

Diabetes Fix



By: Mike Geary, CN, CPT
Catherine Ebeling, RN, BsN

Disclaimer and Safety Information

This information (and any accompanying material) is not intended to replace the attention or advice of a physician or other qualified health care professional. Anyone who wishes to embark on any dietary, drug, exercise, or other lifestyle change intended to prevent or treat a specific disease or condition should first consult with and seek clearance from a physician or other qualified health care professional.

Pregnant women in particular should seek the advice of a physician before using any protocol listed on this website. The protocols described on this website are for adults only, unless otherwise specified. Product labels may contain important safety information and the most recent product information provided by the product manufacturers should be carefully reviewed prior to use to verify the dose, administration, and contraindications.

National, state, and local laws may vary regarding the use and application of many of the treatments discussed. The reader assumes the risk of any injuries. The authors and publishers, their affiliates and assigns are not liable for any injury and/or damage to persons arising from this protocol and expressly disclaim responsibility for any adverse effects resulting from the use of the information contained herein.

The protocols raise many issues that are subject to change as new data emerge. None of our suggested protocol regimens can guarantee health benefits. The publisher has not performed independent verification of the data contained herein, and expressly disclaim responsibility for any error in literature.

The Superfood Diabetes Reversal Diet

PART 1

Introduction—Are You Prepared for the Coming Health Apocalypse?

- 1. Could You or Someone You Know Have Diabetes And Not Know It?**
- 2. The Pathology of Diabetes—What Goes Wrong In Our Bodies**
- 3. How Medication, Insulin and Standard Diabetes Treatments Worsen Diabetes**
- 4. Why Our Current SAD Diet Causes Diabetes, Obesity and Heart Disease**

PART 2

- 5. THE SUPERFOOD DIABETES REVERSAL DIET**
- 6. Understanding the Glycemic Index and Glycemic Load**
- 7. Creating the Diabetes-Free Zone**
- 8. Superfoods That Lower Blood Sugar and Protect Against Diabetes**
- 9. Nutritional Supplements to Keep Blood Sugar in Check**
- 10. Superfood Spices That Fight Diabetes**
- 11. High Impact Ways to Improve Your Insulin Sensitivity**
- 12. Meal Plans and Recipes—Phase 1 and Phase 2**
- 13. Your Superfood Diabetes Reversal Diet Shopping List**

Introduction

The Approaching Apocalypse

We are on the verge of a huge worldwide pandemic. Is this Ebola, AIDS, the plague, cancer, or some new, exotic and yet undiscovered disease?

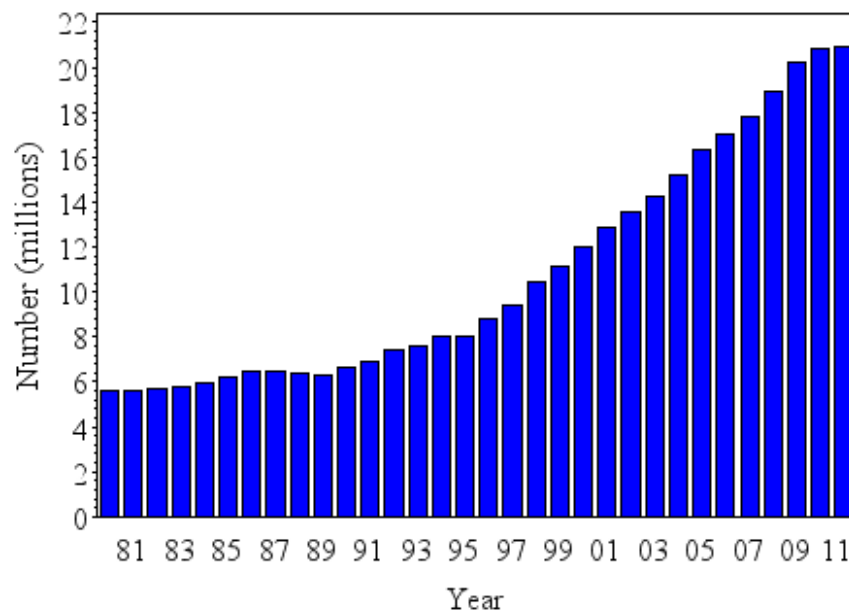
No, this is a fully preventable, fully reversible disease that is very present now, and the ability to change the direction of this deadly disease is literally right under our noses.

That disease is Diabetes. More specifically, Type 2 Diabetes. Insulin resistance, metabolic syndrome, syndrome X, obesity, pre-diabetes, and Type 2 Diabetes are all closely related and all are caused by similar lifestyle and dietary habits that have become ingrained in modern societies.

Sure, diabetes has been around for a long time and it isn't contagious, so just how is it going to become the next pandemic?

This insidious disease has skyrocketed to epic proportions in just the last few years, and the trend is growing stronger by the minute. In the US alone, it has already begun its climb to epidemic proportions, and that is just the tip of the iceberg.

According to the U.S. Centers for Chronic Disease: from 1980 through 2011, the number of Americans with diagnosed diabetes *has more than tripled* (from 5.6 million to 20.9 million).



In the United States alone (as of 2012 statistics):

- 29.1 million Americans, or 9.3% of the population, have full-blown diabetes.
- Of that 29.1 million, 21 million are diagnosed diabetics, and 8.1 million are undiagnosed diabetics.
- In addition to the above numbers, 86 million Americans age 20 and older have “pre-diabetes”. One-third of this group will develop full-blown diabetes in 5 years or less.
- There are about 2 million new cases of diagnosed diabetes per year and that number is rising every year.

According to the most recent estimates, the number of Americans with diabetes ***will increase dramatically in the next 25 years -- from the current 29.1 million to 44 million in 2034.***

Nearly ***1 out of 4*** people in the US currently have a condition called “pre-diabetes.” Pre-diabetes is a condition that occurs when blood sugar is higher than normal or optimal range, but is not high enough to be officially diagnosed as full-blown diabetes. This is determined by a fasting blood sugar level of 100 to 125 mg/dL, according to ADA criteria. Even the conventional numbers for ‘normal’ blood sugar ranges are too high to be considered optimal healthy levels. And—most people don’t have a clue they have this condition—or how to prevent it.

While the United States has one of the largest populations of people with diabetes, it is by no means the biggest. The surge in Type 2 Diabetes statistics is not restricted to just the U.S. These numbers represent a worldwide trend!

According to the World Health Organization and the International Diabetes Federation, 1 out of every 12 people have diagnosed diabetes, ***but 1 out of every 2 people--50% of the world population--have undiagnosed diabetes!***

Globally, it is estimated that diabetes/pre-diabetes and obesity affects about 1.7 billion people worldwide. In 2007, about 240 million people had diagnosed diabetes, but by 2030, it is estimated to be at 380 million. About ten times the number of people affected by HIV/AIDS. This is most likely a gross underestimate, too.

North America and the Caribbean have higher prevalence, followed by the Middle East and North Africa. Western Pacific regions have even higher numbers of people with diabetes.

According to the World Health Organization (WHO):

“...It has long been known that the number of deaths related to diabetes is

considerably underestimated. A more plausible figure is likely to be around 4 million deaths per year related to the presence of the disorder. This is about 9% of the global total. Many of these diabetes-related deaths are from cardiovascular complications.”

These figures show diabetes being projected to become one of the world’s primary diseases within the next 25 years. Major dietary and lifestyle changes are necessary to slow the tsunami of diabetes patients, and to implement cost-effective prevention and treatment strategies to reverse this trend.

Diabetes is one of the world’s most preventable epidemics

Most diabetics (especially newly diagnosed diabetics) find themselves in a hopeless and confusing situation, at the mercy of their doctors and conventional health care, and end up in a downward spiral of helplessness, health issues and depressing treatments—clueless at how to maintain their good health—or that they have the power to reverse this condition.

The important thing to realize is that Type 2 Diabetes can be totally preventable, and virtually reversible—by making simple and inexpensive diet and lifestyle changes, and by learning an awareness of the foods and drinks that contribute to this condition.

Hint: It’s probably NOT what your physician has told you about diet.

This most recent information on the snowballing diabetes trend in the United States and the world is a very sad proof that our current diet, conventional medical treatment, pharmaceutical companies, and the commercial food industry are misleading the public with their diabetes treatment recommendations.

These numbers should be decreasing, not increasing—obviously we are going in the wrong direction!

Obesity is the most preventable risk factor in avoiding diabetes. Generally the majority of people who are overweight right now, to some degree already have pre-diabetes or or even full-blown Type 2 Diabetes.

Because diabetes and obesity are so tied together, the current diabetes figures are based on numbers of obese or overweight folks. But that’s assuming the numbers of obese people stay at the same level and do not increase. If the numbers of obese people continue to go up, then the predicted numbers of diabetics, along with diabetes complications, and the resulting health care costs will go even higher than these predictions.

Our previous estimates of numbers of people with diabetes were actually wrong. In

1991, it was projected that around 11.6 million Americans would have diabetes by 2030—however those numbers were based on the older definition for diabetes, which was a higher blood sugar level than what we now use to determine diabetes. Even so, the number of Americans with diabetes right now is double that number! And worldwide, the numbers are similarly shocking.

And sadly, since diabetes has become such a common, everyday disease, the seriousness of this disease is easily forgotten. Diabetes is directly tied to a significant increase in heart disease, heart attacks, deadly strokes, and other cardiovascular disasters—along with other serious or deadly health issues.

Major health complications frequently associated with diabetes include:

- Heart disease and stroke
- High blood pressure
- Blindness
- Kidney disease
- Nervous system disease
- Wounds, infections, and amputations
- Dental disease
- Pregnancy complications and birth defects

While the medical definition of pre-diabetes is a fasting blood sugar of over 100 mg/dL, and the diagnosis for full-blown diabetes is 126 mg/dL, these numbers are somewhat arbitrary. These cutoff numbers do not reflect the whole spectrum of risk that includes heart disease, cancer, dementia, strokes, kidney and nerve damage—which can easily start at much lower glucose numbers—numbers that conventional medical professionals often classify as ‘normal’.

The DECODE study of 22,000 people in 2003 from the European Diabetes Epidemiology Group measured blood sugar after participants ingested a standardized sugary drink, found that even starting at blood sugar levels that were seemingly ‘normal’ (95 mg/dL) and up to the cutoff numbers for diagnosing diabetes and pre-diabetes, *there was a significant and consistent increased risk of heart disease and other diabetic complications.*

Diabetes takes a huge financial toll on both people and our health care system. Our unhealthy eating habits may soon bankrupt the United States and many other industrialized countries as well. The average Type 2 diabetic spends about \$6700 in health care costs a year! By 2020, the cost to the U.S. health care system will be around \$3.35 TRILLION, according to an analysis by United Health Care Group.

The most important thing we want you to realize is that Type 2 Diabetes is both PREVENTABLE and REVERSIBLE!

You probably haven't heard this from your doctor, but your type 2 diabetes—or pre-diabetes, is preventable and reversible. And the great thing is—what you do to maintain this disease in the healthiest way, has far-reaching effects for your overall health and well-being! And the great thing is, it's not a painful, hard-to-follow diet that makes you give up eating delicious food or lose a ton of weight.

A recent study on diabetes, from Newcastle University in the UK, shows a new breakthrough on type 2 diabetes management. A physician, Dr. Ronald Taylor, found something very interesting when he studied patients with type 2 diabetes. He found something he calls your “personal fat threshold”, which has to do with your pancreas and fat.

Over time, excess amounts of glucose in the form of sugar (especially fructose) and carbohydrates, which become fat cells, not only get stored on the body, but this fat often gets stored in the liver—and the pancreas. And the pancreas is essential for controlling your blood sugar. The pancreas produces insulin which is necessary to keep blood sugar under control.

Yes, weight loss helps to maintain or could even reverse diabetes, but what Dr. Roy Taylor of the Newcastle study found was that losing just one gram of fat from the pancreas could actually return it to more normal function and maintain blood sugar control. Losing weight—body fat, helps to decrease fat stored in the pancreas, and according to Dr. Taylor, *losing just 1 gram of fat from the pancreas* will help return the pancreatic function to normal. How do you lose 1 gram of fat—from your pancreas? The study found that losing approximately 13% of your body weight created the desired fat loss necessary to help improve or reverse diabetes symptoms.

Note: This is a relatively new study and more research needs to be done in this particular area, but this is a very promising find—don't you think? This breakthrough information provides scientists, healthcare professionals and nutrition experts valuable insight on how to treat type 2 diabetes! Regardless of your present body weight, the critical factor is losing that 1 gram of fat from the pancreas.

If you have been diagnosed with Type 2 Diabetes or pre-diabetes, you DO have the power to improve or actually stop it in its tracks!

But, you probably won't hear this from a conventional doctor or other healthcare professional, because treating diabetics is very profitable to the healthcare industry—including doctors, dietitians, pharmaceutical companies, hospitals, and the treatment centers that care for people with the disease, along with the complications of the disease. Conventional type 2 diabetes treatment is a huge money making machine, so your chances of being ‘cured’ by the conventional medical system are slim to none. A diabetes patient is a long-term patient with the big profits for the healthcare system—and unfortunately for you, our healthcare system is a ‘for profit’ system and big

business!

As is the case in many medical procedures, conventional treatment turns their attention to treating the just the symptoms of high blood sugar, instead of going after the true cause of this disease. Most medical treatments focus on controlling blood sugar by raising insulin levels, although this method of treatment may actually worsen the underlying issue of metabolic miscommunication of hormones that govern blood sugar, appetite, insulin, and fat storage.

A scientific study of over 33,000 people showed drug treatment of Type 2 Diabetes is often ineffective, and quite possibly dangerous. Glucose-lowering drugs actually have been shown to increase the risk of death—and they don't prevent the dangerous complications of diabetes! And diabetes patients often get lulled into a false sense of security, thinking they don't really need to watch their sugar and carbohydrate intake—the drugs will take care of it!

Even if you monitor and maintain glucose control, this illness can age you prematurely and shorten your life. The chance of your diabetes worsening over time under conventional medical care is almost a certainty, since the medications that are used to control blood sugar, also cause weight gain.

Conventional medical treatment starts the downward spiral: as a person gains weight and becomes more diabetic, more medications are prescribed, and the doses keep going up and up. The only way to break out of this vicious cycle is to drastically make changes in diet and lifestyle.

Your diet will make or break your success at restoring your health if you are diabetic or pre-diabetic—drugs alone will just not work. One of the biggest problems, however, is that the conventional dietary recommendation for diabetics – the high carbohydrate/low fat diet – is actually the opposite of what turns this condition around.

Carbohydrates include foods like legumes, potatoes, corn, rice and grain. These are primarily the foods that should be avoided as they are high on the glycemic scale, and are quickly and easily turned into glucose, once ingested. Nearly all Type 2 diabetics need to eliminate most grains and sugars, and include more protein, green veggies and healthy sources of fat.

Diabetes is not caused by just having elevated blood sugar—it is caused by insulin resistance and poor hormonal signaling, which can be improved solely by changes in diet and activity levels.

Lifestyle Changes Can Eliminate or Dramatically Improve Diabetes

You are not a victim of your genes or your health diagnoses. When you make some basic

but major changes in your diet and lifestyle, you **can** reverse diabetes on your own! Diabetes is really not that difficult to prevent or even reverse; it doesn't just happen out of the blue, or because you inherited it from your parents. What you more likely inherited from your parents is a poor diet and poor eating habits. Diabetes is simply the result of following unhealthy diet and lifestyle choices, and YOU are in control of whether you get the disease or not!

The prestigious New England Journal of Medicine states that the majority of cases of Type 2 Diabetes can be... “prevented by the adoption of a healthier diet and lifestyle”.

Diet is the single most important factor that leads to high blood glucose levels, insulin stability issues, metabolic dysfunction, high levels of triglycerides and LDL cholesterol (the ‘bad’ cholesterol). And, diet can reverse this condition as well.

The results of a study published in the Archives of Internal Medicine show that significant lifestyle changes, including diet and exercise can create major changes in body weight, blood pressure, and HbA1C (long term) blood glucose readings. Heart health also improved, and HDL cholesterol levels increased.

Over the four years the study ran, compared to the control group, it was found that the lifestyle intervention participants experienced a much lower risk of cardiovascular disease, as well as the biomarkers that predict diabetes, such as elevated blood sugar. The study also found that the group that made major lifestyle changes also lost weight as a side effect of the changes in diet and exercise. Weight loss is very important for diabetics, as research shows that losing just 5% of body weight is very beneficial for prevention of Type 2 Diabetes.

Following a natural diet which excludes sugar, processed carbohydrates, grains and hydrogenated fats, and eating more grass fed meats, wild caught fish, free range chicken, and oodles of fresh, raw vegetables and fruits, is the best and healthiest way to regain your body's natural balance, prevent diabetes, diabetes complications, cancer and related cardiovascular disease.

The fact is, our bodies are designed to be healthy—as long as we give them the appropriate materials. Give your body the right environment for healing and it will become a miraculous self-healing machine.

Whether you have been diagnosed with full-blown diabetes Type 2, or you are pre-diabetic, or you just want to prevent diabetes and other serious health issues, this book is for you! These measures not only help to reverse diabetes and prevent pre-diabetics from getting diabetes, but they also help prevent obesity, heart disease, strokes, Alzheimer's, cancer, premature aging, and many other serious diseases from taking root in your body and undermining your health and longevity.

Why?

Because when you take steps to cut back on sugars and processed foods and stabilize your blood sugar, you protect your overall health and insure your long-term wellbeing for the rest of your life.

So now is the time to get started...

Think it's difficult to do? It's not as hard as you may think. This book is here to take you, step by step, through the process and show you how easy and enjoyable to reverse diabetes and regain your health. The benefits are enormous—way beyond dodging the diabetes bullet!

The real cure for diabetes comes from YOU — by changing your lifestyle, your diet and activity. We are going to empower you to seize control of your health. It is in your hands. Together, we can start right now for a lifetime of good health.

--Catherine Ebeling RN BSN, and Mike Geary, Certified Nutrition Specialist

Important Note:

Your physician is your partner in this diabetes plan, so be sure to share with him all the details of your new diet and lifestyle, so that he can modify your medications and monitor your health as needed.

It is highly likely that if you follow this plan, you will need to reduce or even stop your medications, as this plan will have significant effects on your blood sugar levels.

However, DO NOT attempt to change your medication dosages without consulting your physician first.

Chapter 1



Could You Or Someone You Know Have Diabetes and Not Know It?

Diabetes is not a disease that develops overnight. It is usually something that develops from years of poor diet lacking in nutrients and high in processed foods and added sugars (many processed foods have added corn syrup or high fructose corn syrup and you may not even be aware). Even something as seemingly minor as ingesting just one soda or fruit juice a day can increase the odds of developing diabetes up to 80%. Other risk factors for developing Type 2 Diabetes include:

- Being overweight—even as little as 5-7% over suggested body weight
- Being over the age of 45
- Having a family member with diabetes
- Ethnic background of African American, Native American, Asian, Hispanic or Pacific Islander
- Previous incidence of gestational diabetes
- Blood pressure over 140/90
- HDL cholesterol less than 35, LDL cholesterol over 150, and triglycerides over 250

Diabetes can sneak up on you, and often it has no noticeable symptoms. For some, there may be unusual symptoms, but often the symptoms can vary and you may not connect these to any issues that have to do with high blood sugar.

Diabetes symptoms can be very individual and vary widely from person to person. They are relative to you, your body and your individual health, as well as any other health conditions you may have. You may or may not experience some or any of these symptoms, but if you do, you definitely will want to make a visit to your physician or health practitioner to have your blood glucose and insulin levels checked:

- Frequent urination
- Excessive thirst—not related to anything else (i.e. exercise, heat, altitude, etc.)
- Increased fatigue
- Unusual or unexplained weight loss or gain
- Irritability
- Blurry vision
- Frequent infections of skin, urinary tract or vagina
- Poor or slow wound healing
- Tingling or numbness in hands or feet
- Depression and anxiety
- Metabolic Syndrome

Generally, it is a good idea to get blood glucose and other tests done on a regular basis to track any changes. Diabetes can be a very insidious disease.

Monitoring Your Health for Diabetes

One of the primary things to understand about diabetes and high blood sugar is that there is no line drawn in the sand in which you cross over and you suddenly are dealing with health issues. Think of diabetes and high blood sugar as a **spectrum**, where optimal blood sugar levels are consistently in the 80's, with HbA1C levels below 5%. Once these levels begin to rise beyond that, you've entered the diabetes risk spectrum.

Pre-diabetes is not a benign condition. Once you are in the 'pre-diabetic' range, damage is already occurring to your heart, blood vessels and organs. In fact, research shows that roughly two-thirds of patients admitted to an ER for heart attacks already had 'pre-diabetes'. Risk of a heart attack increases with any rise in blood sugar beyond optimal levels. The fact is pre-diabetes can kill you before you ever get to diabetes from heart attacks, strokes, and cancer.

If you've been diagnosed with pre-diabetes or metabolic syndrome, don't think there isn't anything to worry about until you get to the point of actual diabetes.

The damage is happening right now!

While most conventional doctors look at blood sugar first, actually blood glucose levels are one the LAST THINGS to go up. Insulin is what spikes first and remains high. Over time, the consistently high insulin levels cause cells to quit responding and blood sugar starts to creep up. So the point at which your blood sugar becomes out of the 'normal' range is well beyond the time when the disease is starting to progress.

The good news is that you can improve and even reverse your diabetes.

One of the most effective tests to pick up any sign of diabetes or pre-diabetes is by utilizing a test for insulin levels in your body. Below are some highly effective, but not always mainstream tests you should also request from your doctor's office to get a more accurate picture of what your blood sugar is doing and what is going on in your body. One test does not always give you the whole picture.

