our industrialized lifestyle, we rarely expose ourselves to the sun as compared to just a century ago. Additionally, when we do go outside for prolonged periods, many people put sunscreens on routinely. Many sunscreens block the sunlight from getting through to the skin to produce Vitamin D. It is estimated that Vitamin D levels are deficient in 70%+ of Americans [1]. Most primary care physicians are checking Vitamin D levels when running routine blood work. If your blood work shows deficiency, or you are not in the direct sunlight for 30 minutes per day between the hours of 10:00 am and 2:00 pm, then you will probably want to consider supplementing with Vitamin D. Make sure that you are taking Vitamin D3, as Vitamin D2 is the synthetic form and will not be absorbed like Vitamin D3. The dosage for Vitamin D3 is 1,000 IU's per every 40 pounds of body weight, with a max for most individuals at 5,000-10,000 IU's per day [2]. So, with the megadoses of 50,000 IU's 1x/week, the body can't fully absorb all

Supplementation Considerations

that Vitamin D at once. You would be better served to use the above dosing guidelines and take Vitamin D daily.

The vitamin D I personally use and regularly recommend to patients can be found on my Fullscript dispensary. Fullscript ships to your doorstep in the United States and Canada. Accounts are free to sign up. Fullscript carries high-quality, professional products that they 3rd party test. This ensures you are getting what is stated on the label. Additionally, they have great pricing.

Here is the Vitamin D3: <https://us.fullscript.com/protocols/drpbhealth-vitamin-d3>

Vitamin K2 is found in fermented foods. Vitamin K2 will help with Vitamin D absorption. If you are looking for a Vitamin D3 + K2 product, here is the one I recommend: <https://us.fullscript.com/protocols/drpbhealth-vitamin-d3-k2-single-product>

Omega-3 fatty acids—We spoke on the importance of Omega-3 fatty acids in several chapters. If you eat all wild game meats, pastured and organic meats, and pastured and organic animal by-products, then you probably will not need to supplement with Omega-3 fatty acids. However, due to your local grocery supply, budgetary restrictions, eating out, and other reasons, you may not always have access to pastured or organic meats. If this is the case, then you may not be consuming enough Omega-3 fatty acids. This is when supplementation would be a good choice. EPA and DHA are two forms of Omega-3 fatty acids. DHA primarily constitutes your brain and nervous system, and EPA has more of the anti-inflammatory properties. There are other types of Omega-3 fatty acids like DPA and ALA. When choosing an Omega-3 fatty acid supplement from fish sources, you want to look for three main things: 1) That the Omega-3's are not being concentrated to a specific ratio. Instead, purchase them in their natural occurring form. 2) That they are being tested for purity and quality, meaning that they are pharmaceutical grade, that mercury and other toxins are being filtered out, and that the third-party testing confirms the dosages. 3) You want to make sure that the oil is not rancid. The easiest way to check is to actually bite into a capsule. If it tastes very fishy, then it has gone rancid. This means that it has been exposed to heat, light, oxygen, or a combination of the

Supplementation Considerations

three. Just like any other oil, you do not want to consume rancid Omega-3 fatty acids either.

If you are vegan or vegetarian, you have a higher chance of being deficient in Omega 3's due to the majority coming from animal products. Outside of animal products and seaweed/algae, all vegan food sources of Omega 3's only contain ALA. ALA converts to EPA & DHA at a .1- .9% conversion rate. Yes, less than 1%. So this means you have to eat A LOT of these foods just to get sufficient amounts of Omega 3's.

The Omega 3 I personally take, and regularly recommend to patients can be found here: <https://us.fullscript.com/protocols/drpbhealth-omega-3-essential-fatty-acids>

Since the above is derived from fish, I recommend the following brand for my vegan and vegetarian patients. Most vegan Omega 3's have very little if any EPA. This particular brand has sufficient levels and is a very good quality for the price: <https://us.fullscript.com/protocols/drpbhealth-omega-3-essential-fatty-acids-vegan>

Probiotics—As mentioned previously, probiotics are the good bacteria in your intestinal tract. Many people have begun taking a probiotic supplement as a digestive aid for improved gut function and health. There are a couple of key things that you need to know when buying a probiotic if you choose to supplement with one. First, if taking a probiotic, you want to make sure that you have a wide variety of bacterial strains. Most products only have one or two different strains.

I always encourage patients to get a probiotic with a MINIMUM of five different bacterial strains. Second, you want to make sure that you are taking enough probiotics in each dosage. I always encourage patients to take 20 billion CFU's per day, or more. If the probiotic only contains one or two billion CFU's, it is really not worth the money spent. With all that said, you would be better off to incorporate a variety of fermented foods into your diet. Many times, a single serving of fermented food has more probiotics than what you could ever get in a probiotic supplement. Whole, real food is always your best, first option when considering supplementation. If this cannot be obtained for whatever reason, then your next, best option is supplementing with a good probiotic.

Supplementation Considerations

Here is the Probiotic I've used the most with patients. Broad-spectrum, high-dosage and only 1 capsule to take. The bottle lasts 2 months: <https://us.fullscript.com/protocols/drpbhealth-probiotic>

Multi-Vitamin/Mineral- If you are consuming high-quality food regularly, chances are that you WILL NOT need a Multi-Vitamin/ Mineral. However, if you travel a lot, have limited selection in your area, have budgetary restrictions, etc. then you may want to consider a Multi-Vitamin/Mineral to “fill in the gaps.” When choosing a Multi-Vitamin/Mineral, quality is of the utmost importance. So many vitamin companies fill their product with fillers, artificial coloring, chemicals, and synthetic vitamins. None of these are good, and the body does not really process synthetic vitamins. Literally, I have had patients tell me that they find their vitamin whole, in the toilet, when they use the restroom! This is obviously a waste of money. Your body should be able to not only digest the supplement but be able to absorb it and utilize it. I would highly suggest looking to get a whole-food Multi-Vitamin/Mineral. This means that it is sourced from whole fruits and vegetables, and it is not synthetic. I also encourage you to get a Multi-Vitamin/Mineral that is sourced from organic produce. This way you know that it does not have any petroleum-based fertilizers, pesticides, herbicides, and fungicides in it. Finally, I would make sure that the supplement that you choose is yeast-free, soy-free, corn-free, gluten-free, and non-GMO. Typically, these quality Multi-Vitamin/ Minerals are only found at local “mom and pop” health food stores, or in doctors’ offices.

This is the one I recommend that meets all the above requirements: <https://us.fullscript.com/protocols/drpbhealth-multivitamin-whole-real-food-based>

They also have a gluten-free version if you have a gluten sensitivity or allergy: <https://us.fullscript.com/protocols/drpbhealth-multivitamin-whole-real-food-based-gluten-free>

If you are looking for a vegetarian or vegan option, I suggest this one for patients: <https://us.fullscript.com/protocols/drpbhealth-multivitamin-whole-real-food-based-vegan>

The last supplement you may want to consider taking and I find patients commonly benefit from, is Vitamin B12.

Vitamin B12 is found predominantly in animal foods. Vegetarians and vegans are often deficient in Vitamin B12 for this reason. It is necessary for proper brain and nervous system function.

People who struggle with low energy levels, fatigue, mood changes and lack of focus are often deficient in Vitamin B12. Also, those who have a mutation on the MTHFR gene have the genetic predisposition to not methylate as well. In order for your body to absorb B12, your body need to add a methyl group to B12. If you have this gene variant, you may not be methylating well, and therefore not absorbing Vitamin B12 sufficiently. In turn, leading to a deficiency and host of symptoms.

Another common sign of Vitamin B12 deficiency is neuropathy. Common diabetic medications like metformin block the absorption of B12 and can lead to symptoms like neuropathy.

For these reasons, I've regularly recommended the below B12. It is liposomal in liquid form. This makes it more absorbable. Hold it under your tongue for 20-30 seconds and then swallow. It is also already methylated in the lab, which ensures maximum absorption. WARNING: Take it in the morning or at lunch. If you take it with dinner or in the evening, patients often have difficulty falling asleep.

Here is the Vitamin B12 I regularly utilize with patients:
<https://us.fullscript.com/protocols/drpbhealth-b12-liquid-methylated>

Ideally, if you are eating a solid foundational and healthy diet, then you should not have to consume a whole bunch of supplements, on a daily basis, to maintain your health. Obviously, if you have a health issue, there may be additional supplements and nutritional products that could optimize and accelerate your recovery. But generally speaking, supplements should do exactly as their name implies, they should supplement a foundational nutritional approach that is based on whole, real, foods and fluids.

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CHAPTER 19

Resources

Below you will find a list of resources referenced throughout this book. I wanted to keep this book simple, yet information packed; however, I know that there are those individuals who like more details, like me. In addition, there are those individuals who will find certain topics more interesting and will want to know more information regarding those areas. For that reason, I have listed some resources that I have found very beneficial and educational over the years of my studying and research. Here are each of those, with some mini descriptions, so that you do not have to go back through the text and see each book's primary topic.