While measuring blood glucose is generally the conventional starting point, there are several other very effective tests for diabetes that should also be utilized.

- **Fasting plasma glucose test**--A fasting plasma glucose test measures glucose levels first thing in the morning after you have fasted during the night, since eating or drinking certain foods may elevate blood glucose for a period of time. Fasting blood glucose levels should be below 100 mg/dL. When your blood sugar reaches 100-126mg/dL, you are considered in the pre-diabetes range, or "at risk". Over 126mg/dL is classified as officially Type 2 Diabetes. However, the damage of diabetes begins to start when your blood glucose is 90 or above! A blood glucose level is purely a snapshot of where your blood sugar level is at that particular moment in time. It can be affected by not only food or drink eaten in the last 24 hours, but also stress, medications, hormones, exercise, sleep and if you are fighting off an infection or illness—so there are many variables that come into play with this test.
- **Oral glucose tolerance test (OGTT)**—An oral glucose tolerance test (OGTT) measures fasting blood glucose levels, and then measures your blood sugar again after ingesting a standardized high glucose drink. Normal levels for this test should be below 140mg/dL after ingesting the high glucose drink.
- **Hemoglobin A1c**—While the above tests look at blood glucose as a snapshot at one particular time, one of the best tests for glucose control over a period of time is the Hemoglobin A1c test or the HbA1c. Hemoglobin is a protein within red blood cells that carries oxygen throughout your body. Glucose in the blood joins with hemoglobin, making them 'glycated'. HbA1c test checks the glycation levels in the body over a period of 3-4 months and gives you a more accurate picture of damage done by high levels of glucose. The optimal range for HbA1c is **4-5.9%, ideally being below 5%.**

- **Lipid Panel**—While your lipid panel measure cholesterol and fats in your blood, it actually is a good indicator of what is going on with your blood sugar levels as well. High levels of blood sugar translate into high triglycerides (a type of fat), and also high LDL (what is considered the ‘bad’ cholesterol). HDL levels (the cholesterol that should be high) will tend to be low.
- **Fructosamine**—A fructosamine test will also measure glucose levels over a period of 2-3 weeks. It measures glycation as well but it measures glycated protein. Since sugar molecules stick to proteins and circulate for about 2-3 weeks, measuring this will give you a clear picture of sugar in your blood.

Talk to your doctor about ordering other tests besides just your fasting glucose. The above tests will give you a better idea of where you stand. Once you find any abnormalities in any of these tests, utilizing this book and the Superfoods Diabetes diet will make a significant impact on your health and your current lab values.

Chapter 2



The Pathology of Diabetes—What Goes Wrong in Our Bodies

The cells in our bodies need to have energy in order to function. Most of this energy comes from glucose, which is the sugar the body uses for fuel from foods we eat. Glucose comes primarily from carbohydrates and sugars in our diet, which we eat in the form of fruits, vegetables, starches and other types of sugars. Glucose can also be broken down and metabolized from protein and fats as well, but carbohydrates and simple sugars are the easiest and quickest forms of glucose. So, we eat, and the food we eat is then transformed into glucose and is carried via the blood to all the cells in our body. We also store small amounts of glucose in the form of glycogen, in the liver or the muscles where it is used for energy.

When the glucose levels in our bodies begin to rise, the cells in the pancreas secrete insulin—a hormone that binds to insulin receptor sites on our cells. The insulin lowers the circulating glucose in the bloodstream and sends the glucose off to the cells where it is needed. Insulin is the key to unlock your body’s cell receptor sites to allow glucose into the cell to provide energy for growth, repair, and energy production. The problem comes when there is not enough insulin in the bloodstream to open up the receptor

sites on our cells, or the body no longer responds to the insulin that is released, and the glucose stays circulating in the bloodstream, leaving a trail of destruction.

Circulating glucose in the bloodstream is extremely damaging. Think of it this way: if you put sand in your car's gas tank, the damaging, abrasive effects of the sand in the engine would totally destroy and gunk up most of its sensitive components. Glucose in our bodies is similarly damaging, and it has very destructive effects if left unchecked and allowed to rise out of control.

High levels of glucose are like gritty grains of sand, irritating and inflaming the lining of blood vessels, all the way from the primary arteries to the smallest of capillaries. This inflammation damages the delicate lining of blood vessels. What happens next is similar to a scab when you scrape the skin off your knee...

Your body will send out cholesterol to seal and smooth out the roughened and inflamed areas of the blood vessels—much like a scab—causing layers of plaque and cholesterol to lodge in them. This is why heart disease and strokes are one of the primary complications of diabetics. The excess glucose in the bloodstream has damaged the blood vessels and caused the plaque buildup on their walls.

Then, through an inflammatory cascade, in this high sugar environment, clots in the blood begin to form. It is when these clots become stuck in the narrowed, cholesterol-lined blood vessels that you have a heart attack or stroke, or in the smaller blood vessels, you have kidney damage or blindness, due to damage in the retina of the eyes.

These damaging effects occur in the heart and circulatory system, the brain, kidneys and tiny vessels in the eyes, sexual organs, and the nervous system in various parts of the body—primarily the extremities.

In addition to the glucose buildup in the blood and the damage to kidneys, eyes, nerves and blood vessels, massive quantities of free radicals in the system begin to circulate from all the excessive inflammation, which in turn begin to attack other parts of the body—including the cells and their DNA. When DNA in cells is damaged, cells don't replicate properly, or may grow out of control, and cancer becomes a very likely possibility.

By the way, glucose is the preferred food for cancer cells. In fact, cancer cells will rob our healthy cells of glucose, thereby starving out the healthy cells. So, diabetics who continue to eat sugary carbohydrates are highly likely to develop aggressive cancers in addition to other serious health issues.

The excess glucose begins to displace oxygen's attachment to red blood cells, and the vital organs that cannot survive without oxygen begin to suffer, including the brain, eyes, heart and limbs. This is also why diabetics have frequent and dangerous skin

infections that won't heal, and often lose toes, feet, legs, hands and arms because of this.

When circulating glucose is high and oxygen levels are low, blood becomes thicker and moves slowly. This prompts a reaction in the body to dilute the bloodstream with more fluids, which creates excessive thirst—which unfortunately, many diabetics quench with sugary soda or fruity 'juices', exacerbating the problem even more so. It's a vicious cycle. In an effort to dump off extra glucose, the body tries to flush it out through the kidneys by frequent urination, washing out valuable nutrients in the process as well—even furthering the drastic decline in health. Diabetics often begin to lose muscle mass, even though they gain weight in the form of fat. Result: weakness, loss of energy and fat gain which pushes the cycle even more. This is where Type 2 Diabetes becomes a full-blown disease.

Make no mistake--Type 2 Diabetes is an insidious, deadly disease.

In type 1 diabetics, the beta cells in the pancreas have been destroyed by an autoimmune response, so the body cannot produce or release insulin. Since it is the action of insulin that 'unlocks' cells' receptor sites to allow glucose in, without adequate insulin, glucose from cannot enter cells to allow nutrients in to the cells.

Type 1 diabetics, especially if untreated, actually become malnourished and lose weight, while the circulating glucose (with nowhere to go) in their systems begins to degrade and destroy sensitive blood vessels in virtually every organ system in the body. Left untreated, most type 1 diabetics would probably not live to adulthood. While a diabetes reversal diet will definitely help and improve the health of Type 1 diabetics, there is no real cure for this disease, and most all Type 1 diabetics will need insulin for life.

Type 1 diabetics must depend on external insulin, usually given in the form of an injection. Type 2 diabetics are '*insulin resistant*' and may also require external insulin if dietary modifications do not bring the insulin under control.

Instead of a *lack* of insulin in the case of Type 1 Diabetes, Type 2 diabetics produce ever-increasing amounts of insulin, but as the cells become insensitive to insulin, circulating glucose begins to increase. As the pancreas struggles to produce more and more insulin, in response to the rising glucose levels, it eventually loses its fight, and glucose continues to rise and begins its destruction. Finally, the poor, struggling pancreas eventually loses its ability to produce insulin, and its insulin-producing beta cells begin to die off, and eventually it no longer functions. This is when a person becomes entirely dependent on external insulin medication for life.

What triggers insulin resistance? One possibility is that fatty liver syndrome may be to blame. According to Varman Samuel, MD, PhD, and Associate Professor of Medicine in Endocrinology at Yale University, there is a strong correlation between fatty liver and insulin resistance. Just what causes the liver to build up fat? It's not just about being overweight or obese—as many apparently thin people can also have the problem. Fructose seems to be one of the primary culprits in insulin resistance.

Animals and people fed large amounts of either pure fructose or sugar, which is 45% fructose, convert the fructose into fat immediately. While a portion of that fat circulates in the blood as triglycerides, and gets stored in fat storage areas on the body ('love handles', 'muffin tops', 'beer bellies', etc.), the liver stores a good portion of it as well. When the liver starts storing excessive amounts of fat, insulin resistance and pre-diabetes follow.

Stop the sugar and carbohydrates, and the fatty liver can go back to normal—and along with that, insulin resistance improves. It's that simple.

Insulin on its own is not a purely neutral entity. Excess insulin creates its own set of problems, including contributing to development of plaque in arteries, increasing the appetite, initiating fat storage, encouraging cancer tumor growth, and causing weight gain.

Insulin metabolizes carbohydrates and fats by helping shuttle glucose from the blood into the cells. Insulin also signals fat cells to store circulating glucose as fat for later use. Insulin also blocks the production of glucose by the liver. Normally, when blood sugar levels fall below a certain level, the body will access stored glucose in the liver and muscles as an energy source, through a process called "glucogenesis".

Because of all the damage done to blood vessels, both large and small, heart disease and strokes remain the number one complication of diabetes, and there is strong new evidence that diabetes leads to development of Alzheimer's disease or other types of dementia as well. Other complications from diabetes are gum disease, pregnancy complications, and overall susceptibility to infections, viruses, and mental issues such as anxiety and depression.

Because diabetes is so common, the fact that diabetes is a very serious and often life-threatening disease gets downplayed, and even overlooked. But the reality is, the chance of some type of complication over one's lifetime is highly likely.

Complications of Diabetes—It's Not Just Diabetes That Can Kill You

Diabetes is not just one disease—it often leads to other serious health complications. Blood glucose levels that are consistently high can lead to other serious diseases affecting:

- Heart and blood vessels
- Eyes
- Kidneys
- Nerves
- Teeth and gums
- Sores that won't heal
- Infections
- Sexual and erectile dysfunction

In most all industrialized countries, diabetes is the primary contributor to heart disease, blindness, kidney failure, and lower limb amputation. The risk of a heart attack for someone with diabetes is 2-4x times as much as someone without diabetes.

How does diabetes affect the various systems in the body?

- **Cardiovascular Disease**—the biggest risk factor in diabetes is cardiovascular disease. Heart attacks and strokes are the primary health issue that affects those with diabetes. High blood glucose contributes to inflammation and buildup of cholesterol on blood vessel walls, thicker blood and clotting—all of which lead to heart attacks and strokes.
- **Kidney Disease**—Kidneys contains a large amount of tiny blood vessels that are extremely vulnerable to the damage caused by high blood sugar filtering through them. Kidney disease and kidney failure are two of the most likely health risks that stem from diabetes. Many diabetes patients will have to remain on kidney dialysis for the rest of their lives.
- **Nerves**—High glucose causes damage to fragile nerves in various parts of the body, leading to pain, tingling, and loss of feeling. The extremities, especially the feet are susceptible. This is called “peripheral neuropathy”. While pain and tingling may be extremely uncomfortable, the loss of feeling is especially dangerous, as it can allow injuries to go unnoticed, leading to serious infections that can spread throughout the body, necrosis (rotting flesh) and gangrene, as well as amputations of limbs. Unfortunately, 40% of diabetics who control their blood sugar still tend to develop neuropathy.
- **Eye Diseases**—Eye diseases are common with diabetes patients, and can lead to reduced fields of vision, or even total blindness. High glucose, combined with high blood pressure, damages the tiny blood vessels of the eyes, leading to diabetic retinopathy and other eye issues.
- **Pregnancy Complications**—Pregnant women with diabetes or pre-diabetes are at risk for many complications, especially if their diabetes is undiagnosed

or not monitored well. High blood sugar can cause extremely large babies, making delivery difficult and putting the baby at risk for other complications before, during and after birth. It is also a cause of many birth defects as well.

Children of women who had diabetes during pregnancy are at high risk for being overweight or obese and having other health issues. The non-diabetic children of Type 2 diabetics have been observed to have increased arterial stiffness and neuropathy despite normal blood glucose levels, along with elevated enzyme levels associated with diabetic renal disease have been found in non-diabetic first-degree relatives of diabetics.

- **Respiratory Infections, Pneumonia, Bronchitis**—Excess glucose impairs the body's immune system and makes it difficult to fight off even minor illness, which can turn into serious illnesses fairly easy, as well as creating prolonged periods of illness.
- **Gum Disease**—Gum disease is a common occurrence with diabetes that often harbors dangerous bacteria, which can travel in the bloodstream to other parts of the body.
- **Diabetic Dementia and Alzheimer's**—High blood sugar in the brain can create a higher likelihood of dementia, Alzheimer's or other problems with decreased cognitive function. It is not known why, but the
- between Alzheimer's and diabetes is so strong that Alzheimer's is now being referred to as "Diabetes of the Brain".
- **Cancer**—According to World Health Organization's International Agency for Research on Cancer:

"Your chances of getting cancer are much higher if you are obese, diabetic or insulin resistant. And, your chances of dying from a form of malignant cancer are way higher with diabetes or even pre-diabetes."

Cancer researchers know that as we secrete more insulin, a related hormone known as 'insulin-like growth factor', encourages cancer tumor growth. Cancer cells feed primarily on glucose to grow and multiply as well, and they will steal glucose from healthy cells to feed on, eventually taking over, and choking off the healthy cells' nutrition and energy production.

- **Depression and Anxiety**—Several studies now suggest that diabetes doubles your risk of depression and anxiety, compared to those without diabetes. And chances of becoming depressed actually increase, the worse the diabetes is. However, as depression worsens, so do self-care and the ability to monitor diet and medications, leading to a downward spiral. Treating diabetes with diet will actually help to reverse depression as well

In the United States alone in one year, there are approximately 675,000 diabetes-related Emergency Department visits in hospitals that involved neurological (nerve related) complications, and almost a half a million ED visits from kidney problems, and almost 200,000 ED visits that are related to eye complications.

Your best bet if you have diabetes or pre-diabetes is to get frequent checkups from your doctor to monitor these extremely life-threatening health risks, and to maintain your blood sugar in a 'low' range (fasting blood sugar of 75-89) with a healthy, low glycemic diet and exercise to help avoid these complications all together.

Chapter 3



How Medication, Insulin And Conventional Medical Treatments Worsen Diabetes

Note: Please be sure to consult with your physician before following--and during the Superfoods Diabetes Reversal Diet that is outlined in this book. It is important to keep your doctor aware that you are making some major changes in lifestyle and diet, in order for him/her to adjust any medication you are taking. Make your doctor your PARTNER in your health plan.

While drugs do have the ability to lower your glucose levels to some degree, they do not help your body heal from diabetes, nor will they help you reverse diabetes. Generally, they tend to make diabetes worsen, while you increase your dependence on medications.

A sad but true fact: There is more money in treating diabetics with insulin and diabetic drugs than in curing diabetes with diet and lifestyle changes.

Unfortunately, this is the reality of the civilized world, and one of the main reasons why conventional medical care will not suggest a diet and exercise regimen that will actually help or reverse diabetes. Instead, they treat only the SYMPTOMS of diabetes.

Many Type 2 diabetics tend to eat a high glycemic, highly processed, high carbohydrate diet, which of course, quickly raises the levels of glucose in the bloodstream, causing the release of insulin, which in turn stimulates the appetite and also signals to store fat. Excess stored fat (even as little as 5-10 lbs) can also interfere with insulin's ability to carry glucose into cells. This weight gain increases *insulin resistance* and eventually *worsens* diabetes.

It's a vicious downward spiral...

Conventional medicine's answer to this no-win situation is usually to prescribe and administer insulin, which as a side effect, causes weight gain and appetite increase. Obviously, this treatment tends to create a death spiral of worsening diabetes and complications. Way before diabetes is diagnosed, the more weight someone carries on his or her body, the more insulin is required to lower blood glucose. After years of constant work, paired with a high carb/high sugar diet, the pancreas eventually begins to wear out, leading to full-blown diabetes.

The problem though, is that treating with insulin becomes a slippery downhill slide, because increasing insulin often leads to weight gain, high blood pressure, and elevated cholesterol. And what will a conventional medical doctor do? He will prescribe blood pressure medication, cholesterol-lowering statins, and more pharmaceuticals. All of which have their own set of complications and added health issues on top of the blood sugar problem. And most of these also cause weight gain as well. Conventional medicine totally misses the point that eating low glycemic, fresh, whole organic foods and naturally raised proteins, plus regular exercise is what actually improves the health of a diabetic.

A physician is trained to offer medication to treat the symptoms of diabetes, instead of addressing the real (and obvious causes) that include a nutrient-poor diet high in carbohydrates and sugars; food allergies, food addictions, digestive disorders, out of whack gut bacteria, and hormonal issues. Treating the symptoms just leads to an ever-worsening problem, instead of getting to the root of the problem and solving it. Many doctors never get actually identify or pinpoint the genuine causes of disease and are not only inefficient but downright disastrous in their result.

Think of it this way: Diabetes, high blood sugar, obesity, high cholesterol and high blood pressure are all SYMPTOMS that result from a bad diet, inactive lifestyle, and toxic sludge from the environment. This can be turned around, by making changes in this area.

Type 2 Diabetes is a disease that evolves from a poor diet and lifestyle. The good news is that it can be fixed!

Relying on lowering blood sugar with medication or insulin will not improve one's health, nor will it counteract the effects of diabetes. In fact, relying on medications to lower blood sugar actually does NOT reduce the risk of death from any of the related health complications of diabetes of stroke, heart attacks, infections, and kidney disease.

In one large study, called the ACCORD study, that was published in the New England Journal of Medicine in 2008, the 10,000 patients who were being treated with insulin or blood sugar-lowering drugs were monitored and evaluated for their risk of heart attack, strokes and death. The National Institutes of Health actually had to stop the study after three and a half years because the aggressive medical intervention was leading to MORE deaths, heart attacks, and strokes.

Many of the conventional medical methods for lowering blood sugar actually increase insulin levels, which in turn causes more harm overall. For example, Avandia, one of the world's best selling diabetes drugs, but over 50,000 lawsuits have been filed in the United States, because the drug makers make failed to inform patients about possible life-threatening symptoms that include stroke, heart failure, heart attack, bone fractures, vision loss and death. There is no real evidence that any of the diabetes drugs actually reduce the risk of the complication of diabetes.

Aside from the fact that diabetes drugs do not actually do anything positive for a diabetic's health, there are the side effects, many of which can be downright deadly.

In another study published in the Journal of American Medical Association (JAMA) on statins (cholesterol lowering drugs), of nearly 33,000 NON-DIABETICS on statins, over 3,000 developed diabetes in 5 years. Obviously, statins are not working to prevent diabetes or heart disease.

When a diabetics cells become resistant to the effects of their own body's insulin, on a consistently high sugar/high carbohydrate diet, it takes more and more insulin in order to keep blood sugar in check. This is known as "insulin resistance" and is the hallmark for pre-diabetes and Type 2 Diabetes.

A high insulin level is usually the FIRST sign of a problem—long before blood sugar starts to climb out of control. Oddly enough, however, most conventional medical doctors don't test for this right away.

But the bottom line is this: the higher your insulin levels are, the worse your insulin RESISTANCE is.

Insulin is a fat-storing hormone, so when insulin levels are high due to a high sugar and carbohydrate diet and/or medication, there is weight gain. Weight gain, as you know, contributes to diabetes risk.

It's a steep and slippery downhill slide from insulin resistance and high circulating levels of insulin to high blood pressure, high cholesterol, high triglycerides, poor sex drive, infertility, thickening of the blood, kidney failure, infections and amputations, cancer, depression, heart disease, strokes, and Alzheimer's—and more!

And insulin treatment also creates a greater susceptibility to cancer. The connection between diabetes and cancer is fairly clear—in fact, several studies have shown up to a 30% great likelihood that diabetic patients on supplemental insulin can develop colon, breast or prostate cancers.

Do you or anyone you know have 'LOW blood sugar'?

Hypoglycemia (LOW blood sugar) is often one of the first symptoms of **too much insulin**. Generally when people have hypoglycemia, you think of someone who needs more sugar or carbohydrates in their diet, but often this is not the case. More often it is the case of unregulated, unstable blood sugar. If you tend to skip meals, or eat too much sugar and refined carbohydrates, it tends to cause the typical ups and downs one sees in someone with hypoglycemia.

A typical person with hypoglycemia may wake up with a low blood sugar headache, grab a Coke or come sort of sugary latte or pastry for breakfast, thinking they need to get more sugar in their blood. Soon they have a sugar buzz, and skip lunch, worrying about the excess calories they ate in the morning, only to hit a wall as blood sugar plummets later on, after insulin has flooded their system. And off they go, to find another sugar buzz to quickly spike their blood sugar back up.

Obviously this is the wrong approach! Eventually the body's cells become resistant to the insulin surges, and it can't push your blood sugar back down. And the next exit sign along this route is "Diabetes".

Of course, popping a 'magic' pill or two to fix the problem always seems to be the popular quick fix for every health problem. But it won't work! In fact, it will work against you!

What you put into your body for fuel and nutrients is the **KEY factor** on whether you get diabetes or prevent it.

The Cost of Diabetes

Medical management of diabetes is a HUGE billion-dollar network of medical staff, hospitals, labs, and of course pharmaceuticals. In 2014, sales of diabetes drugs in the U.S. alone reached \$23 billion dollars! However, the medical definition of diabetes has changed since the blood glucose threshold was lowered for the second time. This creates a whole new and much larger group of diagnosed diabetics.

But that doesn't mean the new standards don't mean anything. In reality, we are just catching diabetics earlier on, and although it doesn't really benefit the diabetic patients, but it is benefitting the medical and pharmaceutical industry—by the billions!

Pharmaceutical costs are only the starting point. Diabetes is an extremely costly disease for both patients and their families, and the health care system.

In India, a lower-income Indian family with a family member with diabetes will spend as much as 25% of their entire family income on treatment. In the U.S., it is about 10% of their income.

If you are lucky enough to have medical insurance, your insurance may cover some of your treatment, but there are the direct (out-of-pocket) costs to those with diabetes and their families. These costs include medical care, drugs, insulin, needles, blood sugar monitors and more. Patients also have increase payments for health, life and automobile insurance because of their illness.

In the United States, diabetes patients spend about \$6000 to treat their disease, which includes monitors, medication, doctor's office visits, eye exams, syringes and other routine costs. But, diabetes patients very often have complications, and that out-of-pocket cost does not include the costs to treat those complications. Most diabetes patients in the United States pay about three times as much for their health care than those who are healthy. And unfortunately those health care costs will continue to rise as the numbers of diabetic patients begin to rise.

Diabetes can and should be managed easily and much more cheaply at home by diet, exercise and lifestyle modification. And the only side effects of this approach are GREAT HEALTH.

Chapter 4



Why Our Current **S**tandard **A**merican **D**iet Causes Diabetes, Obesity and Heart Disease

If you study historical dietary patterns of ancestral humans in almost any culture around the world, the one similarity that accounted for lack of chronic disease, cancer and obesity was that the foods in their diets were totally *unprocessed* natural foods.

Whether a diet was high in protein, high in fat, high in carbs, low in carbs, etc., doesn't seem to matter as much, as the foods that were included were eaten as close as possible to how they are found in nature. And their diets were very low in sugars!

The problem is that not only is there plenty of food everywhere we look, but much of it is really 'nonfood', or just processed junk full of sugar, addictive chemicals, empty calories, fake flavorings and preservatives. Virtually **NOTHING** our bodies can use.

In spite of being able to store body fat efficiently, ancestral humans were rarely obese because they worked hard just to find food and shelter. In the process, they immediately burned up whatever calories they consumed.

In the last few thousand years, the way we grow and produce food has made food almost too easy to obtain—in fact, it's everywhere! We no longer have to spend our days and our calories hunting and searching for food. The problem is that most of the food that is readily available is food that our bodies do not recognize. Even until recent times, humans never ate grains as refined as we eat them today. A full 75%-80% of modern diets are now derived from grains and soy products).

When we eat foods made from processed grains, starches or sugars, including fruit juices, soda, sports drinks, breads, pasta, cookies, crackers, cake, etc., our bodies quickly turn the carbohydrates or sugar into glucose, which is should be used as a energy source.

Less than 100 years ago, the average American consumed about 4 pounds or less of sugar a year. Today, the average American consumes somewhere between 150-200 pounds of sugar a year! Pictured a different way: imagine 30-40 five-pound bags of sugar lined up. Now imagine one person eating all that sugar in a year. Is it really any wonder why obesity and diabetes have skyrocketed? That's about ¼ to ½ lb of sugar a day!

Refined sugars are now extremely pervasive in most processed foods, soft drinks and juices. There are of course, the obvious ones like cake, cookies, candy, ice cream and other 'desserts', but take a look at the less-than-obvious:

- So-called 'healthy' cereals
- Barbecue sauces
- Catsup
- Breads
- Crackers
- Frozen 'diet' dinners
- Hot dogs and other processed meats
- Marinades
- Spaghetti sauce
- Peanut and other nut butters
- Salad dressings
- Smoothies, juices and other 'natural' drinks
- Energy drinks, energy bars

You can walk down virtually any aisle in a grocery store, pick up a can, bottle or box of most anything and find sugar in some form in it. Generally, it is high fructose corn syrup—one of the most refined and worst sugars out there!

Besides diabetes and the resulting blood sugar/insulin issues, sugar also contributes negatively to allergies, arthritis, behavioral problems, depression, anxiety, immune

function, migraines, mental illness, tooth decay, and *most all aspects of your physical and mental health.*

Dietary sugars and refined grains are probably the biggest contributor to inflammation in our diets. Not only do they cause insulin and blood sugar spikes and fat storage, but they trigger a myriad of inflammatory responses in the body, which can lead to chronic inflammation and an array of diseases.

We are now in the midst not only of never-before-seen numbers of diabetes, but we are also in the middle of an obesity epidemic that coincidentally began to pick up speed in the early 1980's. This occurred at the same time as the popularity of the low-fat/high carb/high grain diet began to rise. Even the USDA food pyramid was changed to advise us that needed to be eating large servings of grains and carbohydrates.



This dietary change coincides with the steady rise in obesity and Type 2 Diabetes that began its steep climb to the current numbers we are now seeing. Besides the scientific research that points to the real cause and effect, it's easy to look at the parallel lines of dietary changes (high carb/low-fat) and the rates of obesity and diabetes.

“According to Katherine Flegal, epidemiologist at National Center for Health Statistics, the percentage of obese Americans stayed constant at 13-14% through the 1960's and 1970's, but then shot up nearly 10% more in the 1980's and 1990's and beyond”, says Gary Taubes in his NY Times article, “What If It's All Been A Big Fat Lie?”

Researchers are finally beginning to take a closer look at the current dietary trends and conclude that the popular low-fat/high carb diets are **not** the heart-healthy, weight loss diets they were once proclaimed to be. The Paleo or Caveman diet is starting to gain popularity—mainly because it works, by eliminating refined sugars, starches and grains.

Walter Willett, chairman of the department of nutrition at the Harvard School of Public Health is the spokesman for one of the most comprehensive diet and health studies ever. The data from 300,000 participants, explains Willett, clearly *contradicts* the ‘low-fat/good for your health message’.

In addition, a large body of research has shown that most all low fat, weight loss diets are dismal failures. Although Americans eat less fat than did 20 years ago, they are fatter than ever, and have more health issues than ever. Obviously this way of eating does not work for weight loss or health.

Eleftheria Maratos-Flier, the director of obesity research at Harvard's Joslin Diabetes Center says, "For a large percentage of the population, perhaps even 30-40%, low fat diets are counterproductive. They have the paradoxical effect of making people gain weight."

Why are we talking about obesity and weight gain? The fact is, Type 2 Diabetes goes hand in hand with weight gain and obesity. When one goes up, the other goes up. And a low-fat, high grain, high carbohydrate diet contributes directly to higher blood sugar and diabetes.

Man has never really evolved to eat a diet high in starches or sugars. It is actually contrary to our physiology. Grain products and sugars have been—for the most part—absent from humans' diets until the advent of agriculture 10,000 years ago. Conversely, the low fat diet has only been around for about the last 25-30 years. Until the late 70's, it was common knowledge (and even back as far as 1825) that bread, rice, potatoes and other sweet or starchy foods caused weight gain.

Take a look at societies that have diets higher in starchy foods. For example, Italians historically have had a tendency to be overweight, and it's no wonder, since they eat diets heavy in pasta and bread, and low in meat protein. Similar results show up in countries in the Caribbean, Latin America and Africa, where diets are traditionally higher in starchy foods such as rice, root vegetables, and potatoes. These starchy foods are quickly turned to sugar in our bodies.

In the 1970's, a nutrition expert and scientist from the UK published a report on the damage that sugar caused, called, "Sweet and Dangerous". He was, unfortunately, ahead of his time. Yudkin's research was done on rodents, chickens, rabbits, pigs and human college students, using sugar and starchy foods. It was noted that these foods quickly caused a rise in triglycerides in the human test subjects. The sugar and starch not only increased the risk for heart disease, but also caused weight gain, insulin resistance and Type 2 Diabetes.

Unfortunately, the mainstream medical community did not take his work seriously and instead turned to the published work of the scientist who began the now-very well known cholesterol theory, Ancel Keyes. The problem with Ancel Keyes' "Seven Countries Study" was that his chosen results were actually cherry-picked from the complete study results that included *more* than seven countries. He neglected to acknowledge that there was an even **higher correlation between heart disease and countries eating the largest amounts of starches and sugars.**

Somehow, Ancel Keyes' cherry-picked, very biased study and his cholesterol theory gained popularity with the medical community and became so widespread and mainstream, that the "Anti-fat" movement became the national pastime. This movement was also picked up by the current political parties, including the National Institute of Health, and the FDA. Soon, meat and vegetables as dietary staples were replaced by processed cereals and skim milk, fat-free/high sugar cookies and 'healthy' snack crackers and pasta. Cereal grains became the base and the biggest part of American Food Pyramid and the American diet as well as many civilized countries worldwide.

The food industry, of course, picked up on this increasingly popular trend and began producing lowfat foods like crazy. Everywhere, the words "Fat-Free" became the new advertising mantra, and fats of all kinds became the mortal enemy.

Fat-free on its own was less tasty, and so, instead of fat, the new processed food ingredient became loads of corn syrup or high fructose corn syrup to make food taste better. If low fat didn't taste good on its own, just add more sugar! Surely it can't be bad for you if it contains no fat—sugar was fine, right?

Dead wrong!

But everyone followed along...we all started eating more and more carbohydrates and sweet things—surely the new food pyramid and the United States Food and Drug Administration must be right!

Completely ignored was the effect of refined sugar and carbohydrates on blood sugar, insulin, and weight gain.

But, let's take a moment to go back to Human Physiology 101 and look at this phenomenon. Our bodies have two primary sources of energy supply:

1. Fat—which we burn when insulin and blood sugar levels are **low**. Your body will actually access, break down, and burn your own fat for energy.
2. Glucose—which comes from the starches and sugars we eat. When you eat foods that are high glycemic, meaning that these foods are high in sugar, and quickly turned into glucose in the body, blood sugar goes up, and then insulin is released. Insulin not only lowers blood sugar, but it also regulates fat storage. Insulin causes you to store recently eaten calories as fat, and you stop burning your own fat for energy.

The more fat someone carries on their body, the more insulin is released each time they eat. Then, as you more gain weight, insulin makes it easier and easier to store fat, and it

becomes harder and harder to lose it. Insulin also has a huge effect on hunger and appetite.

The Vicious Cycle—When you eat sugary, starchy foods like cookies, pasta, bread, potatoes, etc., blood sugar spikes, and the resulting rush of insulin lowers blood sugar—and viola! In a couple of hours you are hungrier than ever! This sets people up for weight gain, obesity, and diabetes. For diabetics, this situation is even worse, as medication in the form of insulin is also at work to help to lower blood sugar, and there is even more fat storing opportunity.

Food Addictions

Is it our willpower or is there something more sinister at work here? How is it that people cannot stop eating? And why is it that it seems to be the junky processed foods—not vegetables or fruit? It's that box of cookies, the bag of chips or the container of ice cream that tends to get demolished in one sitting. How often do you hear someone saying they “just couldn't” stop eating that broccoli or salad”?

Why is this?

Food companies are smart; they add in addictive chemicals that not only affect your taste buds, but also your mind and your body as well, along with sugar, another highly addictive ingredient. And the result is that you may not be able to stop eating! It's as powerful as shooting heroin or being addicted to cocaine! Nobody really consciously chooses to become a food addict, but the primitive reward centers in the brain can overcome the average person's willpower and block our body's signals that tell us to stop eating.

Not only are we biologically wired to crave and eat foods that contain sugar, salt and fat, but food companies add in their own powerful additives, in addition to sugar or high fructose corn syrup, that create a genuine addiction to many processed foods.

The big food companies, large-scale farming and pharmaceutical companies want to control you and addict you!

Mega food companies like Philip Morris-Kraft (now Altria), ConAgra, Cargill, Tyson, Sara Lee, General Mills, Kellogg, Coca Cola and Pepsi have all developed ways to hook the consumer and addict them to foods they sell through carefully researched chemicals, special flavorings, and mass marketing. Processed food companies end up indirectly funding the massive pharmaceutical companies' bottom line, as sick, addicted consumers soon find their health deteriorating and their waists expanding.

Healthy foods have become expensive and almost unattainable for many, while the cheapest foods contain the least nutrients, the most fillers, chemicals and sugar. This makes a lethal combination—especially for the poorer populations.

It should come as no surprise that big food manufacturers and fast food restaurants have huge research departments that are constantly studying new and better additives to add taste, texture, and addictive properties to their foods—so that you find that you can never eat ‘just one’ of anything. It is a known fact that processed foods contain chemicals that stimulate the very same areas in the brain as addictive narcotic substances. And they are just as difficult to stop eating, once you start.

Surplus crops grown here in the US, are actually sold overseas to other countries, bringing unhealthy food choices to other parts of the world. Meanwhile, our busy lives dictate that we grab ‘fast’ food wherever we can, instead of cooking at home where we can control the food and ingredients we are eating.

Food and soft drink companies with huge advertising budgets spend massive amounts of money on advertising, and television is the biggest advertiser of these worthless junky foods. The worse the food is for your health, the more companies spend on marketing and advertising—often falsely claiming their products are “healthy”, “natural” or “gluten-free” or “sugar free”, in an effort to mislead consumers.

In the United States, the average child sees about 10,000 ads for junk food on television a year! Children are the most susceptible group and they push the demand for junk food, but become helpless, addicted victims of the processed food industry. In many other countries around the world, food advertising to children has been banned, for good reason!

The Trouble with Sugar

When we talk about “sugar”, it means all forms of sugar. That includes high fructose corn syrup, sucrose or table sugar, honey, brown rice syrup, fruit juice, molasses, maple syrup, sucanat, sorghum, and agave syrup, and more.

Many misguided medical professionals and dietitians will tell you that a calorie is a calorie, and it doesn’t matter where it comes from. However, in reality, the source of the calories makes all the difference in the world when it comes to health. Added sugars in foods are significantly more harmful calories.

Sugar Addiction

When we eat foods that are high in sugar, it causes dopamine to be released in the brain. Dopamine is a natural brain chemical that has to do with the brain’s reward and

pleasure centers. Dopamine also helps to regulate emotional responses and it causes us to take action to move towards them.

The more sugar you eat, the more you want—and, like addictive drugs—you will continually want and need more to get that same feeling. And since sugar and other junk foods act on the same areas of the brain as highly addictive drugs like cocaine and heroin, it becomes easy to actually become addicted to certain foods.

Similar to those powerful drugs, getting off sugar and other addictive substances in food, actually cause withdrawal symptoms—just like detoxing from drugs.

Liquid Sugar—the Most Dangerous Form of Sugar

Sugary drinks—whether they contain cane sugar or high fructose corn syrup—like soda, energy drinks, vitamin waters, and fruit juice are one of the most addictive and sneaky sources of sugar and calories of all. Not only do they spike blood sugar almost immediately, but they also create hunger so you end up gaining weight both ways.

Soda, which is almost everywhere, not only is highly addictive, but even relatively small amounts of it can increase your risk of diabetes dramatically. A single can of soda a day has been shown to increase the chances of diabetes developing by anywhere from 25% to 82%, according to a Nurse's health study of 92,000 women.

While soda companies increased their visibility, their reach, and their advertising budgets, soda consumption doubled and so did obesity and diabetes rates.

Blood Sugar, Insulin and Aging—The Damaging Effects of Sugar

Besides the formation of the highly destructive Advanced Glycated End Products (AGE's), sugar, in all forms (fructose, sucrose, glucose, galactose, lactose and others) has other ways of inflicting serious damage to your body and speeding up the aging process.

Fructose is the worst of all sugars, but all forms of sugar that affect your body's blood sugar levels and insulin can be harmful.

According to Dr. Joseph Mercola:

“Fructose in particular is extremely pro-inflammatory, promoting AGE's and speeding up the aging process. It also promotes the kind of dangerous growth of fat cells around your vital organs that are the hallmark of diabetes and heart disease. In one study, 16 volunteers on a high-fructose diet produced new fat cells around their heart, liver and other digestive organs in just 10 weeks.”

So the internally and externally, limiting sugar in all forms, will go a long way towards slowing down the disease and aging process. Even the skin of those who consume larger amounts of sugar ages, wrinkles, and sags far quicker than the skin of someone who eats a very low sugar/low glycemic diet.

Sugar also weakens or paralyzes the immune system, making your body more susceptible to infections of all kinds and complications of minor diseases.

The average American eating a stereotypical Standard American Diet consumes 2.5 pounds of sugar a WEEK. And when you think about adding in the other processed foods such as white or wheat bread, pasta, pastries, and all the refined carbohydrates, which turn into sugar in the body, it's no wonder there is such a huge increase in diabetes.

Could it be that sugar is THAT bad? In a word...YES!

Let's define what we are talking about when we say 'sugar'. We usually think of sugar as the white stuff that sits in cute little bowls on our tables, or in those little packets at restaurants. The truth is there are many different types of sugars and our bodies do not react to all of them in the same way.

"High fructose corn syrup" is the form of sugar that you see on virtually every label of processed or packaged foods, or in most soft drinks. There are many other forms of sugar, but for now, let's concentrate on the two most often consumed sugars, sucrose (or cane sugar) and fructose.

Regular white table sugar (and brown sugar) is called 'sucrose'. Sucrose is composed of one molecule of glucose bonded to a molecule of fructose. So, that makes sucrose about 50% glucose and 50% fructose. Fructose is 2x sweeter than glucose. Since table sugar is half fructose, it is lots sweeter than starches (which are also a type of sugar) in potatoes, bread or other carbs that also turn into glucose in the body.

The more fructose in any type of sugar, the sweeter it is.

High fructose corn syrup is 55% fructose and 45% glucose. So that makes it sweeter than regular table sugar. However, white sugar and high fructose corn syrup are both a combination of glucose and fructose in our guts, so our bodies react in basically the same way to both.

The harmful effects of sugar have to do with the way your body metabolizes the *fructose* portion of the sugar. For instance, if we eat 100 calories of starchy foods like pasta or potatoes (which is converted to glucose in the body) or 100 calories of sugar (remember basically 50/50% of glucose and fructose), they are metabolized differently and have a different effect in your body.

This is key:

- *Fructose is metabolized in our livers*
- *Glucose from sugar and starches is metabolized in our cells.*

Why does this matter?

Consuming HFCS causes your liver to work very hard to process the fructose. If that sugar comes in a liquid form like soda or fruit juice, the fructose hits your system instantly and causes your liver to go into a frenzy to process it. So your liver gets a massive shot of fructose!

When fructose is ingested, 100% of it goes to the liver, where it immediately is converted to fat. The fat becomes a substance called triglycerides, a key contributor to heart disease. Some of these triglycerides float around in your bloodstream and get stored as fat on your body. These free fatty acids are also turned into the low density lipoproteins which are the most dangerous form of LDL cholesterol.

Some of this fat is stored in the liver. Ever hear of 'fatty liver disease'? Fatty liver disease can result from an excess of fructose (from high fructose corn syrup). When the liver starts storing excess amounts of fat, insulin resistance and metabolic syndrome follow, and not far behind then, is Type 2 Diabetes.

The result—accelerated aging, chronic disease and ultimately, death—all from excess sugar.

Some other ways fructose accelerates aging and disease:

- Fructose elevates uric acid levels, which can become gout, a painful form of arthritis when the uric acid forms crystals on joints, mainly in the feet and hands. Uric acid is also responsible for pushing up blood pressure.
- Fructose tricks your body into gaining weight by turning off your body's appetite-control system. Consuming foods containing fructose actually make you hungrier. You don't feel full when you should, so you keep eating.
- Fructose quickly and easily leads to weight gain and abdominal obesity (yes, this is where dreaded "belly fat" comes from), decreased HDL (good cholesterol), increased LDL (bad cholesterol), elevated triglycerides, elevated blood sugar, and high blood pressure, which leads to metabolic syndrome. And of course, these things continue right down the road to obesity, diabetes, heart disease, and even cancer.

What about artificial sweeteners? Shouldn't those be OK?

We have been told by doctors and nutrition 'experts' for years that diet sweeteners were the way to go—to avoid gaining weight from those extra calories, and to avoid those blood sugar and insulin spikes. Diet sweeteners are NOT the answer.

The fact is diet sweeteners can actually make you gain weight, and confuse your body. These sweeteners—including Splenda/sucralose, Nutrasweet/aspartame, and Sweet n' Low/Saccharin, actually stimulate your appetite and insulin response.

The American Diabetes Association just published a study that shows daily consumption of diet soda was linked to a significant risk of metabolic syndrome (pre-diabetes) and Type 2 Diabetes. And in another study of 66,000 women from France, those who drank one diet soda ***a week had more than double the risk of diabetes***, than women who did not consume sodas.

And besides increasing diabetes risk, *diet soda doubles the risk of weight gain and obesity* over an eight-year period. So think twice if you are hoping to save calories and lose weight by drinking a diet soda. They do just the opposite! You are far better off drinking plain water.

The problem is, when artificial sweeteners are ingested, the sweetness confuses the body, and insulin is released anyway. Unfortunately, in the absence of real sugar, the insulin drops the existing blood sugar levels, and as a result, creates hunger and cravings—and guess what—you crave starchy, sweet processed foods.

Fooling your brain into thinking you are getting something sweet plays a bad trick on your body and your metabolism. Artificial sweeteners not only disrupt normal hormonal signals that control hunger and satisfaction, but they are also highly addictive. According to Dr. Mark Hyman in his book, "The Blood Sugar Solution", those who consume diet soft drinks regularly have a 200% increased risk of weight gain, a 36% increased risk of pre-diabetes or metabolic syndrome, and a 67% increased risk of diabetes.