1. *Good Calories, Bad Calories: Fats, Carbs, and the Controversial Science of Diet and Health* by Gary Taubes—This is Gary's first book on the controversies found in the nutrition research. He describes how research outcomes were reported one way, to fit the individuals' personal hypotheses, but the research outcomes never proved the hypotheses. In fact, in many cases, the research pointed to just the opposite when looked at closely. He also documents the history of how nutritional science evolved, and how that has affected our nation's health, and subsequently, the rest of the world that takes on our Western lifestyle. He essentially proves that "conventional wisdom" in nutrition, which has been reported for the last half century, is, many times, the exact opposite of what the research truly shows. This, in turn, has led to tremendous rises in "Western diseases" and increased health care costs.

2. *Why We Get Fat: And What To Do About It* by Gary Taubes—This is Gary's follow-up book to *Good Calories, Bad Calories*. It is more condensed and does not go into as much detail. This book is a very good read on what really causes humans to become unhealthy and fat, and I have summarized the main thoughts in this book.
3. *Brain Maker: The Power of Gut Microbiomes to Heal and Protect Your Brain for Life*, by David Perlmutter, M.D.—This book is a follow-up to Dr. Perlmutter's previous books *Wheat Belly* and *Grain Brain*. This book primarily discusses the effects of gut health, and the microbiome, on brain health. The two body systems are intricately related. He discusses how our gut microbiomes are influenced as early as birth, and how they are influenced by our lifestyle choices. He then lays out a plan to improve the intestinal microbiome.
4. *The Plant Paradox: The Hidden Dangers In "Healthy" Foods That Cause Disease and Weight Gain*, by Steven R. Gundry, M.D.- Dr. Gundry was the first author to bring international awareness to the negative effects of lectins and how they can negatively affect some individuals. He discusses lectins in detail, the role of a healthy digestive tract, the common disruptors of a healthy digestive tract, and the ill effects lectins can cause for some individuals.
5. *Sweet Deception: Why Splenda, NutraSweet, and the FDA May Be Hazardous To Your Health* by Dr. Joseph Mercola—Dr. Mercola has one of the largest resources of natural, health information available on the web. You can find information on just about any health topic at Mercola.com This particular book covers how these mentioned artificial sweeteners have a very deleterious effect on your health, and how the FDA has played a role in making the general public think that they are safe.
6. *The Obesity Code: Unlocking The Secrets of Weight Loss* by Jason Fung, M.D.—This is a book specifically addressing weight loss, as the title implies. Weight gain and obesity are primarily driven by hormones, in everyone, and only by understanding the effects of insulin and insulin resistance, can we achieve lasting weight loss. Dr. Fung covers

a lot of the science and research as to why this is, and only uses data from scientific experiments on human models, not animal models, to explain why.

7. *The Big Fat Surprise: Why Butter, Meat, and Cheese Belong In A Healthy Diet* by Nina Teicholz—This is an absolutely eye-opening book on the history of nutritional science, the egotistical individuals that pushed their personal agendas and hypotheses, the organizations and companies involved that pushed certain agendas for monetary gain, and the resulting effects on our nation's health, from decades of incorrect information. It reads as a history lesson, a thriller, and a research analysis all in one.
8. *Wheat Belly: Lose The Wheat, Lose The Belly, And Find Your Path Back To Health* by William Davis, M.D.—This is an in-depth look at the history of ancient wheat to modern wheat, its effects on the body, from food intolerances all the way to research on schizophrenics. This is a very in-depth look at how, and why, wheat makes someone less healthy and contributes to weight gain.
9. *Grain Brain: The Surprising Truth About Wheat, Carbs and Sugar- Your Brain's Silent Killer* by David Perlmutter, M.D.—Basically, as the full title describes, the book lists factors that have a tremendous effect on the health and function of your brain. Your brain, of course, coordinates and runs the functions of everything in your body.
10. *Salt Sugar Fat: How The Food Giants Hooked Us* by Michael Moss— This book covers how the food giants literally get people not only loving their food, but literally addicted to it, through the combination of 3 ingredients: salt, sugar and fat. The companies know the optimal combination point for every product that they place in the marketplace. In the food industry, that is called “The Bliss Point”.
11. *The Real Meal Revolution: The Radical Sustainable Approach to Healthy Eating* by Tim Noakes, M.D.—Dr. Noakes is one of the leading authorities, worldwide, on a high-fat, moderate protein, and low carb diet. He has been a professor of medicine for many years. He personally was an avid runner and ran over 70 marathons in his