And sucralose, or Splenda, has been shown to interfere with insulin secretion and glucose metabolism as well. NOT a good substitute for sugar for anyone with blood sugar problems!

The latest research shows that artificial sweeteners also interfere with your gut microbiome, that delicate balance of beneficial bacteria living in your gut. In one study, *glucose intolerance developed within just 11 weeks* in mice given artificial sweeteners of saccharin, sucralose or aspartame, compared to mice given water, which had no changes in glucose tolerance. When the gut bacteria's delicate balance is thrown off, it

can have far-reaching health effects, including glucose control, immune function, mood, and nutrient processing.

The Trouble With Grains

Remember the US Department of Agriculture's food pyramid guide? Yes, the one that recommended we eat 6-11 servings of grains in the forms of breads, cereals, pastas, rice, etc. Following this guide was disastrous in terms of blood sugar, hunger and weight gain.

When you take a look at the food supply of highly civilized societies, the common denominator is an overload of carbohydrates and processed grains—often combined with sugar or fructose (generally in the form of high fructose corn syrup) to make that starchy stuff even more desirable and addictive. Our bodies quickly begin to crave that junk and the short term high we get from those foods.

Wheat and corn are two most commonly used food ingredients and some of the worst carbohydrates for raising blood sugar and increasing aging.

Cave men didn't eat grains—at least nowhere close to the form we eat today. And, consumption of grain in civilized countries has been increasing for the last 30-50 years, to the point where grain is the primary food in many people's diets.

As grain consumption has gone up, so have the numbers of diabetes and obesity—in direct relationship to grain consumption.

Today, flours are more refined than ever—missing fiber and essential nutrients. The modernized version of wheat, *triticum aestivum*, is very different from the wheat used by our ancestors.

Modern wheat has been genetically altered and manipulated to become a far different plant than it previously was. The gluten proteins in modern wheat are much different than the gluten in the wheat of the past. This considered to be one of the reasons for the sudden increase in the incidence of celiac disease and gluten sensitivity.

Wheat gluten can be related to a whole range of inflammatory diseases, and even for those who are seemingly not gluten-sensitive, it causes low-level, long-term inflammation.

Many people would never connect these symptoms with eating grains; but weight gain, and emotional, physical, and mental symptoms are fairly frequent with gluten sensitivity—whether you think you have a problem with gluten, or not.

Gluten sensitivity dramatically increases inflammation not only in the digestive system, but in the whole body. Gluten, (the protein found in wheat, rye, barley, spelt, and sometimes oats) is not only inflammatory but can trigger obesity and diabetes.

Even if you don't have an obvious reaction to foods containing gluten, inflammation—to one degree or another—still occurs—which still has damaging health effects, and can be as wide-ranging and varied as: osteoporosis, anemia, vitamin deficiencies, autoimmune diseases, and even autism and schizophrenia. Inflammation from gluten and other grains can also increase your odds of cancer and heart disease. In fact, a review in the *New England Journal of Medicine* linked gluten to 55 health conditions.

So even if you don't have a diagnosis of celiac disease, wheat and gluten can be harmful to your health.

Gluten sensitivity and inflammation can also block the absorption of important nutrients, creating nutritional deficiencies that can cause more frequent illnesses, chronic diseases, autoimmune disease, mental illness, dementia and Alzheimer's disease.

Wheat, in particular, also contains a type of sugar called Amylopectin A that raises blood sugar shockingly high. *Eating just two slices of whole wheat bread (the kind we're told is 'healthy') raises blood sugar higher than eating two tablespoons of pure cane sugar.*

Here's what Mike Geary has to say about wheat:

"Here is a little-known fact that's often covered up by the massive marketing campaigns by giant food companies that want you to believe that "whole wheat" is healthy for you... but the fact is that wheat contains a **very unusual type of carbohydrate** (not found in other foods) called **Amylopectin-A**, which has been found in some tests to spike your blood sugar HIGHER than even pure table sugar. In fact, amylopectin-A (from wheat) raises your blood sugar MORE than almost any other carbohydrate source on earth based on blood sugar response testing that's documented in studies.

This means that wheat-based foods such as bread, bagels, cereals, muffins, and other baked goods often cause MUCH higher blood sugar levels than most other carbohydrate sources. If you don't believe me, here's something you should know... I ran personal blood sugar tests on myself using a blood glucometer about 45 minutes after eating 2 slices of wheat bread vs eating a bowl of oatmeal, with equivalent grams of carbohydrates.

Check out the Results of this blood sugar test that Mike conducted:

The blood sugar test results of wheat vs oatmeal:

2 slices of whole wheat toast:

45 minutes after consumption: **Blood sugar spiked from 86 fasting level to 155**

1 Bowl of Oatmeal (equivalent grams of carbs to 2 slices wheat toast)

45 minutes after consumption: **Blood sugar increased from 86 fasting level to 112.**

As you know now, the higher your average blood sugar levels are over time, the more AGEs are formed inside your body, which makes you age FASTER. Clearly, the whole wheat spiked blood sugar MUCH higher than the oatmeal, and if you don't know, 155 is a massive blood sugar reading that will certainly contribute to faster aging if you eat wheat frequently... and most people eat wheat without even thinking about it at almost EVERY meal...Yikes!

Not only that, but the high blood sugar spikes caused by wheat also makes your body pump out more insulin which makes you **pack on more body fat**... Not fun at all!

These massive blood sugar spikes from eating wheat daily also cause damage over time to your blood sugar regulation system, harming your pancreas, causing insulin resistance, and eventually causing type 2 Diabetes. I think we have a strong case against eating so-called "healthy" wheat!

Wheat and grains absolutely push you more quickly towards diabetes, chronic disease and an early death.

Corn may be an even bigger problem. Bumper crops of corn keep corn prices low which in turn helps to keep many of the items we buy at the store low-priced. Corn, in some form, is in an overwhelming majority of packaged foods that we buy from conventional grocery stores. And corn—unless it specifically says, “organic” is genetically modified and even further from anything your body recognizes. GMO corn is very likely a key contributor to many allergies and inflammatory health issues.

Corn has a very high sugar content and is a definite contributor to diabetes and obesity. Corn also contains substances that block nutrients from being utilized in the body. It can cause a variety of health issues, such as dermatitis, diarrhea, irritability, ADD and depression.

Eating a more Paleolithic type diet that is mostly grain-free is a very good way to control blood sugar, your weight, and the resulting AGE's as well. This type of diet emphasizes eating real foods, such as fresh organic vegetables, and naturally raised meat and fish, along with ample amounts of healthy fats--while avoiding grains, processed foods and sugars.

Advanced Glycated End Products, AGE's That Kill

We know that one of the most accurate predictors of heart disease and diabetes is a condition called 'metabolic syndrome'. According to the CDC (Centers for Disease Control) at least 75 million Americans have metabolic syndrome, and probably many more have it but have not yet been diagnosed.

Sugar and carbohydrates in the food you eat not only drive up blood sugar and insulin and create all those damaging effects—excessive sugar in the body (in the form of glucose) binds to proteins causing glycation.

People with chronically elevated blood sugar have the most damage from Advanced Glycated End Products, such as those with Type 2 Diabetes or metabolic syndrome. As nutrition expert Johnny Bowden says, "It's like putting sugar in your gas tank, it totally gums up [and damages] the works." Certain types of sugars, including fructose, are 10x more likely to glycate.

AGE's can be measured by the same test given to diabetics to monitor long-term blood sugar control. This relatively new blood test is known as the Hemoglobin A1c test. For optimal aging, your A1C levels (whether diabetic or not) should be less than 5%, which would mean keeping your blood sugar level below 90 mg/dl on average. While that seems fairly low by some conventional medical standards, this percentage is easily attainable if you eat a low glycemic diet.

AGE's are responsible for wrinkly, sagging skin, and additional damage to the pancreas that hastens diabetes, along with inflammation and irritation to the blood vessels, which leads to deadly plaque buildup that causes heart disease and strokes.

Besides the inflammation they create in blood vessels, they damage collagen in blood vessel walls, which leads to high blood pressure. Glycation also weakens the blood vessel walls, causing aneurisms and deadly hemorrhagic strokes.

AGE's also help form the sticky amyloid proteins and neurofibril tangles that take over the brains of those with Alzheimer's disease, causing severe memory loss and dementia. This is one reason that Alzheimer's disease is now thought to be 'diabetes of the brain'.

AGE's damage nerves, contributing to the peripheral neuropathy that diabetics can get, along with deafness, and blindness—two more side effects that go along with high blood sugar and diabetes.

As you can see, AGE's are highly destructive. Advanced Glycation End products come from two primary sources:

- From our diet—something we can control
- Internally produced in the body

Any food that is browned or roasted—and contains sugar, such as toasted bread, bacon, crispy brown cookies, chips, crackers, etc. contains AGE's. They form whenever food browns with heat, and molecules bind with the sugars in the food.

Any food that is high in fat, protein or sugar is also likely to cause AGE's when cooked.

If you look at the huge amount of foods that contain high fructose corn syrup and other added sugars, is it any wonder there are such high rates of cancer, diabetes, heart disease, and other inflammatory diseases? Processed foods are the primary source of most sugars.

PART 2

THE SUPERFOODS DIABETES TURNAROUND DIET

Make the Commitment and Change Your Life

Making huge changes for your health and for the rest of your life can be overwhelming and daunting. But when you think about what's at stake—and what the payoffs are—how can you *not* do it?

By following this diabetes reversal diet, you will notice:

- **No blood sugar highs or lows**
- **Reduction of medications, or elimination of medications**
- **Insulin needs reduced, often within the first week or two**
- **Weight loss—often significant weight loss—and then stabilized body weight**
- **Reduction or reversal of diabetes-related health conditions**
- **Increased energy and improved moods**
- **No food cravings**

Our goal is to reverse or improve your diabetes to the point of becoming non-diabetic again, meaning that your blood sugar levels stabilize and remain below 90-100. Be aware, though, your tendency to become diabetic is still there and you will need to follow a healthy low glycemic diet, and lifestyle habits for the rest of your life!

You CAN do this! Follow this diet as if your life depended on it—because it does!

Besides reversing a very serious, life-threatening, chronic disease with horrible complications, you are also going to drastically cut your chances of getting cancer, lose a lot of extra weight, feel better mentally, gain energy, and gain a new lease on life! Correcting and healing your diabetes can actually heal your entire life.

Now, isn't that worth the commitment?

If you are truly committed to making these changes, you will find that your blood sugar levels can return to normal or near normal ranges, you can decrease and even stop your medications.

It is embedded into our 'caveman' brains to want to overeat and to crave sweet foods, but we can override that urge, armed with the right knowledge and the tools to

success—that I am giving you here. If we don't overcome these impulsive, addictive behaviors, you are allowing food to control you and your health. Do you want to be controlled by junk foods and huge corporate conglomerate food companies? No, you know you don't! Gain control!

Most clinical psychologists will agree that it takes 3 to 4 weeks of reprogramming your brain and your habits. So commit to following this plan for at least a month and you can change your habits and break free of your addictions. The first few weeks will require a bit of effort, conscious planning, and daily reminders to help you keep from slipping back into your old habits. After a while, though, it becomes second nature, and these healthy habits can take over with less effort or thought. It just becomes automatic. You will be 're-wiring' your brain for a healthier lifestyle!

And once you begin to feel the success of your efforts—more energy, better, happier moods, slimmer waistline, glowing skin, AND better health—you will be motivated to continue this awesome new lifestyle! And your family, loved ones, and friends will certainly notice the positive change as well.

YOU have the power to change your life and change the world around you.

By the time you have been diagnosed with Type 2 Diabetes, your pancreas, the organ that supplies your body with insulin, has been weakened and injured. You are going to help heal your pancreas, and heal your body as well. The pancreas is not only essential for producing insulin, but it also produces essential enzymes for digestion—primarily sugars and starches—as well as proteins and fats.

Let's revisit insulin's function in the body. Insulin, as you may be aware, helps to lower blood sugar by opening receptor sites on the surface of your cells. This is how glucose enters your cells to supply your body with energy. While this may be one of insulin's functions, its other function is to store fat.

So unless that glucose is immediately used up, it will be stored as fat. This fat in the form of triglycerides is shuttled away to the fat cells. When fat cells become engorged, their sensitivity to insulin decreases (insulin resistance), and the glucose will continue to circulate in the bloodstream. This is where you get chronically elevated blood sugar.

As this occurs, the pancreas senses the higher levels of glucose in the blood and pushes out even more insulin. This in turn creates more fat cells that get shoved into storage. As insulin's effect begins to diminish, blood sugar goes higher and higher, and BOOM!, you have Type 2 Diabetes.

Focusing on low glycemic foods instead of processed, packaged foods with added refined starches and sugar goes a long way towards avoiding blood sugar ups and downs and ultimately is the key to a longer life, and slowing the entire aging process.

The secret to recovering from Type 2 Diabetes is this:

It is not about treating the disease, but rather about creating health. And by creating health, you will make major changes in not only your diet, but in your whole body, which will in turn move you away from diabetes and disease, and towards a lifetime of good health and vitality.

The easiest way to climb the mountain is to take it one step at time. We are here to take you, step by step through this process.

But Be Aware of This Amazing Side Effect...

One of the positive and immediate side effects you will notice while following this diet, is that you will almost immediately find that you begin to shed unwanted pounds and start returning to a slimmer, healthier looking body.

Your clothes will fit better, you will lose that puffy, bloated look and feel, become leaner and stronger, and find that your appetite and energy stabilize throughout the day as well.



Chapter 6



Understanding the Glycemic Index and Glycemic Load

The Glycemic Index—How to Identify Foods to Eat and Foods to Avoid

Before we get into a discussion of the best diabetes-reversing, high nutrient foods, let's take a moment to discuss the **glycemic index** and the **glycemic load** and how it affects your blood sugar and insulin. This knowledge is a key part in keeping blood sugar and insulin low—as well as losing weight and optimizing your health.

The purpose of the Glycemic Index (GI) is to help you to identify foods that spike your blood sugar. Eating this way has been proven to be more effective at controlling diabetes, helping you lose weight and prevent chronic diseases, than counting calories.

In fact, the prestigious New England Journal of Medicine found that the easiest diet to maintain, and the one that had the biggest impact on weight loss and maintaining that weight loss, was a low glycemic/higher protein diet. The Cochrane Database (the leading resource for reviews in health care) also concluded that the low glycemic diet helps you lose weight faster and keep it off—over any other type of diet.

The Glycemic Index is based on a scale of 0-100, with the higher values assigned to foods that elevate blood sugar the quickest. The highest ranked food listed on the glycemic index, with a score of 100, is pure glucose.

Just remember this: the higher the GI rating, the faster your blood sugar goes up, and along with that, insulin—and fat storage. The highest glycemic scores come from simple sugars, refined starches, and most anything made from any kind of flour or starch—including gluten free foods.

What does that mean for me?

The foods with the *highest glycemic index* are the foods that are the *worst* for you to eat, and are the foods that promote diabetes, weight gain and obesity, Advanced Glycated End Products (AGE's) along with other dangerous chronic health conditions, like heart disease and cancer.

Dietitians used to believe that only sugary foods and drinks had an impact on blood sugar, but now we know that even foods that seem relatively free of sugars can act like sugar in your body, once ingested. Many starchy foods like wheat bread, potatoes, pasta and rice can have just as dramatic of an effect on blood sugar and insulin as sugar.

One of the worst offenders is sweetened drinks, like soda, and even (unsweetened) fruit juice. These drinks hit your system incredibly fast because you drink them—instead of chewing them—and they are instantaneously absorbed into your bloodstream, and skyrocket your blood sugar.

Even so-called 'healthy' whole grains like whole wheat bread can actually be the same as eating a couple spoons full of sugar. And ditto for gluten-free foods. They are usually made out of even more refined starchy substitutes—which are often higher glycemic ingredients like potato starch, tapioca starch, and rice flour. So don't get duped into believing that eating gluten free food is a healthier option. Yes, AVOID gluten, but do NOT substitute "gluten-free" breads, cookies, pasta, pizza, bagels, etc. for wheat. Just avoid those starchy high glycemic carbohydrates all together!

Most vegetables (except for starchy root vegetables), meat, eggs, fish have the slowest digestion time and are considered low glycemic, as are healthy fats like those in avocados, nuts, olive oil, butter and coconut oil.

Generally, this is the way the medical community classifies foods under the Glycemic Index:

- **Low-0-55**
- **Medium 56-69**
- **High 70 or greater**

Diabetes healing foods should have a Glycemic Index of under 50.

However, glycemic indexes can be deceiving, so using a GI guide will help you gain a better understanding of what you should and shouldn't be eating. In terms of getting your blood sugar under control and reversing diabetes or stopping pre-diabetes, remember that the Glycemic Index plays a very significant role. Choose foods with very low GI values. This is key to getting your blood sugar back under your control.

Your body's glycemic response to foods eaten depends on another factor as well as its GI. It not *only* has to do with the actual glycemic index number, but it also has a lot to do with the ***amount*** of food you eat. If you eat a tiny amount of a high glycemic food, it will have very little effect on your blood sugar, as opposed to eating a large amount of a high GI food—especially if you eat it on an empty stomach.

A low glycemic diet benefits everyone, too—not just those trying to reverse diabetes or pre-diabetes. It's an effective weight loss diet, cholesterol-lowering, anti-inflammatory, way of living and eating. A low glycemic diet will benefit EVERY area of health and well-being.

What's the Difference Between Glycemic Index and Glycemic Load?

Glycemic Load is the food ranking system that measures carbohydrates in food, while the Glycemic Index ranks foods on how quickly they are broken down into sugar and absorbed into your system. The glycemic index does not measure the *amount* of carbohydrate in a food, so the glycemic load is actually considered a better way to determine how foods affect blood sugar.

Foods with a Glycemic Load under 10 are considered low-GL and are the foods that will not impact blood sugar. GL foods between 10-20 will have a moderate effect on blood sugar, and foods ranked with a GL of 20+ are foods that definitely will cause blood sugar spikes.

Dr. Al Sears, M.D., has a great listing of examples of foods, their Glycemic Index, and Glycemic Load on his website at <http://www.alsearsmd.com/glycemic-index/>. There is also a downloadable PDF on Dr. Al Sears' site that can be very helpful while you are learning the GI/GL values of foods you eat.

Both the GI and GL are useful measures to gauge your reaction to certain foods your body's overall Glycemic Response has much to do with your management of blood sugar over time, and also depends on individual makeup (your tendency to have diabetes or highly reactive blood sugar), your overall diet and lifestyle. As you gain more control over your diet and stabilize your blood sugar over time, you may find your body is less reactive to some of these foods.

The best way to get a handle on glycemic index and glycemic load is this:

- 1. *Never eat carbs by themselves.***
- 2. *Combining low glycemic foods with the higher glycemic foods helps to lower the overall glycemic effect on your system.***
- 3. *The more refined the grain is (a whole grain vs flour), the higher the glycemic value.***
- 4. *Size matters—the size of the portion of high glycemic food you eat makes a difference in the glycemic load.***
- 5. *Always eat protein, fats and vegetables BEFORE you eat carbohydrates or foods that are moderate to high glycemic. This slows the effect on your blood sugar***

It may take a bit of practice and a little trial and error to get the glycemic load of your meals and snacks as low as possible, but it really isn't that hard and it will become second nature. The best way to remember is to combine protein or healthy fats with low-starch carbs from veggies, beans, legumes and fruit.

Low Glycemic Index Carbohydrates + Protein and Healthy Fats = Lower Blood Sugar

For example, if you are going to eat an apple, eat it with a handful of nuts or almond butter. Eat beans with some cheese. Eat a turkey slice wrapped in lettuce. Eat sweet potatoes with meat or fish. Add protein powder and healthy fats (like avocado or coconut oil) to your fruit smoothies.

A very important new study published in Diabetes Journal shows that *the order in which you eat your food* has a very big impact on how your blood sugar responds. Eating protein and vegetables BEFORE you eat carbohydrates has a very significant effect on how your blood sugar reacts. In fact, blood sugar can register almost 30% lower when protein and fiber is eaten first. And, of course, if you reversed the order and ate carbohydrates first, you would see your blood sugar spike. Just another reason to pass on the bread basket or chips and salsa prior to your meal, and eat a salad with healthy olive oil and vinegar on it instead.

The other great thing about eating protein and veggies before you eat carbs is that you actually fill up on the most nutrient-dense foods first—so you probably eat LESS of the carbohydrates that can derail your diet.

One of the best things about eating low glycemic foods is that you do not get hungry as easily and are more satisfied for longer. Since low glycemic foods do not spike your blood sugar, and in turn insulin, they also do not trigger ‘the munchies’ as easily as high glycemic foods do. Result: you eat less, when you eat low glycemic healthy foods.

Below is an abbreviated list from Dr. Al Sears website (www.alsearsmd.com/glycemic-index/) of the glycemic values of some common foods:

Sample Glycemic Index and Glycemic Load Chart

Red—Avoid, High Glycemic!

Yellow—Caution, Eat Sparingly

Green—Great! Eat as much as you want!

Food	GI	Serving Size	GL
Sweet Stuff			
Honey	87	2 Tbs	17.9
Snickers Bar	68	60g (1/2 bar)	23
Table Sugar	68	2 Tsp	7
Fruit Jam	51	2 Tbs	10.1
Dark Chocolate Bar	23	37g (1 oz)	4.4
BAKED GOODS & CEREALS			
French Bread	95	64g (1 slice)	29.5
Corn Flakes	92	28g (1 cup)	21.1
Rice Krispies	82	33g (1.25 cup)	23
Glazed Donut	76	75g (1 donut)	24.3
Waffle	76	75g (1 waffle)	18.7
Bran Flakes	74	29g (3/4 cup)	13.3
Cheerios	74	30g (1 cup)	13.3
Corn tortilla	70	24g (1 tortilla)	7.7
Wheat Bread	70	28g (1 slice)	7.7
White Bread	70	25g (1 slice)	8.4
Angel food cake	67	28g (1 slice)	10.7
Oatmeal (not quick cooking or instant)	58	117g (1/2 cup)	6.4
Oatmeal Cookie	55	18g (1 large)	6
Popcorn	55	8g (1 cup)	2.8
Chocolate cake w/chocolate frosting	38	64g (1 slice)	12.5
BEVERAGES			
Gatorade Powder	78	16g (.75 scoop)	11.7
Cranberry Juice Cocktail	68	253g (1 cup)	24.5
Cola, Carbonated	63	370g (12oz can)	25.2
Orange Juice	57	249g (1 cup)	14.25

Soy Milk	44	245g (1 cup)	4
V-8 Juice	38	243g (1 cup)	3.4
LEGUMES			
Baked Beans	48	253g (1 cup)	18.2
Pinto Beans	39	171g (1 cup)	11.7
Chickpeas, canned	31	240g (1 cup)	13.3
Lentils	29	198g (1 cup)	7
Kidney Beans	27	256g (1 cup)	7
Peanuts	13	146g (1 cup)	1.6
VEGETABLES (except for the ones listed below in red, most all vegetables are low GI and acceptable to eat)			
Potato	100	213g (1 med)	36.4
Carrot, raw	92	15g (1 large)	1
Beets, canned	64	246g (1/2 cup)	9.6
Corn, yellow	55	166g (1 cup)	61.5
Sweet Potato	54	133g (1 cup)	12.4
Peas, Frozen	48	72g (1/2 cup)	3.4
Tomato	38	123g (1 med)	1.5
Broccoli Brussels sprouts, cooked	0	78g (1/2 cup)	0
Cabbage, cooked	0	75g (1/2 cup)	0
Celery, raw	0	62g (1 stalk)	0
Cauliflower	0	100g (1 cup)	0
Green Beans, asparagus, zucchini, etc	0	135g (1 cup)	0
Mushrooms, red and green peppers	0	70g (1 cup)	0
Spinach and other green leafy veggies	0	30g (1 cup)	0
FRUIT			
Watermelon	72	152g (1 cup)	7.2
Pineapple, raw	66	155g (1 cup)	11.9
Cantaloupe	65	177g (1 cup)	7.8
Raisins	64	43g (small box)	20.5
Kiwi, w/ skin	58	76g (1 fruit)	5.2
Banana	51	118g (1 med)	12.2
Strawberries, blueberries, raspberries, blackberries	35	152g (1 cup)	3.6
Apples, w/ skin	39	138g (1 med)	6.2
Grapefruit	25	123g (1/2 fruit)	2.8
Sweet Cherries, raw	22	117g (1 cup)	3.7
NUTS			
Cashews	22		
Almonds	0		
Hazelnuts	0		
Macademia	0		
Pecans	0		
Walnuts	0		
DAIRY			
Ice Cream (Low-fat)	47	76g (1/2 cup)	9.4
Pudding	44	100g (1/2 cup)	8.4

Whole Milk	40	244g (1 cup)	4.4
Ice Cream	38	72g (1/2 cup)	6
Yogurt, Plain	36	245g (1 cup)	6.1
MEAT/PROTEIN			
Beef	0		
Chicken	0		
Eggs	0		
Fish	0		
Pork	0		
Deer-Venison	0		
Buffalo	0		
Shellfish	0		
Turkey	0		

Chapter 7



Creating The Diabetes-Free Zone

The next most important step to success is to change your environment—both physically and socially. Making changes in your home, your kitchen and the people who are closest to you will make or break your success.

Let's talk about support first. This is your first layer of protection in the diabetes free zone.

Making major life changes can be difficult at first, but in time—with support—you can create new healthy habits. Support from family and friends can be extremely important, especially at the beginning of this program when the changes may seem really big. Family and friends can either keep you on the path to health or derail your efforts, even if they don't mean to. Getting everyone on board to help you work towards your goals is a huge step in the right direction. Otherwise you may feel as though you are swimming upstream.

Let your family and friends know what your dietary restrictions are—especially in Phase 1. You don't have to change everyone's diet, but asking them for help and explaining

what you are doing and why will go a long way. And who knows, they may find out the health benefits of your diet and join you!

There most probably are several support groups in your town that may be helpful, as well as meetup.com groups or online support. Google “diabetes support” and take a look. Support groups or even an accountability partner can often mean the difference in success or struggling. Connecting with others is invaluable and many studies show that often success or failure depends on group and community support. Remember you are NOT alone in this. Find your group or teammate and get going in the same direction!

Now let’s take a look at your immediate environment—your home and your kitchen.

First you are going to eliminate those foods—and the temptation—that raise your blood sugar and spike your insulin, and second—and most importantly—you are going to replace those foods with healthy, fat-burning, diabetes-reversing, energy-producing superfoods. This is a cold turkey approach—because that is what works.

That means a total makeover for your kitchen. For more on this and a healthier diet, see [“The Fat Burning Kitchen”](#) book. It’s time to reclaim your right to healthy food and to remove the foods that will derail your newly established health goals.

Take a look at your pantry, your fridge, and your freezer. This is where most of the problems originate—in your home. If you don’t have healthy, nutritious, low glycemic, low carb foods in your home, you are doomed. Gain control of your environment and you gain control of your diet. So, now is the time to survey the foods you store in your house and ‘clean house’ so to speak.

This is where most of your pre-packaged and processed foods sit, waiting...calling to you late at night, after work when you are stressed out and have the munchies, after a hard workout—just waiting for a weak moment to knock your ‘diet’ off track, once again.

Now is the time to get rid of those cookies that you purchased and swore you would only nibble on--and 10 cookies later, you have lost all control and will power. What about those corn chips that seemed somewhat ‘healthy’, but you ended up eating half the bag in one sitting? And that instant mac and cheese you bought for those late work nights, and the “healthy” cereal that contains more sugar grams per serving than 2 handfuls of M & M’s...

Junk food companies are not stupid. They know what you crave, and they know how to put in ingredients that will keep you eating their products. The only way to not fall prey to these companies and their health-destroying foods is to just avoid them. Period.

The Kitchen Cleanout—Foods You Absolutely Must Remove!



It's harsh, but it's the only way you can succeed at this. Don't feel you are wasting food; these foods destroy your health and push you further down the path of diabetes and other major health issues. If you wish, donate these foods to a homeless shelter if necessary. While foods like this don't do anyone much good, for those in desperate need, they serve the purpose.

Remove the temptation, and get control of your diet, your life, and your health again. This is a cold turkey approach, because truthfully, there is nothing else that works. Sugar in all its forms is HIGHLY addictive, and the only way to get it out of your system and get over the cravings is to cut it out completely. It may take 3-10 days to break this addiction, but you will find if you avoid it completely, you won't crave it at all!

- 1. Eliminate all processed and packaged foods.** A good rule of thumb to go by is to look at the list of ingredients. If it has more than 3 ingredients, don't keep it—especially if it contains ingredients you don't recognize or cannot pronounce. Best to keep on hand food that contains 1 ingredient or better yet, doesn't even have a label. Most food that has a label contains some form of sugar.
- 2. Eliminate sugar in any form.** This includes: sucrose, glucose, cane sugar, brown sugar, honey, molasses, fruit juice, juice concentrate, maltose, fructose, maple syrup, corn sweetener, natural sweeteners, beet sugar, organic cane juice,

brown rice syrup, agave, corn syrup, high fructose corn syrup, xylitol, mannitol, and sorbitol.

3. **Get rid of all artificial sweeteners.** This includes Splenda, sucralose, Nutrasweet, aspartame, saccharin, and anything containing sugar alcohols such as xylitol, sorbitol, malitol, and erythritol, or anything ending with “-ol”. Although Stevia is an all-natural safe sweetener, it still can fool your body and your metabolism, so avoid this sweetener too. We want you to retrain your tastebuds to enjoy foods and drinks that are not sweet.
4. **Eliminate all grain products (for Phase 1).** Especially foods containing gluten. Eliminate corn, wheat products, rice, oats, and all “gluten free” products—most of these are highly processed starches that raise your blood sugar even more quickly. This includes any products that contain corn, wheat, flour, rice flour, tapioca starch, potato starch, oats (especially instant oats), etc. Don’t forget products like muffins, pastries, bagels, pasta, ramen noodles, rice noodles, bread, crackers, chips, cookies, rolls, tortillas, cereals, etc., all contain grains and starches. When you get to the maintenance phase of your diabetes reversal diet, you may be able to re-introduce some of these less processed foods.
5. **Eliminate refined cooking oils** such as: corn oil, soybean oil, peanut oil, canola oil, sunflower oil and any oil that says “hydrogenated”. Also, check labels to be sure foods do not contain these inflammatory oils. Vegetable oils are shown to cause weight gain, and they are NOT healthy!
6. **Avoid all soft drinks, diet drinks, energy/sports drinks, fruit juices, and sweetened teas—whether “diet” or sweetened with sugar, fruit juice, or high fructose corn syrup.**
7. **Remove all sweetened dairy products such as flavored yogurts or kefir, and drinks.** Also avoid drinking skim milk, as skim milk is actually high in lactose (a sugar), and the absence of milk fat makes it easily absorbable and can increase blood sugar.
8. **No deli and processed meats,** cold cuts, sausages, bacon and jerky with added sugars and chemicals such as nitrites and nitrates.
9. **Avoid all ketchup, mayonnaise, relishes, jams, jellies, salad dressings, and pre-packaged sauces like spaghetti sauce.**
10. **Nothing fried in oil.**
11. **No frozen prepared dinners**—especially ‘weight loss’ meals.

- 12. Avoid soups in cans or boxes.** These often have a lot of additives, sugars and starches.
- 13. Eliminate all non-dairy milks with added sugar or other sweeteners.** The unsweetened non-dairy 'milk' drinks are ok. Avoid soy milk, rice milk and any milk substitute with added sweeteners.
- 14. Avoid starchy, high glycemic vegetables: beets, peas, white potatoes, sweet potatoes, squash, and corn (Phase 1).**
- 15. No alcohol—especially beer and mixed drinks.** If you feel you would like to drink alcohol, you can enjoy *one glass of wine a day*. Red or white is ok (red is best) but the drier the better—in other words avoid any sweet wines. Alcohol basically turns to sugar in our bodies—especially on an empty stomach. And it reduces your ability to avoid junk foods.
- 16. Be aware that most medications contain corn syrup and/or artificial sweeteners—**especially over-the-counter cough syrups and antihistamines.



I know what you're thinking—"WHAT'S LEFT FOR ME TO EAT!!??"

**Fear not...there are lots of delicious diabetes-reversing
superfoods out there for you to enjoy!!**



Chapter 8



The Top Diabetes-Fighting Superfoods

The following pages are going to guide you to a delicious array of REAL, delicious, healing Superfoods that are low-glycemic and full of nutrients.

This combination will help you reverse diabetes and pre-diabetes, help you get thinner, and increase your energy and overall good health!

Eating a diet of high-quality foods rich in nutrients is your best bet for success. These foods activate your body's healing system, remove your cravings, and give you back your health. You may find that eating high-nutrient foods removes your cravings and your urge to overeat.

If virtually all the food you eat every single day contains super-high amounts of nutrients, then your body will be able to get most of the nutrition it needs for optimal health, and will in turn regulate your appetite and calorie intake without the struggle of calorie counting. Not only that, but most of the diseases and illness comes from the lack of high quality nutrients in real food. The Diabetes Superfood diet will help you load up on high-density nutrition, while lowering your blood sugar, because of the low glycemic index of the foods and menus you will have access to.

Now before you think that high nutrient density only means fruits and vegetables, think again! You'll see throughout this book that high nutrient density can also include lots of mouth-watering, higher fat foods that you may have believed were "bad for you", such as whole eggs, red meat, nuts, avocados, certain oils, butter, and so on.

Think about it for a second – If you eat foods each day that are high in calories but low in nutrients such as pasta, cakes, cookies, crackers, etc. (high caloric density, low nutrient density), then your body will be craving additional food, despite the fact that you may have already eaten more than your daily caloric maintenance balance for weight maintenance vs. weight gain. AND—you set yourself up for diabetes, heart disease, obesity, cancer, and a host of other diseases.

We're going to show you in this book all of the low-nutrient foods that you need to avoid and get rid of, as well as some of the foods you may have been deceived by food companies into falsely believing are "healthy", but were, in reality, actually ruining your health. In addition, we're also going to show you all of the countless, amazingly delicious options you have for healthy foods that are nutrient-dense and can help to bring you closer to your health goals.

Diabetes-Fighting Superfoods

The best diabetes healing superfoods are low glycemic, and have few carbohydrates, and have some of the highest concentrations of antioxidants, vitamins, minerals, phytochemicals (healing plant chemicals), and fiber.

Not only will you find these foods satisfying and delicious, but because they are low glycemic, and high in nutrition, you will feel satisfied and start to feel your cravings for junk food recede. Our bodies are smart; when you feed your body the high-density nutrition it needs, it stops craving more food.

Further, low glycemic foods not only keep your blood sugar stable and low—where it should be, but because they do not stimulate an insulin release, they do not stimulate your appetite. Result: you feel satisfied and full longer.

Being in a state of 'un-health' with diabetes or pre-diabetes—or even being overweight—means you are missing valuable nutrients in your diet. Besides stabilizing your blood sugar by eating low glycemic foods, eating a diet of Superfoods will restore valuable nutrients missing from your diet. By doing this, you will help to correct not only diabetes, but many other existing health issues. Getting rid of diabetes-related symptoms will actually become secondary to your path to real HEALTH.

Following these principles will help you maximize the nutrient value of your food and maximize your investment in your health:

- 1. Whenever possible, eat REAL food with one ingredient.**
- 2. Eat organic as much as possible. For a list of the foods you absolutely should eat organic and ones that are ok to eat conventional, see the “Dirty Dozen and Clean 15” and www.ewg.org**
- 3. Eat good quality protein: grass-fed meat, pasture-raised/organic poultry, and wild-caught fish.**
- 4. Buy local, as much as possible. Including vegetables, meat and dairy products. Smaller, local farms have more naturally raised options and less additives, pesticides, etc. And you KNOW where it came from.**

Keep in mind, you may be making major changes to your diet, and it may take some time to adjust your taste buds. Your body may be used to super-sweet, processed foods with added chemicals to enhance the flavors, along with artificial flavors and sweeteners. Real food tastes different, but you may soon find that real food has a far more exquisite flavor, and your cravings for sweetness will subside as you nourish your body with high quality vitamins, minerals, and antioxidants. And you will soon find, as you eliminate sugar, that your tastebuds become more sensitive to sweetness.

Loving Your Diabetes-Fighting Veggies

Vegetables should be the cornerstone of your diet and the primary food group you are eating. Vegetables help fill you up and they are concentrated sources of huge amounts of vitamins, minerals, antioxidants, fiber and diabetes-fighting phytochemicals that not only help to reverse diabetes, but they also help you lose weight, speed up your metabolism, optimize your health AND are good for the planet as well! Whether you eat meat or are a vegetarian, vegetables should make up about 75-90% of your diet.

Vegetables have the ability to fill you up while being very low in calories, so you lose weight when you eat the bulk of your diet in veggies. I have always made it a habit to eat all my veggies first, which means I have less room to eat the more caloric foods on my plate like meat and starchy carbohydrates. Plus, when you eat fiber in the form of vegetables, and protein BEFORE carbohydrates, your blood sugar stays up to 30% lower than if you ate the high carbohydrate foods first. Besides all that, the fiber in vegetables keeps you regular, and cleans out toxins, cholesterol, and waste products (left over from processed foods) and helps to prevent a majority of diseases.

Here are ten delicious ways to get vegetables in your diet as much as possible:

1. Buy local whenever possible. Buying local ensures you get the freshest picked, seasonal vegetables, with the highest concentration of nutrients. They taste better too!
2. Try all different kinds of vegetables cut up in salads. Or try a salad with various greens, carrots, cucumber, sweet red pepper, tomatoes, walnuts or almonds, and a hard-boiled egg, tuna or meat. Drizzle extra virgin olive oil and balsamic vinegar and some herbs, (keep these ingredients on hand, and you never have to eat unhealthy bottled salad dressing again), and viola! A delicious meal.
3. Sauté or lightly steam vegetables with grassfed butter and a squeeze of fresh lemon or lime, sea salt and pepper. Add a touch of grassfed butter and lemon juice to lightly cooked vegetables for a great flavor enhancer.
4. Keep raw veggies cut up in the fridge and you always have a handy low calorie, high nutrient, high fiber snack on hand.
5. Use sliced cucumber, zucchini and other veggies to dip into hummus, bean dip, guacamole or salsa instead of chips or crackers.
6. Mash up cauliflower instead of high glycemic mashed potatoes. Chop cauliflower and steam until tender. Add garlic browned in butter, sea salt and pepper, and mash with a fork or potato masher. Mashed cauliflower can even be used for pizza crusts.
7. Make sandwiches and tacos out of lettuce leaves. Use bigger romaine, Bibb, or Boston lettuce and wrap any combo of meat, fish, and veggies in lettuce. Try tuna salad this way! Many restaurants are beginning to offer this on the menu.
8. Add a variety of greens to your smoothies. Try kale, spinach, Swiss chard, parsley, or any other power greens in your smoothies. You can also add celery, zucchini, cucumber, and other vegetables to smoothies as well. You generally can't taste them, and blending them up with your smoothies makes them 'pre-digested' so you just add extra power and nutrients to your smoothies.
9. Don't overcook vegetables. Most vegetables taste best when lightly cooked, tender-crisp, and at their brightest color. Lemon juice and butter, sea salt and pepper let the delicious taste shine through and are one of the best ways to enjoy most vegetables.

10. Try grilling your vegetables. Nothing tastes better than grilled asparagus, grilled zucchini or summer squash, or grilled sweet red peppers. One of my favorite ways to eat vegetables in the summer time when they are garden fresh!

The Top Superfoods for Fighting Diabetes

Avocados - Avocados are another so-called "fatty food" that many of us have been conditioned to avoid, but this is a power-packed super food! Not only is this fruit super high in monounsaturated fat, but also chock full of vitamins, minerals, micronutrients, and antioxidants.

The healthy fats and other nutrition you get from avocados help stabilize blood sugar and insulin. The healthy fat content in avocados makes you feel full longer and takes away junk food cravings. And that equals a leaner, healthier body. Avocados contain plenty of oleic acid, the monounsaturated fat in olive oil, that helps lower cholesterol.

Avocados are also a good source of potassium, a mineral that helps regulate blood pressure and electrolytes. Adequate intake of potassium can help to guard against circulatory diseases, like high blood pressure, heart disease, or stroke.

One cup of avocado has about a quarter of your required daily amount of folate, or folic acid, a B vitamin that plays an essential role in making new cells by helping to produce healthy DNA and RNA. One study showed that individuals who consume folate-rich diets have a much lower risk of cardiovascular disease or stroke than those who do not consume as much of this vital nutrient.

Avocados are also a very concentrated dietary source of the carotenoid, lutein which is good for eye health. It also contains measurable amounts of related carotenoids, zeaxanthin, alpha-carotene and beta-carotene, plus significant quantities of vitamin E, all significant cancer-fighting ingredients. My favorite lunch or snack is an avocado sliced in half with sriracha sauce on it. I sometimes add a little canned albacore tuna too.

Beans and Legumes – Beans (including black, white, navy, lima, pinto, garbanzo, soy, and kidney beans) are a terrific combination of slow-burning carbohydrates, satisfying protein, and soluble fiber that helps you feel satisfied, helps stabilize your body's blood-sugar levels, and keeps hunger in check. Beans are also inexpensive, versatile, and virtually fat-free.

Beans and other legumes have been proven to regulate blood glucose and insulin levels, with their high fiber and low glycemic index, according to a Canadian study on Nutrition and Metabolism at the University of Toronto. The report was published online Oct. 22 in the *Archives of Internal Medicine*.

Beans and legumes not only improve blood sugar levels, but they also help to lower blood pressure and cholesterol. These improvements in blood pressure and blood sugar add up to better diabetes control and a reduced risk of cardiovascular disease, the researchers said. Beans provide a heart-healthy, nutritious and more affordable alternative to eating processed meats and dairy foods.

Coffee – If you like your morning coffee, there's good news for those who are fighting or trying to avoid diabetes. Drinking four cups of coffee every day can decrease the risk of developing Type 2 Diabetes *by more than half*, according to a new study from University of California, Los Angeles.

Caffeinated coffee raises the level of sex hormone-binding globulin (SHBG) in the blood, which reduces the risk of developing Type 2 Diabetes. Study participants were found to have a 56% less chance of developing diabetes when drinking 4 cups of caffeinated coffee a day.

And, while too much caffeine can have negative effects like raising blood pressure, and causing anxiety, sleeplessness and stomach issues, the more coffee you drink, the better for its preventative effects on diabetes. Just be sure to stop early in the day, so the caffeine in your system will be mostly gone by bedtime.

And if the caffeine bothers you, decaf coffee helps some too. A 2006 study in the journal Archives of Internal Medicine of 28,812 women found that those who drank six cups of decaffeinated coffee a day had a 22 % lower risk of developing Type 2 Diabetes than those who don't drink any coffee.

And more good news about coffee drinking—a 2011 study in the Journal of Molecular Nutrition and Food Research revealed that coffee consumption helped to prevent or delay degenerative diseases connected with free radicals. Unchecked free radicals can actually damage your cell's DNA which can lead to potentially dangerous mutations like cancer. The protection from your cup o' joe can actually happen within just five days of regular consumption too. Just avoid drinking sweetened coffee with non-dairy creamers! Learn to enjoy your coffee black or with a touch of grassfed butter or coconut oil added.