lifetime. He was a very strict, high-carb, low-fat dieter for most of his life. Then, he was diagnosed with Type 2 Diabetes, after decades of following all of the conventional, nutritional advice, by the book. He decided to investigate why he developed diabetes. He learned that everything he was consuming was exactly wrong, according to the research. Through his dietary changes, he dropped over 25 pounds, got his diabetes under control, and his running performance improved to better than it had been in over 20 years. Much of what he described, I have summarized in this book.

12. *WestonAPrice.org*—The Weston A. Price Foundation is a non-profit foundation dedicated to educating the public on nutrition, farming practices, and the healing arts. There is a large amount of free information on their website. Dr. Price's initial research demonstrated that humans achieve perfect physical form and perfect health, generation after generation, only when they consume nutrient-dense, whole foods and the vital fat-soluble activators, found exclusively in animal fats. They also publish a magazine, called Mother Earth News, which covers nutrition, farming practices, and the healing arts. They also have seminars around the country where you can attend and learn.
13. *RealMilk.com*—This is a website dedicated to educating the public on the history of how we moved away from raw milk as a society, the health benefits of raw milk, and where you can find local raw milk products. Many people who are lactose-intolerant, can consume raw milk products because the naturally-occurring enzyme, lactase, is not destroyed in raw milk, like it is with pasteurization.
14. *Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods*, by Sandor Katz—This is Sandor's first book on the history of fermentation across cultures for millennia, the nutritional and health benefits, and also the how-to recipes and process to ferment foods at home as people have done for thousands of years. Once you start reading, you will probably be inspired to start trying some of the recipes, because they really are easy. You basically need jars, salt, non-chlorinated water, and your food....and sometimes even less than those items.

15. *The Art of Fermentation: An In-Depth Exploration of Essential Concepts And Processes From Around The World* by Sandor Katz—This is Sandor’s follow-up book to *Wild Fermentation*, written a decade later. This book has more detail, and more answers to troubleshooting, along with more recipes.
16. *KombuchaKamp.com*—Hannah Crum is known as the “Kombucha Mama”. She has a plethora of information on her website about making kombucha and other fermented, probiotic foods. She not only shares this information, but she has a lot of start-up gear to purchase so that you can start making fermented drinks and foods at home. This is a great resource for all things fermented.
17. *Brain Energy: A Revolutionary Breakthrough In Understanding Mental Health-and Improving Treatment for Anxiety, Depression, OCD, PTSD, and More* by Dr. Chris Palmer, M.D.—Dr. Palmer is a 20+ year Harvard research scientist, professor, and practicing physician. How he stumbled across the metabolic connections with mental health issues, is a story in itself. He then leaned into his observations and has presented a game-changing book for mental health treatments, backed by scientific literature. I highly recommend.
18. *The Secret Life of Fat: The Science Behind The Body’s Least Understood Organ and What It Means For You* by Sylvia Tara, PhD.—Sylvia had always been conscious of her weight and did everything to keep her weight down and her body trimmed. When she had several life events of friends who ate vastly different than her mouse-like eating routine and were thinner, she knew there was something missing. She went back to school determined to learn more about these mysterious cells called fat. Turns out, fat is an organ of its own in the body and has many hormonal influences over the brain and body. A fascinating and eye-opening read.

CHAPTER 20

In Conclusion: Thank You!

I want to thank you for reading this book. I hope that it has been eye-opening. I hope that it has also been educational and informative. More importantly, I hope that it has been practical and useful. It is my desire that you can take this information, apply it to your life, and allow your body to move towards health. **Knowledge is wonderful, but the implementation of that knowledge is the key to seeing results.**

Wisdom is said to be knowledge applied. So be wise. ;-)

Once implementation occurs, you will not only begin to regain your health and lose weight, but more importantly, you will maintain your weight loss and optimize your health.

If you need help getting the knowledge implemented, as mentioned before, consider visiting www.MetabolicMasteryTransformation.com to learn more. The program was designed to help you implement the process to improve your metabolism in a proven, practical, simplified and highly effective way.

Ultimately my hope and prayer is the information in this book is not only life-changing for you, but also for the friends and family around you!

REMINDER: You only get one body to live this life in. Treat it well!

To your health,

Dr. M. Brandon Pettke