One caveat about coffee though: the huge coffee industry is very environmentally unsustainable, uses tons of pesticides, and is worse for the environment than ever before, so always buy from organic and sustainable sources.

Wild Caught Fish, Grass-Fed Meat and Free-Range Poultry, Eggs and (Raw, Unpasteurized) Cheeses - What an animal eats before you eat it, is of extreme

importance to you. Commercially raised meats, including fish, poultry and livestock are fed a diet of corn and corn byproducts, soy and soy hulls, discarded brewery grain and other castoff grain byproducts. Sometimes these animals are fed vegetable pulp, peanut shells and even old candy and candy wrappers.

A similar diet is fed to farmed fish, and free-range poultry. Animals were not meant to eat grains and the grains are not only hard to digest, but they actually make the animals sickly, creating a need for antibiotics and other pharmaceuticals, like growth hormones. Antibiotics are also routinely given to cattle, fish and poultry in an effort to fatten them up and make them grow faster. All of this remains in the meat you eat.

The old adage, “you are what you eat” is the same for animals. Animals fed a junk-food diet, and raised in dirty, overcrowded conditions do not create the nutritionally sound protein or healthy fats that naturally raised animals do. And most of the toxins that remain from the pesticides and other additives given to them are stored in their fat and livers, so not only do you not get healthy fats eating CAFO (commercially raised meat), you get a mouthful of toxic chemicals.

Naturally raised, antibiotic and hormone free cattle, poultry and fish contain the highest amounts of nutrients possible, because these animals are eating their natural diet. Their fat contains more of the healthy omega 3 fats and other essentially fatty acids as well.

And one more thing—animals and fish raised in large commercial feeding operations are mistreated, live a miserable life and are sick and crowded. It takes a massive amount of water to raise them and their filthy, toxic excrement pollutes the oceans, seas and the land—and your body!

Apple Cider Vinegar – Consuming vinegar before meals and at bedtime has been shown to lower post-meal glucose by 34%, according to an Arizona State University study. The subjects took 20 grams of apple cider vinegar with 40 grams of water and (don’t use this—use stevia instead) saccharin.

It is thought that the vinegar slows the absorption of carbohydrates into the blood or slows the breakdown of starches eaten into sugars. This actually mimics the effect of a popular diabetes drug. The study also shows that vinegar increases insulin sensitivity, perhaps acting similarly to metformin, another common diabetes drug.

And other studies have shown that vinegar at bedtime reduces fasting blood glucose in the morning as well. Postprandial glucose measurements (post meal) actually make up the majority of the HbA1c level in the blood—one of the most important measurements of long-term blood sugar stability.

Pretty amazing for something you can pick up at your grocery store for a just a couple dollars! Apple cider vinegar is good for everyone, so get in the habit of taking a little bit of it every day. I like it on salads with a bit of extra virgin olive oil, too!

Nuts and Seeds - Almonds and walnuts sit at the top of the list for nutrition, but many other varieties of nuts and seeds are healthy, too, including pumpkin seeds, sunflower seeds, pistachios, pecans, cashews, macadamias, and brazil nuts--and even though they are actually a legume and not a nut--peanuts.

Nuts are the perfect snack. Protein and fat in nuts helps you feel satisfied and stop cravings, and since nuts have no sugars, they keep your blood sugar stable. All varieties of nuts, except cashews, are extremely low on the glycemic index, so they are a great snack for those of you trying to lower blood sugar.

Besides their lean body benefits, nuts are a highly nutritious food to include in your diet. Nuts are high in healthy fats, which help satisfy your cravings and keep you from over-indulging in sweet or starchy.

Nuts are chock-full of hard-to-get minerals, such as copper, iron, magnesium, manganese, zinc and selenium. Selenium is a potent cancer-fighting mineral, and aids the thyroid gland, which regulates metabolism, and fat burning in the body.

Potassium is an important electrolyte involved in nerve transmission, heart function and blood pressure. Magnesium is nature's calming agent, and is excellent for heart health and blood sugar. Nuts are also a good source of fiber and protein, which of course, you know helps to control blood sugar and can aid in weight loss.

Choose raw nuts or raw nut butters instead of roasted nuts if you can; it helps to maintain the quality and nutritional content of the healthy fats that you will eat.

Olive Oil - We now know that a diet rich in monounsaturated fats like olive oil, coconut oil, nuts and seeds, is very beneficial to our overall health.

Olive oil still is a principle factor of the Mediterranean diet. Today, most olive oil comes from Mediterranean areas in Spain, Italy, Greece, Portugal and Turkey. Olive oil varieties are a bit like wine, where different growing conditions, soil and weather dictate the taste, color and amount of polyphenols or antioxidants in the oil.

Extra virgin olive oil is made from the crushing and the first cold pressing of olives. Extra virgin olive oil has the heartiest, fruitiest flavor and most health benefits.

Olive oil is rich in monounsaturated fat, a type of fat that researchers are discovering has numerous significant health benefits. If you compare the Mediterranean diet, where olive oil is the main fat used, to the standard diet of the United States, where other fats such as animal fats, hydrogenated fats and highly processed vegetable oils like corn oil and soybean oil dominate, you will see some huge differences!

People who use olive oil regularly, especially in place of other fats, have much lower rates of heart disease, atherosclerosis, diabetes, colon cancer, and asthma.

A Spanish study done a few years ago and published in the scientific journal, *Diabetes Care*, showed a Mediterranean style diet rich in olive oil reduces the risk of Type 2 Diabetes by almost 50 percent compared to a low fat diet. And, calorie-controlled diabetic diets high in monounsaturated fat do not cause weight gain and are more pleasing to eat than low fat diets.

Previous studies have shown that a Mediterranean style diet rich in olive oil may prevent Type 2 Diabetes by improving blood sugar levels, insulin resistance and blood lipid levels. Olive oil also helps to lower triglyceride levels, which are directly related to high blood sugar, and a key component to the development of heart disease.

Diets using ample amounts of olive oil improved adiponectin levels, thus reducing inflammation and heart attack risks. Adiponectin, a hormone produced in the body, and secreted by fat cells, regulates sugar and fat metabolism, improves insulin sensitivity, and has anti-inflammatory effects on the cells lining the blood vessel walls. Low blood levels of adiponectin are a marker for metabolic syndrome and pre-diabetes, and are also associated with increased heart attack risk.

Three other recent studies suggest that such heart-healthy effects from olive oil are due not only to its high content of monounsaturated fats, but also to its hefty concentration of antioxidants, including chlorophyll, carotenoids and the polyphenolic compounds tyrosol, hydrotyrosol and oleuropein—all of which not only have free radical scavenging abilities. By reducing both inflammation and free radical damage, olive oil protects the lining of our blood vessels, helping to maintain its ability to relax and dilate, and helping reduce high blood pressure.

Olive oil varies greatly in taste and the amount of polyphenols depending on the region it comes from. One scientist observed that the higher quality olive oils produced a throat-stinging sensation when swallowed. A compound in olive oil (oleocanthal), which is a powerful anti-inflammatory, actually works as well as medications like ibuprofen. Concentrations will vary depending on the variety of olives. To check for this anti-inflammatory, taste a spoonful of olive oil, and see how strongly it stings the back of the throat. The greater the sting, the greater the oleocanthal content. Always buy extra virgin olive oil when purchasing olive oil to gain its full range of health benefits.

Grass Fed Butter – Healthy oils and fats are key to good health. Together they work as a team to supply your body with essential fatty acids for blood sugar stabilization, longevity, hormone balance, heart health, sharp vision, glowing moist skin and energy.

Twenty five years ago or so, everyone switched from natural fat sources like butter and lard, to processed margarine and Crisco, because the medical community decided that butter, lard and other saturated fats caused heart disease, heart attacks and strokes. Clearly this wasn't the answer.

It is not cholesterol and saturated fats in our diets that contributes to heart attacks, but a combination of high blood sugar and insulin from too much sugary, starchy foods, and eating highly processed, inflammatory vegetable oils, including soybean oil, sunflower oil, corn oil, safflower oil and canola oil.

Of course, natural fats in general are beneficial to the body. Fat is converted to fuel, which is burned as an energy source, as long as you are not eating a diet high in sugar or starch. Fat helps our bodies absorb nutrients; particularly calcium and fat-soluble vitamins A, D, E and K.

Most butter substitutes are junk that should never be consumed by humans, despite the “healthy” labels. Keep in mind that butter still is a highly concentrated source of calories, so be aware of controlling your portion sizes. However, since butter is low glycemic and stabilizes blood sugar, and gives you some very important and necessary nutrition that your body needs, it will reduce appetite and cravings. The only source of healthy butter is from organic, grass fed cows.

Coconut Oil – Coconut oil is the new ‘healthy’ oil and for good reason. In terms of how coconut oil benefits those with diabetes, studies have found that coconut oil can help to lower LDL (bad) cholesterol, and raise the good HDL cholesterol—both of which help to prevent heart disease. And a study published in 2009 showed that mice fed coconut oil had less insulin resistance and less body fat than mice fed lard. The study is interesting because it helps explain human studies showing that people who incorporate medium chain ‘fatty acids’ found in coconut oil into their diets can lose body fat.

Coconut oil is considered a medium chain triglyceride, which means it is metabolized differently than most fats. Unlike long chain fatty acids contained in animal fats, MCT's are small enough to enter mitochondria - the cells' energy burning powerhouses, where they can then be converted immediately to energy, making them a key ingredient in a diabetic's diet, since they are very low glycemic, and they also slow the absorption of other carbohydrates that may be eaten at the same time. Coconut oil boosts energy and endurance, and enhances the athletic performance.

The short and medium-chain fatty acids rev up the body's metabolism, and keep your energy going for a long time, without the crash that sugary carbohydrates can have. It is also easy to digest and aids the healthy functioning of the thyroid gland (critical to metabolism and weight loss) and enzyme systems.

Pure coconut oil (make sure it is not hydrogenated) is actually one of the best options for cooking oil, due to its highly stable nature under heat. This makes it much less inflammatory to your body compared to other oils such as soybean oil, corn oil, or other "vegetable" oils. This article below describes more details about cooking oils and which are healthy vs. unhealthy: <http://www.truthaboutabs.com/unhealthy-vs-healthy-cooking-oils.html>

Dark Green Leafy Vegetables: Chard, Spinach, Baby Greens, Romaine, Kale - Our ancient ancestors were thought to eat up to six pounds of leafy greens a day. As they walked from place to place, they picked and ate green leaves as they went. That's a lot of greens! Very few of us even get the minimum of three cups a week! But, leafy greens deliver a bonanza of health benefits and massive nutrition in the form of vitamins, minerals, fiber, antioxidants, and phytonutrients!

Leafy greens are packed with the mineral magnesium and also contain amino acids which help to lower blood sugar and control insulin. Magnesium is an essential nutrient for over 300 functions in the body, and leafy greens are one of the biggest sources of this vital nutrient. In addition to its blood sugar-controlling abilities, it assists in the metabolism of carbohydrates, and reduces cravings for sugar.

Leafy vegetables are an ideal fat burning food, as they are typically very low in calories. They also ward off the risk of cancer and heart disease since they are low in fat, high in dietary fiber, and rich in folic acid, vitamins K, C, E, and many of the B vitamins, iron, calcium, potassium and magnesium, as well as containing a host of super-powered phytochemicals.

Dark green leafy vegetables are, for a low calorie food, one of the most concentrated sources of nutrition of any food. They also provide a variety of phytonutrients including beta-carotene, lutein, and zeaxanthin, which protect all of our cells from damage and our eyes from macular degeneration and cataracts, among other benefits. Dark green leaves even contain small amounts of healthy omega 3 fats. Carotenoids, which are the antioxidants in orange, red, yellow and green vegetables have been shown to reduce the risk of diabetes Type 2 by up to 20% or so. Carotenoids are present in most all vegetables—so eating the brightest and deepest colored ones ensures you get a good dose of this powerful phytochemical!

The rock star nutrient dark green leafy vegetables is vitamin K. A cup of cooked greens provides about nine times the minimum recommended amount of vitamin K. This

overlooked vitamin is responsible for preventing atherosclerosis by reducing calcium buildup in arteries, preventing inflammation (a key ingredient in heart disease), and regulating blood clotting.

Greens have very few carbohydrates--which makes them very low glycemic--and lots of fiber, which make them slower to digest. So, greens themselves have very little impact on blood sugar. In some diets, greens are even treated as a "freebie" carb-wise, which means--lean, mean nutrition!

When you have a choice, a variety of greens is always best, as each has its own family of nutrients. Go for as many different colors and shades of green as you can!

Broccoli, Brussels Sprouts, Cabbage, Kale and Other Cruciferous Veggies – Scientists have been studying the role inflammation plays in Type 2 Diabetes and have found that chronic inflammation actually leads to insulin resistance, leading to the onset of Type 2 Diabetes. Eating foods regularly that are rich in vitamin C such as cruciferous vegetables helps to lower inflammation and keep it in check, thereby lowering the risk of diabetes.

Broccoli and other cruciferous vegetables are also rich in potassium, which helps to regulate glucose metabolism. Potassium is necessary for the beta cells in the pancreas to 'sense' elevated blood sugar levels, and respond by secreting insulin. Those who have lower levels of potassium have a decreased ability to sense blood sugar levels and therefore end up deficient in insulin output. This ends up increasing diabetes risk over time.

Cruciferous vegetables are also particularly good at counteracting xenoestrogens in our environment. Xenoestrogens are artificial, chemical estrogens (a female hormone) that come from toxic chemicals in our environment, plastics, cosmetics, and food additives. Xenoestrogens are powerful hormone disrupters and have been implicated in a variety of medical problems, and during the last 10 years many scientific studies have found hard evidence of adverse effects on human and animal health, including weight gain and diabetes.

Cruciferous vegetables are rich in natural chemicals called indoles and isothiocyanates, which protect against many cancers. And broccoli sprouts contain 10 times as much sulforaphane, a cancer-protective substance, than does mature broccoli.

Garlic and Onions – Garlic and onions' pungent odor and taste comes from their powerful sulphur-containing compounds. The primary ingredient is Allicin, known for its antibacterial, antiviral, antifungal and antioxidant properties.

Allicin, along with other powerful compounds in both onions and garlic have a profound effect on your circulatory, digestive and immunological systems, which helps to lower blood pressure, lower blood sugar levels, and raise the levels of HDL (good cholesterol) in your body.

Garlic and onions are especially effective as a dietary aid for diabetics, as they help to increase insulin and stabilize blood sugar. A study published in the Journal of Medicinal Food found that both garlic and onions effectively improved glucose tolerance and insulin sensitivity.

Garlic has also long been acclaimed as helping to prevent heart disease and strokes—two serious health risks for diabetics. And onions also contain an hefty amount of the antioxidant, quercetin (especially red or purple onions), which helps to reduce inflammation, help allergies and fight heart disease and cancer.

Garlic's health benefits come from fresh garlic (not powdered or in a jar). The potent chemicals in garlic are released when garlic is crushed, minced or chopped and have a chance to sit for a few minutes. Add raw garlic to your meals three times a day, or you can actually crush garlic, and swallow this with a glass of water.

Red or purple onions contain more of the compound quercetin, but its antioxidants are concentrated in the outer layers of its skin, so only peel away the thin, paper skin or you may be peeling off some of its awesome health benefits as well. Garlic and onions' amazing health benefits make it well worth the bad breath you may encounter!

Strawberries, Raspberries, Blueberries, Blackberries, Cranberries and Cherries - Eating a low glycemic diet means you have to eliminate a lot of sweets. While your taste buds adjust, you may crave something sweet, and berries like raspberries, blueberries, blackberries, strawberries and cherries fit the bill—while being exceptionally good for you as well! Berries and cherries are diabetes superfoods because they are packed with powerful antioxidants, vitamins, fiber and little natural sugar.

Berries deep color comes from a compound called anthocyanin, which is a flavonoid antioxidant that has been shown to reduce insulin resistance and help control blood sugar—two very important things for a diabetic who is trying to regain optimal health!

A cup of strawberries contains over 100 mg of vitamin C, which is way better than orange juice! Vitamin C strengthens the immune system and helps build strong connective tissue. Strawberries also contain calcium, magnesium, folate and potassium and very few calories. If they are available, organic strawberries are way better than conventional and well worth the extra price. Non-organic strawberries are one of the highest sprayed crops and since strawberries really have no skin or rind, they soak up all those pesticides and herbicides.

One cup of blueberries offers a smaller amount of vitamin C, but high amounts of minerals and some extremely beneficial phytochemicals, with very few calories. Blueberries are also extremely high in antioxidants, as are cranberries. And raspberries offer vitamin C, potassium and a variety of other antioxidants.

You can choose other berries with similar power-packed nutrition, such as loganberries, currants, gooseberries, lingonberries and bilberries.

Dark Chocolate - Every once in a while you need a sweet, satisfying treat, and chocolate seems to fit the bill—but just remember, it does contain some sugar, so limit your treat to one or two pieces. Dark chocolate is actually good for you, but it can't be just any old chocolate you grab off the shelf.

One of the major reasons diets and other weight loss programs fail is because you end up feeling deprived. Life isn't about that! It's about changing your bad habits, and allowing yourself to indulge in small amounts, once in a while. Integrating chocolate and in small doses into your daily diet, can help your diabetes reversal eating plan be a success! One or two small pieces of dark chocolate will not ruin the diabetes reversal diet.

A recent study shows even more health benefits from dark chocolate. Chocolate is made from the beans of the cacao tree, *Theobroma Cacao* Plant. Cocoa contains several antioxidants which are effective in preventing weight gain and Type 2 Diabetes by curbing the appetite and improving glucose tolerance.

These flavonoids are plant-based compounds with powerful antioxidant properties, which means they reduce inflammation, promote healthy arteries, and help fight aging by preventing--and repairing--cellular damage. A small bar of dark chocolate can contain the same amount of antioxidants as six apples, four and a half cups of tea, or two glasses of red wine.

Good **dark** chocolate can serve as an appetite suppressant, lower your blood pressure, improve your mood, and add antioxidants. Dark chocolate's bitter taste helps regulate appetite and the cocoa butter may help the stomach feel full longer. And—chocolate contains an ingredient that is a mood elevator, along with magnesium, a mineral that helps control blood sugar and helps you feel calm and relaxed, while lowering your blood pressure.

If you look at most grocery stores, you will probably see ever-expanding choices of dark chocolate selections. Keep in mind that milk chocolate and white chocolate are full of sugar, and don't offer the same health benefits as dark chocolate. Instead, reach for the good quality dark, organic chocolate, without all the sweet additions like caramel,

toffee, etc. If you want some extra flavor in your dark chocolate, choose the dark chocolate with nuts, fruit, or coconut added. Be mindful of added sugars or sugary ingredients.

Generally, chocolates in the range of 70-80% cocoa have the best taste but have much lower sugar levels than milk chocolate. The darker the better. Go easy on the chocolate—save it as a special treat, and limit yourself to a half an ounce a day, and you will get all of its awesome health benefits.

Seaweed – New studies report that certain seaweeds slow down the processing of carbohydrates, which keeps blood sugar from spiking. The study, published in Food Chemistry evaluated 15 different levels and found that five brown seaweed types had the most powerful enzymes which slow the metabolism of carbohydrates. Brown seaweed extracts appear to have the ability to interfere with the release of simple sugars as well, which reduces post-meal blood sugar spikes.

Other research on seaweed shows seaweed helping to lower blood pressure, another common health issue among people with Type 2 Diabetes.

In addition to the many vitamins and minerals, and powerful plant chemicals seaweed contains, seaweed is also known to help with weight loss—another benefit for those with diabetes. While many of the seaweeds studied are specific types of brown seaweed, you can help yourself to Nori wraps that you can find in a health food store or a Whole Foods. Nori wraps are the seaweed wrappers that sushi is wrapped in, and they make great wraps for most any kind of filling. Try them filled with tuna salad!

Green Tea - People have been drinking tea since ancient times and even today, it is still one of the most popular drinks in the world—besides water. Of the many health benefits of tea, diabetes prevention is one of them.

Through a complex biochemical reaction, tea, especially green tea, helps to sensitize cells so they are better able to metabolize sugar. A Japanese study published in the Diabetes and Metabolism Journal in 2013, found that people who drank 6 cups of tea a day were 33% less likely to develop Type 2 Diabetes.

It does this by slowing the action of a particular digestive enzyme called amylase. This enzyme is pivotal in the breakdown of starches (carbs), that can cause blood sugar levels to soar following a meal. This is pretty exciting stuff -- green tea might be a missing link in proper glucose management.

It is known that tea contains antioxidants called 'polyphenols', which reduce oxidative stress, and cause vasodilation which expands and relaxes blood vessels, reducing blood pressure, and lessening the chances for heart attacks and strokes.

While black tea has many health benefits, green tea is the clear winner. Green tea contains higher polyphenol levels. In fact, if you were to go to PubMed.com and do a search for green tea, you'd find over 2,000 studies performed on green tea and its components. Other benefits include weight loss, cancer prevention, antioxidant activity, cognitive enhancement, general good health and well being... and the list goes on and on.

Green tea is also a great fat burning substance. Green tea aids weight loss by increasing the metabolic rate, causing those who use it to experience a small increase in calorie burn, according to the American Journal of Clinical Nutrition. And in another study by the American Journal of Clinical Nutrition, drinking green tea leads to both a lowering of body fat AND of cholesterol levels. Double whammy!

In short, green tea's health benefits are a result of several mechanisms, including increased metabolism, a positive effect on blood sugar and insulin regulation, and the inhibition of certain enzymes, which are required for the processing of carbohydrates and fats.

The best benefits of green tea come with 2-3 cups of tea a day. Not into hot liquids? Make some up and pour it over ice. There are many types of green tea out there to choose from: some have caffeine, some do not; some are flavored with lemon, orange, chai, jasmine, etc. Look for a reputable brand and choose organic when possible—and avoid added sugars and artificial sweeteners. Aside from plain water, this is the healthiest possible drink you can have with your meals or during the day.

In addition, other types of herb teas offer a huge variety of antioxidants and are great substitute for sodas, juice, etc. that add empty calories and weight gain. There are berry teas, red teas (aka - rooibos tea), mint teas, chamomile teas, yerba mate, hibiscus teas, etc. etc. All of these teas have additional unique antioxidants not found in other teas and can have benefits. For example, hibiscus teas (the tea most commonly called "herbal tea") have been found in studies to help reduce blood pressure. All of these taste delicious hot or cold, and some are so good and naturally sweet (with 0 calories) they don't need anything else.

Red Wine – Yay! Red wine can be healthy for diabetics! A small glass of red wine a day can actually help keep diabetes under control, along with a healthy, low glycemic diet. The natural phytochemicals found in red grape skins known as polyphenols can help the body regulate glucose levels, preventing potentially dangerous peaks and valleys in

blood sugar levels. A small glass of red wine contains around as many active ingredients as some anti-diabetic drugs.

This latest study on wine and diabetics compared the polyphenol content of 12 different types of wine. It was found that some of the antioxidants in red wine interact with human cells that are involved in the development of fat cells, energy storage and blood sugar regulation. These polyphenols are actually comparable to the same action that the diabetes drug Avandia controls.

Moderate wine drinking—especially red wines has been associated with health benefits for humans. Moderate means a small glass for women, and two glasses for men.

The Keto Diet for Type 2 Diabetes (How effective is it?)

The conventional approach for Type 2 Diabetes is to manage the condition with medications and diet, based on the American Diabetes Association guidelines, which still includes a lots of high carb foods, along with a low-fat diet and processed vegetable oils. Unfortunately, both science and real-life results show that this protocol just simply does not work. At best, this approach may be better than a junk food diet (but not much better) and have a small shift in blood glucose and other diabetes blood markers if the person has really been abusing their body with junk foods. However, diabetes drugs can often have harmful side effects, and research tells us that the damage to the blood vessels can still occur, even with glucose-lowering diabetes drugs.

While most of general public still keep their bodies fueled on glucose in the form of processed grains, starches, and sugar, (Standard American Diet), others have begun to adopt reduced carb Paleo—and even ketogenic diets that actually reprogram their bodies to the fat burning/fat-fueled machines that our ancestors once had. These kinds of diets are very effective in lowering the amount of glucose circulating in the body and bringing back insulin sensitivity once again.

What is the difference between a Paleo diet and a Keto diet?

The Paleo diet has been popular the last few years and it is generally a reduced carbohydrate diet compared to the standard American Diet, however “paleo” is only a template for healthy eating, and doesn’t have a specific ratio of carbs like Keto does. However, paleo emphasizes eating foods that our primal ancestors ate: no grains, no dairy, no legumes, no processed foods, and no refined sugar. Paleo does however allow some carbs in the form of sweet potatoes, fruits, starchy vegetables, natural sweeteners like honey, maple syrup and dates. Paleo diets also include

grass-fed pastured meats, poultry, eggs, wild caught fish, game and healthy saturated fats.

Is a Paleo diet effective for type 2 diabetes? It is a far cry from the ADA-recommended low-fat/high carb diet and far healthier with its emphasis on fresh veggies, naturally raised proteins, and unprocessed foods, but the Paleo diet can contain variable amounts of carbohydrates and natural sugars, depending on the types of paleo foods you choose to eat. Many versions of Paleo diets include sweet potatoes, or desserts sweetened with dates, honey, molasses, or maple syrup. So, yes, a Paleo diet is a much better choice over the SAD diet, or even the ADA recommended diet, but it's not always the absolute best choice to lower blood sugar and insulin, depending on the quantity of carbs one chooses to eat on a paleo diet.

On the other hand, the ketogenic diet takes Paleo a step further by restricting carbohydrates to a much larger degree. A keto diet restricts most carbohydrates and all sugar, keeping the resulting glucose in the body consistently low, and forcing your body to burn fats for energy instead of carbs. Keto diets are even more restrictive than Paleo diets as far as carbs go, so in many ways, a keto diet is almost a perfect diet for a diabetic. A keto diet generally allows 20-50 grams of carbohydrates per day. While that is super low compared to the average diet, it can be done, and is easier than you may think.

How a ketogenic diet works for type 2 diabetic

Type 2 diabetes starts when a person is eating large amounts of sugar and carbohydrates. This in turn elevates the body's serum glucose, creating an increased need for insulin. Over time, the body's insulin cannot effectively lower the circulating glucose in the body, creating ever higher levels of glucose, insulin, increased body weight, and rising levels of triglycerides. Higher than normal levels of glucose damage blood vessels causing heart disease, kidney disease, blindness and other health issues.

How does a keto diet affect insulin and blood sugar?

When we look at one of the best ways to manage type 2 diabetes, the best and healthiest method is to lower blood sugar by restricting carbohydrates and sugars, in addition to increasing antioxidants and other nutrient-dense foods.

Since a keto diet is a very low carb, low sugar diet, blood sugar stays low, people generally lose weight and the body once again becomes more sensitive to insulin. A keto diet, in comparison to a Paleo diet, allows less carbohydrates and proteins, and adds in more high-quality fats. Because of this drastic dietary transformation, the body quits requiring glucose for energy and instead becomes more efficient in breaking down both dietary fats along with body fat to utilize for energy.

There are many variations on a Paleo diet, but in general a keto diet contains these components:

- 60-75% of calories from fat (or even more)
- 15-30% of calories from protein
- 5-10% of calories from carbohydrates.

The ketogenic diet is not a new dietary fad; it has existed since the 1950's as a treatment for epilepsy and other health issues. It has recently gained popularity as a way to improve health, increase physical stamina, and lose body fat. A few scientific studies have been conducted on ketogenic diet and diabetes already. Let's take a look, shall we?

The first study was performed by researchers at Duke University in 2005. Researchers recruited 28 participants with type 2 diabetes who were also overweight. The study lasted 16 weeks. The subjects consumed a low carbohydrate keto diet, aiming for less than 20 grams carbs per day. Diabetics also reduced their medications with medical supervision. There were twenty-one subjects who successfully completed the study. Here's what they found after only 16 weeks:

- HbA1c 16% decrease
- Average 20 lb weight loss
- Triglyceride levels 42% decrease
- Ten patients reduced medications, seven stopped medication.

The conclusion of the study was that a **keto diet is highly effective at lowering blood glucose**, but there should be medical supervision to adjust medications accordingly.

A second study conducted by Stephen Phinney and Jeff Volek, who wrote *The Art and Science of Low Carb*, showed the positive effects of low carb diet as well. This particular trial shows convincing evidence that a **low-carb diet improves blood sugar levels and helps speed weight loss in adults with type 2 diabetes**. In almost 60% of participants, diabetes medication was decreased or stopped altogether.

The study, conducted at Indiana University, and published in *Journal of Medical Internet Publications*, looked at 262 people with type 2 diabetes who were overweight. Participants cut carb intake to 30g a day, while increasing their fats and protein. Patients were also provided nutritional and behavioral counseling, along with digital coaching and medical supervision for medications. Findings after only 10 weeks:

- HbA1c had a 6.5% decrease
- BMI decreased by 7%

- 112 reduced diabetes medications, 21 totally eliminated diabetes medications

Another study of 84 people, looked at the effectiveness of a low-glycemic diet compared to a ketogenic diet, and after 24 weeks looked at key diabetes markers of fasting blood glucose, body mass index (BMI), weight, and Hb A1C. While a low carb, low-glycemic diet is good for controlling diabetes, obviously a keto diet is better.

Low-calorie group

- Fasting glucose down 16%
- BMI decreased by 3, average 15lb weight loss
- .5 reduction in HbA1c

Keto group

- Fasting glucose down 20%
- BMI decreased by 4, average 24.5lb weight loss
- 5 reduction in HbA1c

And this study of 363 overweight or obese participants in the United Arab Emirates looked at the effects of a ketogenic diet on weight loss and diabetes symptoms. 102 of the subjects had type 2 diabetes. One group consumed a low-calorie diet and the other consumed a keto diet. Both groups had nutritional trainer and exercise.

- Study subjects were measured on:
- Body weight
- BMI
- Waist circumference
- Blood glucose
- HbA1c
- Cholesterol, LDL, HDL, triglycerides
- Uric acid, urea, creatinine

After 24 weeks, both groups had improved in all metrics but the keto group had far more significant results. Diabetic medications were decreased to half and some were discontinued for those on the ketogenic diet.

It is important to note for those beginning a ketogenic diet, the drop-in glucose can be quick, so it is very important to monitor blood glucose frequently and to have a physician monitor the diabetes medications.

Ketogenic diets are higher in saturated fats, something the American Diabetes Association actually warns diabetics to avoid. Research, however, shows favorable lipid results on a high fat diet.

In another study, researchers looked at 83 subjects who were divided into three groups of equal calories. One group followed a very low-fat diet, one group followed

a diet high in unsaturated fats, and the third group ate a very low carb and high saturated fat diet.

At the end of the 12-week study, all three groups had lost similar amounts of body fat and weight. However, the Low Carb Ketogenic diet group also had the lowest triglyceride levels, higher HDL, and lower glucose and insulin levels.

Very Low-Fat Group:

- Triglycerides decreased by 4%
- Insulin levels decreased by 15.1%

High Unsaturated Fat Group:

- Triglycerides down by 9.6%
- Insulin levels decreased by 18.7%

Ketogenic Diet Group:

- Triglycerides decreased by 40%
- Insulin levels decreased by 33.6%

Key results indicate that ketogenic diets do not increase the risk of heart disease or high cholesterol. Keto diets have shown to significantly decrease harmful lipids including triglycerides and LDL cholesterol, compared to other equal calorie/low fat diets.

Conventional Diabetic Diets vs. Ketogenic Diets

In spite of all the positive research on ketogenic diets for diabetes, most doctors and dietitians still recommend high carb diets to manage diabetes. A typical medically supervised diet recommended for a type 2 diabetic would include 45-60g carbohydrates at every meal, plus 15-30g of carbs for snacks. Seriously??

Most dietitians and doctors feel that even though the ketogenic diet is effective, most people will not be able to stick to it. And yes, this is somewhat true, although with the emerging popularity of the ketogenic diet, more and more options are available, including recipes, books, blogs, cooking classes, etc. that feature delicious keto meals and snacks. The nature of a keto diet is to keep blood sugar in a low and stable range, and because of this, it is much easier to control appetite and the “munchies”.

Ketogenic diets can be crucial to the successful healthy management of type 2 diabetes. In a recent critical evaluation of literature on carbohydrate restriction and diabetes, a group of 26 leading researchers compiled 12 points of evidence published in the January 2017 Journal of Nutrition, pointing to the use of low carbohydrate diets as the primary dietary treatment of type 2 diabetes. Key points include:

Dietary carbohydrate restriction has the greatest effect on decreasing glucose levels. The current epidemic of obesity and diabetes has been caused almost entirely by an increase in carbohydrates.

Type 2 diabetics can adhere to a ketogenic diet at least as easily as they can most other diets, and often better.

Measured saturated fats in the blood are affected more by dietary carbohydrate intake, than dietary lipid intake.

Dietary carbohydrate restriction is the most effective way to reduce serum triglycerides, LDL cholesterol and increasing HDL cholesterol.

Bottom line is that lowering glucose by strictly reducing carbohydrate intake in a ketogenic diet has the most positive effects on diabetes markers, without any of the negative side effects of pharmacological treatments.

All of the available evidence thus far suggests that a keto diet is one of the safest and most effective ways to control or reverse type 2 diabetes. Diabetes patients should always notify their physicians of dietary changes and have medications and blood sugar monitored closely.

Following a strict carbohydrate-restricted, ketogenic diet is key initially, but once your body is adept at fat burning, you may be able to ease up slightly on the daily carbohydrate count.

Generally, following a strict keto diet for about 2 months will help your body adapt to burning fat. Rather than stressing out about keeping carbs consistently below 20-30g, it may be easier to give yourself a safe zone to follow. Perhaps one day you eat less, another day you eat more. As long as you generally stick to low carbohydrates, (below 50-60g per day) your body will continue to be fairly efficient in burning fat for energy and keep blood glucose low.

The end result is a healthier body, weight loss and a clear head.

References

- <https://www.perfectketo.com/keto-diet-vs-paleo-diet-ketosis-better-paleo/>
<https://www.marksdailyapple.com/keto-and-type-2-diabetes/>
Centers for Disease Control and Prevention. National Diabetes Statistics Report: Estimates of Diabetes and Its Burden in the United States, 2014. Atlanta, GA: US Department of Health and Human Services; 2014.
American Diabetes Association. "Nutrition Recommendations and Interventions for Diabetes—2006 A position statement of the American Diabetes Association." *Diabetes care* 29.9 (2006): 2140-2157.
Emerging Risk Factors Collaboration. "Diabetes mellitus, fasting blood glucose concentration, and risk of vascular disease: a collaborative meta-analysis of 102 prospective studies." *The Lancet* 375.9733 (2010): 2215-2222.
O'Gara, Patrick T., et al. "2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines." *Journal of the American College of Cardiology* 61.4 (2013): e78-e140.
Aguirre, Florencia, et al. "IDF diabetes atlas." (2013)

"Update 2014". IDF. International Diabetes Federation. Retrieved 29 November 2014.

Geiss LS, Wang J, Cheng YJ, Thompson TJ, Barker L; Li Y, Albright AL, Gregg EW. Prevalence and incidence trends for diagnosed diabetes among adults aged 20 to 79 years, United States, 1980-2012. *JAMA* 2014; 312:1218-1226.

Yancy Jr, William S., et al. "A low-carbohydrate, ketogenic diet to treat type 2 diabetes." *Nutr Metab (Lond)* 2 (2005): 34.

Westman, Eric C., et al. "The effect of a low-carbohydrate, ketogenic diet versus a low-glycemic index diet on glycemic control in type 2 diabetes mellitus." *Nutr Metab (Lond)* 5 (2008): 36.

Hussain, Talib A., et al. "Effect of low-calorie versus low-carbohydrate ketogenic diet in type 2 diabetes." *Nutrition* 28.10 (2012): 1016-1021.

Noakes, Manny, et al. "Comparison of isocaloric very low carbohydrate/high saturated fat and high carbohydrate/low 'saturated fat diets on body composition and cardiovascular risk." *Nutrition & metabolism* 3.1 (2006): 7

Chapter 9



Supplements to Lower Blood Sugar, Increase Insulin Sensitivity, and Fight Diabetes Symptoms

Important Note:

Do not start supplements, or reduce or stop taking any of your medications without consulting with your physician. However, by utilizing the dietary guidelines and meal plans in this book, along with the recommended supplements, it is very possible to improve your blood sugar levels, blood sugar stability and control. Always consult your doctor and let him know exactly what you doing, as you may need to reduce some of your current diabetes medications.

It can be said that diabetics exist in a state of malnutrition, because of the way this disease progresses. Excessively high blood sugar and the ineffectiveness of insulin make it very hard for nutrients to be absorbed into cells, where they are needed. Getting the proper nutrients into your body not only helps to replenish what is missing, but also adds extra fortification to fight diabetes, and its often dangerous and deadly side effects—in addition to most all other nondiabetes-related health issues.

The majority of the population is deficient in magnesium, iron, B-vitamins, vitamin D, zinc and omega 3 fats. Being overweight or obese is actually a symptom of malnutrition. And, if you eat a diet high in processed foods, you are eating a vitamin and mineral

depleted diet. Even if they say they have added nutrients, nothing replaces REAL, whole foods when it comes to the many thousands of powerful phytochemicals, anti-oxidants, vitamins and minerals in them.

In addition to supplements specifically for diabetes, I recommend a basic list of supplements that I advise EVERYONE include in their diets. It is virtually impossible to get these basics—even if you eat a very healthy diet. As always, though I recommend you consult with your doctor to let him know you are taking these.

The following supplements and dosages are based on Dr. Mark Hyman’s recommendations in his book, “The Blood Sugar Solution”:

Basic Supplements for Overall Health

- Full spectrum high quality vitamin/mineral
- Vitamin D3, 1000-2000 IU
- Omega 3 fatty acids, 1000-2000 mg
- 200-250 magnesium, AM/PM
- 300-600 alpha lipoic acid, AM/PM
- 200-600 chromium polynicotinate a day
- Multi B vitamin
- High quality, multi-strain probiotic

Diabetes Fighting Supplements

The following supplements are powerfully effective in the fight to slow down the progression of diabetes for type 1 and Type 2 diabetics. The supplements discussed below will help to enhance glucose metabolism, improve insulin sensitivity, and stabilize blood sugar, as well as helping to prevent diabetic neuropathy, kidney disease, heart disease, strokes, cancer, and dementia.

Be sure to check with your doctor about each of the below supplements and dosages.

Alpha Lipoic Acid

Often just called “ALA” for short, alpha lipoic acid is the synthetic version of a natural substance in our bodies that is important for cellular energy and to avoid damage from free radicals. ALA also helps to increase insulin sensitivity, and works with the B vitamins to help the body utilize the energy found in proteins, carbohydrates and fats. In

addition, ALA is also being looked at in the treatment of diabetic neuropathy (a painful nerve condition caused by nerve damage from excessive levels of glucose), liver dysfunction, and glaucoma. While there are no established standards on dosages for ALA, according to Dr. Mark Hyman in “The Blood Sugar Solution”, he recommends 300-600mg of alpha lipoic acid twice a day with meals.

Acetyl L-Carnitine (or Carnitine)

This supplement is a combination of two amino acids, lysine and methionine. Both of these are key contributors to energy production in the body, and help to burn fat. In addition, according to the American Diabetic Association, a recent study from Wayne State University in Detroit showed that taking 1000 mg three times a day help to reduce the pain from diabetic neuropathy and helped to regenerate nerve cells damaged from high glucose levels. Symptomatic relief was present at 26 weeks, although test subjects took acetyl L-carnitine for 52 weeks total. Neuropathic pain is one of the most common symptoms in diabetic neuropathy.

Remember Advanced Glycated End products and the effects of their damage? Carnitine is shown to protect against the destructive effects of AGE's as well. AGE's are the result of proteins and sugars binding together, which prematurely age our bodies and exacerbate many health conditions, including diabetes. Foods high in AGE's include sugary or carbohydrate rich foods and foods that are browned and caramelized.

Foods and meats, especially if they are browned or grilled are high in AGE's, and lifestyle factors such as being sedentary, lack of sleep, and high levels of stress, all contribute to creating more of these destructive little guys.

According the study at Wayne State University, researchers found that 1000 mg a day improved pain symptoms, and 3000 mg a day significantly improved pain symptoms, especially those who were newly diagnosed.

Vitamin A

Vitamin A deficiency has been found recently to be a possible factor in the development of type 2 diabetes. Researchers from Cornell Medical College in New York concluded that vitamin A treatments may help the insulin-producing beta cells in the pancreas. Vitamin A is found in abundance in many brightly colored fruits and vegetables, as well as grass fed meat and dairy products.

In the study, the researchers found that removing vitamin A from the diets of mice led to reduced insulin production and higher blood glucose levels as a result. When vitamin A was reintroduced, beta cell production in the pancreas rose, insulin production

increased and blood sugar levels returned to normal. High doses of vitamin A can actually become toxic, but the vitamin A found in brightly colored vegetables and fruit, betacarotene, is not. Your best bet is to be sure you are getting several servings of (primarily) vegetables and a small amount of fruit in your diet every day. For best absorption, be sure you eat your veggies with a small amount of healthy fat like grass fed butter or extra virgin olive oil.

B Vitamins

B Vitamins are a necessary nutrient for diabetics. Diabetics tend to lose water-soluble vitamins (as in B vitamins) at a much faster rate because high blood sugar levels tend to act as a diuretic. B vitamins are necessary for proper function of nerve tissue and can protect against diabetic neuropathy and nerve damage.

Vitamin B6 and Vitamin B12 are especially helpful in protecting and strengthening nerve tissue. Biotin which is also one of the B vitamin family helps to enhance insulin sensitivity. B vitamins actually work synergistically in that they work best in the presence of other B vitamins. So instead of taking B vitamins separately, it's best to find a good multi B vitamin supplement that will contain all the necessary B vitamins in the right ratios.

Chromium

Chromium has been a popular diabetes supplement for many years. Chromium is an essential mineral that is involved in sugar metabolism. Chromium has been shown to lower blood sugar levels in Type 2 Diabetes and improve metabolism of carbohydrates, proteins, and lipids.

Chromium got noticed back in the 1950's when researchers found they could prevent diabetes in rats by giving them chromium supplements. Since then, it has been intensely studied as a natural aid for diabetics. One of the most recent studies showed improved insulin sensitivity and glucose tolerance in people with Type 2 Diabetes when taking 1000 mcg of chromium and a sulfonylurea-type diabetic drug. Chromium appears to help insulin stick to cell walls so that it is easier for insulin receptors to take up glucose more readily. Several studies have shown encouraging results from using chromium, showing improved blood sugar control and improved HbA1c values.

Dr. Mark Hyman in his book, "The Blood Sugar Solution", recommends 200-600 mcg of chromium polynicotinate a day. But according to other sources, you should not exceed dosages of 400-800 mcg per day, and make sure you check your blood glucose levels regularly and report any noticeable side effects to your doctor. Chromium can interfere with beta-blockers, insulin, niacin, corticosteroids, ibuprofen, and aspirin. Chromium can

be found in foods including egg yolks, beef and brewer's yeast, although therapeutic amounts of it are difficult to obtain from diet alone.

Ginkgo Biloba

Ginkgo biloba has been used as a health-enhancing supplement for nearly 3000 years. Ginkgo has been effectively used to:

- Improve blood circulation and maintain blood vessels
- Support normal blood clotting action
- Support healthy aging in brain and healthy brain function
- Support healthy glucose metabolism

Ginkgo contains flavonoids that are known to be protective of the brain and nervous systems as well as the heart and blood vessels. Other flavonoids in ginkgo are potent antioxidants and scavengers of free radicals, which help to prevent or fight disease as well as combating inflammation.

According to a Dr. Kudolo, a scientist from the University of Texas Health Sciences, ginkgo also helps to lower blood sugar levels and stimulates the pancreas to secrete insulin. Other studies have shown ginkgo to significantly lower the fasting blood sugar levels in lab animals.

Diabetics are also more prone to strokes and heart attacks, because of their blood's platelets' tendencies to stick together. Ginkgo has also been shown to help prevent the formation of blood clots involved in these adverse health events. And, ginkgo helps to prevent diabetic neuropathy and nerve damage as well.

Ginkgo is available in tablet, capsule or tea. Dr. Andrew Weil, M.D. and other medical sources recommend up to 120 mg daily of this in divided dosages.

Please note: If you are taking Coumadin, Warfarin, or other blood thinning medications, you definitely want to consult your physician. Ginkgo has blood-thinning capabilities on its own and can have dangerous interactions with other blood thinning medications.

Grape Seed Extract

A new study published in the Journal of Cell Communication and Signaling compared the effects of Grape Seed Extract to metformin, a commonly used diabetes drug. GSE was found to reduce blood glucose and elevate blood insulin. The negative effects of a high fat, high fructose diet were also reversed—including the potential to get cancer.

Grape seed extract's primary active ingredient is a substance called proanthocyanidins, which is a powerful antioxidant from the red skins of grapes—which is also found in smaller amounts in red wine and grape juice (although grape juice is very high in sugar).

Proanthocyanidins, and grape seed extract in particular, have been extensively researched to have protective and therapeutic properties on the cardiovascular system.

Magnesium

At least 80% of the population is short on this very vital mineral. Surprised? Magnesium is a miracle mineral. Over 350 different and important enzymatic functions in the body depend on this essential mineral, including stabilizing blood sugar levels, maintaining energy levels, muscle and nerve function, heart rhythm, blood pressure and immune function.

Insulin resistance, so common in Type 2 diabetics and pre-diabetics results in a loss of magnesium and creates havoc in all those 300 different processes in which magnesium is needed. Other factors that contribute to magnesium deficiency include:

- Celiac disease, Crohn's disease, food allergies, leaky gut, etc.
- Drinking alcohol
- Kidney disease
- Older adults because absorption decreases with age
- Diabetes, especially if it's poorly controlled
- Medications – diuretics (for blood pressure), antibiotics and medications for cancer

Magnesium is the key ingredient to metabolizing protein, carbohydrates, and fats as well as helping genes function properly. Without magnesium, energy cannot be stored properly in our muscles as ATP. Nearly every system in the body is affected by a magnesium deficiency. I also consider magnesium to be nature's relaxation supplement as it helps your muscles relax and sleep better, as well as eliminate twitching or cramping of the muscles.

Magnesium cannot be manufactured by our bodies, so must be obtained through our diets or supplements. Foods rich in magnesium include raw spinach, kale, and Swiss chard. Other good sources include broccoli, mustard greens, summer squash, halibut, blackstrap molasses, halibut, turnip greens, pumpkin seeds and peppermint.

Supplements are made in chelated or non-chelated form. Chelated forms include: magnesium citrate, magnesium glycinate, magnesium aspartate, and magnesium taurate. Research has shown that the chelated forms of magnesium absorb better than the non-chelated forms.

If you supplement with calcium or eat lots of dairy products, magnesium is even more important. Maintaining the appropriate calcium-to-magnesium ratio is important. According to Dr. Mercola, he states: “Research on the paleolithic or caveman diet has shown that the ratio of calcium to magnesium in the diet that our bodies evolved to eat is 1-to-1. Americans in general tend to have a higher calcium-to-magnesium ratio in their diet, averaging about 3.5-to-1.”

Magnesium and calcium must be kept in balance in order to function in your body properly. Your body’s levels of magnesium are extremely important in regulating blood pressure, angina and abnormal heart rhythms. And if you are taking calcium for your bones, know that magnesium, vitamin K2 and vitamin D3 all work synergistically to preserve bone health. Calcium alone does not help—and throws off the delicate balance of calcium and magnesium.

Certain forms of magnesium may cause loose stools, especially if you are not used to taking it. Magnesium citrate is good if you tend to have constipation. Take magnesium glycinate or aspartate, or in a spray form for dermal application, if you are sensitive to magnesium and it gives you loose stools. An Epsom salts bath before bed is a great way to help the body absorb magnesium and relax you so you sleep soundly.

Doctors and health care practitioners suggest 200-400 mg a day. Start with a lower dosage at bedtime and increase as tolerated.

Omega 3 Fatty Acids

Omega 3 fatty acids are a type of polyunsaturated fat with multiple health benefits, generally found in wild caught fatty fish like herrings, halibut, sardines, salmon, cod and grass fed meats. Omega 3’s are considered an ‘essential fatty acid’, as they must be obtained from dietary sources.

While most people get more than enough omega 6 fats (from vegetable oils and grain fed, commercially raised meat, poultry and farmed fish), we do not get enough omega 3 fats. And an overabundance of omega 6 fats, tips the balance and ratio of omega 6: omega 3. The more omega 6 fats you eat, the more omega 3 fats you need to eat.

For those with diabetes or pre-diabetes, omega 3’s lower insulin resistance (a key factor in the development of diabetes Type 2). In addition, they help to counteract the other dangerous health issues that many diabetics are at increased risk for. Omega 3’s have been found to lower triglyceride levels, increase the good cholesterol, HDL, and decrease inflammation. They are also excellent as a blood thinner, making blood less likely to form clots, so they help to prevent deadly heart attacks and strokes.

Omega 3 fats are highly effective in protecting brain health, improving mood and erasing depression, and protecting nerve tissue. In addition to the many other benefits of omega 3 fatty acids, omega 3's also can help you lose weight.

Omega 3 fats can come from wild caught fatty fish, meat from grass fed animals, dairy from grass fed cows, and free range, *pastured* eggs, as well as nuts and seeds—especially flax seeds. However, to get the maximum benefits of this important oil—and to get enough of it to benefit your health—it may be best to take a supplement. Most doctors recommend you take between 1000-2000 mg a day, along with increasing the amount of wild caught fish you eat.

Note: Farm-raised fish does not contain as much of the omega 3 fats, so you are best to steer clear of this type of fish. Wild caught fish contain more of this essential fatty acid.

If you take a blood thinner, be sure to talk to your doctor about taking omega 3 fat supplements, as this nutrient helps to thin blood, but can be a dangerous combination when taken with blood thinners.

Pycnogenol

This superstar supplement from the bark of a particular French pine tree has been heavily studied in the last 30-40 years. It contains a very unique and powerful combination of procyanidins, bioflavonoids, and organic acids. The findings have been very positive in its ability to help diabetics. Pycnogenol has been shown to decrease high blood pressure, lower LDL, and control blood glucose. Pycnogenol works by slowing down the absorption of carbohydrates and sugar, which means they enter the bloodstream more slowly, preventing post meal glucose spikes.

Pycnogenol's other outstanding benefit for diabetics is its ability to repair and increase elasticity in the capillaries in the eyes, helping to prevent diabetic retinopathy—one of the more dangerous progressions of diabetes. Pycnogenol has also been used as a topical treatment for the painful sores that won't heal, that diabetics often get. It has been shown to hasten healing time and to help prevent infections.

Recommended dosages vary depending on need. WebMD suggests these dosages (be sure to ask your own doctor for recommended doses) :

- To improve circulation: 45-360 mg daily, or 50-100 mg three times daily.
- For diseases of the retina: 50 mg three times daily.
- For mild high blood pressure: 200 mg of pycnogenol daily.

Vitamin D

Vitamin D has received a lot of attention lately as being one of the most essential vitamins for overall health. It plays a big role in bone health, immunity, energy production and blood sugar regulation. The body makes vitamin D from sunshine—especially the UVB rays (the ones that cause a sunburn), which it then converts into usable vitamin D in the body. If you limit your time outdoors during the day while the sun is shining, or cover yourself completely with sunscreen, you may be lacking in vitamin D. In fact, most of the population is deficient in vitamin D to some extent.

Several studies have shown promising evidence that vitamin D is protective for diabetics, pre-diabetics and for those with metabolic syndrome. A Tufts University study found that combining calcium with vitamin D can dramatically slow the rise in blood sugar. Researchers studied adults taking 700 IU of vitamin D and 500 mg of calcium a day and it was found that those who took the vitamin D had less of a rise in fasting glucose levels than did the subjects who did not take vitamin D.

Another study published recently in the Endocrine Society's *Journal of Clinical Endocrinology and Metabolism*, studied vitamin D levels of 150 people in Spain. The study found that the people with *low levels of vitamin D were most likely to have diabetes or pre-diabetes and problems with blood sugar*. The lead researcher said, "Our findings indicate that vitamin D is associated more closely with glucose metabolism than obesity...and the study suggests that vitamin D deficiency and obesity work together to increase the risk of diabetes." In other words, if you are vitamin D deficient and overweight, you are more likely to develop diabetes. Vitamin D also helps to improve the body's sensitivity to insulin, reducing the risk of insulin resistance and helps regulate the production of insulin in the pancreas as well.

While many experts say vitamin D levels in the blood should measure between 20-56 ng/ml, optimal vitamin D levels are considered to be around 60-80 ng/ml, especially if you are looking for help in keeping glucose levels under control. Correct levels of vitamin D vary from person to person. The best way to check your correct levels is to have a 25-hydroxy-vitamin D or 25 (OH) D blood test from your doctor.

Vitamin D supplements come in two forms: Vitamin D2 and Vitamin D3. Vitamin D2 is a synthetic version, while vitamin D3 is the natural form that your body can use most readily. Avoid the synthetic version and take Vitamin D3.

More benefits from vitamin D:

- **Weight Loss** - Optimal levels of vitamin D help to reduce parathyroid hormone levels, which in turn help the body to lose weight, a major health issue with Type 2 Diabetes.

- **Regulates appetite** – Vitamin D increases the body's levels of the hormone leptin, which is involved in Type 2 Diabetes, and controls body fat storage, triggering the sensation of satiety, and helping you stop eating.
- **Reduces belly fat** – Low levels of vitamin D increase the stress hormone cortisol, which is produced by the adrenal glands. High prolonged levels of the cortisol in the blood can cause increased abdominal fat—or even worse, internal visceral fat, which is linked to various health conditions including heart disease and diabetes Type 2.

***Note:** before increasing your intake of vitamin D, consult with your doctor first to make sure the dose you intend to take is safe and won't interact with your standard diabetes medications. It may be a good idea to have your vitamin D levels checked.*

Vitamin K2

Vitamin K2—different from vitamin K1, is an essential vitamin that is often overlooked. And, new studies show that most of the population in modern industrialized cultures are significantly deficient in this essential nutrient. It's no surprise because grass fed dairy products have all but disappeared from our modern food supply.

Vitamin K has been shown to help to regulate glucose metabolism by converting it to a something called carboxylated osteocalcin, which affects insulin sensitivity.

Vitamin K2 is not found in most of our foods, although it is present in the butter from grassfed, pastured cows (Kerrygold is a good brand of grassfed butter), or the milk or cheese from grassfed cows. Natto, made from fermented soybeans, also contains significant quantities of this valuable nutrient. In addition to the fact that vitamin K2 helps to improve insulin sensitivity, vitamin K2 also helps your body to transport calcium into your bones and teeth, instead of floating around in your bloodstream or settling in blood vessels or kidneys.

Other good sources of vitamin K2 are found in goose and chicken livers, aged raw cheeses, pastured eggs, and fermented organic (grass fed) milk. The best way to get vitamin D is by exposure to sunlight's UVB rays, which triggers the body to produce vitamin D.

Zinc and Copper

Zinc is an essential mineral that is very important in maintaining health by helping the

Immune system function properly and to help it fight off infection and counteracting free radicals in our system. Zinc also helps to fight acne, help the skin heal faster, and breakdown carbohydrates for energy. Zinc also helps to maintain taste and smell. Zinc gets stored in muscles, blood cells, the eyes, skin, bones, liver and pancreas.

Since our bodies cannot manufacture zinc, it is an essential mineral that must come from food that we eat. The primary sources of zinc are red meat, poultry and seafood, as well as beans, nuts, whole grains and some dairy foods.

People with chronic GI problems such as celiac disease (gluten intolerance) and Crohn's disease, as well as vegetarians (especially those who eat a lot of soy products) are at an even higher risk of being short on zinc.

Zinc has long been used as an ingredient in some of the older insulin formulations, such as NPH, Lente and others. Why? Because zinc is a necessary ingredient for the formation of the pancreas' beta cells—that manufacture insulin.

In 2007, Finnish researchers studied over a thousand adults with Type 2 Diabetes for seven years and found that supplementation with zinc may also be useful in preventing heart disease in Type 2 diabetics.

However, too much zinc can replace copper in the body and offset the delicate balance between the two, so it is best to get zinc from natural food sources if at all possible. Two of the best sources of both zinc and copper are liver from grass fed cattle, and oysters.

Chapter 10



The Incredible Power of Herbs and Spices

Certain herbs and spices contain some of the most potent and concentrated antioxidants of any food. Many herbs and spices rank even higher in antioxidant activity than many fruits and vegetables, with some spices having as much as 10-50x more antioxidants than blueberries.

The antioxidants in spices include some very powerful protection—not only against diabetes, but also: cancer, heart disease, arthritis, macular degeneration, Alzheimer's and aging.

Not only do they add extra flavor to foods, but combined with the nutrition in other foods, they exponentially boost the natural antioxidants, phytonutrients, and anti-inflammatory power of many foods. Herbs and spices also:

- Stabilize Blood Sugar - Some spices are so effective at regulating blood sugar and controlling insulin that they work as well or better than diabetic drugs, without the harmful side effects.

- **Aid Fat Burning and Boost Metabolism** – Many herbs and spices increase metabolism, partly because they are so nutrient-dense. Losing weight helps to increase sensitivity, as well as lessen other diabetic complications.
- **Powerful Anti-Inflammatory Properties** –Scientific studies show that herbs at reducing inflammation without the negative side effects. Reducing inflammation helps to reduce the possibilities for heart attacks, strokes, Alzheimer’s and other diabetic complications associated with increased inflammation.
- **Immune-enhancing properties**—The antioxidants and other phytochemicals boost the body’s immune system, creating a more powerful defense system against pathogens and contagious diseases. Enhancing the immune system also helps the body heal from skin wounds, which can turn into dangerous infections.

Cinnamon – Several studies have been done on the effectiveness of cinnamon’s ability to regulate blood sugar and insulin sensitivity. One of the most well-known studies, tested diabetic subjects on differing doses (1, 3, or 6 grams) of cinnamon. After 40 days, all three dosage levels of cinnamon had significantly reduced fasting glucose by 18-29%, triglyceride levels by up to 30%, and LDL cholesterol 27%. Although different doses were used in the study, the results were the same regardless of dosage—meaning that you do not have to take 6 grams of cinnamon a day to receive its health benefits.

In addition to the positive effect this delicious spice has on blood sugar and insulin levels, cinnamon also has one of the highest antioxidant levels of any spice. Cinnamon also has powerful anti-inflammatory properties, and helps relieve pain and stiffness in muscles and joints, including arthritis.

Cinnamon also has a positive effect on brain function—and smelling cinnamon, or chewing cinnamon-flavored gum, has been noted to improve memory and attention. Cinnamon reduces inflammation in blood vessels that can leads to atherosclerosis and heart disease, as well as having antifungal and antibacterial properties—all of which are dangerous complications of diabetes.

Cinnamon generally comes in two different types: Ceylon cinnamon or Cassia cinnamon, otherwise known as Saigon Cinnamon. In the US, Cassia cinnamon is typically found in most grocery stores, however, Ceylon cinnamon is more effective and more associated with the health benefits of blood sugar stability. Ceylon cinnamon also contains less coumarin, a naturally-occurring toxin which can damage the liver in very high doses.

While cinnamon capsules are available, studies are underway to determine the effectiveness of cinnamon from food. It is not currently known how much cinnamon to take for maximum effectiveness, but research shows it is effective in relatively small doses. My recommendation is to sprinkle cinnamon on your food as much as possible to

get its health benefits. Try cinnamon in your smoothies, yogurt, healthy baking recipes, oatmeal, mixed with berries, or as a healthy addition in your coffee or tea.

Cinnamon contains some highly reactive toxic aldehyde compounds. These toxic compounds can accumulate in the body over time. These insoluble solids can cause potential abnormalities in the body's cell reproduction (as in cancer) in large doses. There are cinnamon supplements that contain only the beneficial water-soluble nutrients without the dangerous fat-soluble toxic substances.

Dr. Mark Hyman, author of "The Blood Sugar Solution", recommends 125-250 mg of cinnamon, taken as a supplement.

Berberine – Berberine is present in many plant, including the European barberry, golden seal, goldthread, Oregon grape, phellodendron, and tree turmeric. It is found in the roots, rhizomes, stems and the bark of these various plants.

A couple of studies have been conducted on berberine and its effectiveness on blood sugar in the last few years. In one study, berberine was compared to metformin (a common diabetes drug). At the end of the trial, fasting blood sugars in the berberine group dropped from an average of 191 milligrams per deciliter to 124, and average hbA1c (the longer-term test for blood sugar stability), dropped from 9.5% to 7.5%, while fasting triglycerides dropped from 99 to 78 milligram per deciliter.

The study concluded that berberine showed a similar, if not identical effect in the regulation of glucose metabolism, such as HbA1c, fasting blood glucose, fasting insulin, and lipid metabolism. Insulin resistance was shown to have dropped by 45%.

In a second study, after 7 days of berberine, similar results were found. However, berberine is not without side effects. Some participants noted severe gastrointestinal distress while taking the berberine, but most disappeared after a week of usage.

Berberine can be a potent oral hypoglycemic agent (blood sugar lowering) with fairly significant positive benefits on lipids (triglycerides), along with a small amount of weight lost as well. While these researchers found berberine to be safe and low cost, others disagree, saying it is an untested and uncontrolled herbal medication. Again, be sure to discuss with your physician before starting on berberine.

Other benefits of berberine include:

- Helps protect bone density
- Protects against neurodegenerative brain disorders, such as Alzheimer's disease
- Mimics the effects of a low calorie diet, so it may be a valuable tool in anti-aging.

Cayenne - This hot spice not only heats up your dishes, it heats up your body and raises your metabolism, helping you burn fat faster. And an interesting research study showed that when a person consumed an appetizer with red pepper flakes, they ate 15% less food.

Heating up your dishes with chili pepper can also help to lower your insulin levels in a good way too—so a 2006 study published in the American Journal of Clinical Nutrition shows. Australian researchers showed that the amount of insulin required to lower blood sugar after meals was reduced, if the food contained chili pepper. When chili pepper is eaten on a regular basis, insulin needs dropped even lower.

In those with Type 2 Diabetes who were overweight, chili pepper helped decrease the amount of insulin necessary to effectively lower blood sugar levels. And one more benefit: meals with chili pepper helped to increase the liver's ability to clear insulin.

More benefits for those with diabetes or pre-diabetes: Cayenne reduces LDL cholesterol, and triglyceride levels, and prevents harmful blood clots, all of which contribute to heart attacks and strokes. Cayenne is a very effective anti-inflammatory and pain remedy for everything from headaches to arthritis and sore muscles, as well as clearing nasal congestion and boosting immunity.

Cayenne comes in the spice section in powdered form, sold as 'cayenne', or as 'red pepper flakes'. You can also purchase cayenne capsules as a dietary supplement. Or look for hot pepper sauces that don't contain any added sugar. Sprinkle a little hot pepper on everything you eat—use instead of black pepper. Try cayenne in your morning eggs, in soups, stews, chili, or meatloaf for a little metabolism boosting spice! I love cayenne sprinkled on cantaloupe or papaya!

Cilantro and Coriander – Both Cilantro (the herb) that looks a little like parsley and is used frequently in Mexican, Indian and Thai cuisines, and coriander (the seed) are very protective for diabetes.

Coriander is considered both an herb and a spice, since its leaves and seeds are used as a seasoning and condiment for foods. The dried seeds of the plant are generally referred to as coriander, and the leaves of the fresh plant are cilantro. Coriander and cilantro have long been used for their health benefits, and in some parts of Europe, it has had the reputation as being the "Anti-Diabetic" plant.

In studies, when coriander was added to the diet of diabetic mice, it was shown to help stimulate the secretion of insulin and lowered blood sugar. Coriander has also been shown to protect against heart attacks, by reducing the levels of LDL cholesterol (the bad cholesterol) and raising the healthy HDL cholesterol. In addition, cilantro and coriander have been shown to contain other beneficial phytonutrients that can help to

prevent salmonella (food poisoning), and also help to decrease toxic mercury levels in the body from eating certain types of fish. Enjoy fresh cilantro in guacamole, salsas, salads and ethnic dishes, and add coriander to foods and beverages for a delicious exotic but mild flavor.

Cumin - Cumin is another spice that is especially high in antioxidants, but cumin is known for being especially good for digestion. It stimulates the gallbladder and pancreas to secrete enzymes and bile that break down food into usable nutrients your body can use. Cumin also helps detoxify the body, and is highly effective for respiratory disorders like asthma and bronchitis.

Cumin, like cinnamon, helps keep blood sugar levels stable, which means cumin is great for diabetics or pre-diabetics, and it means less chance of weight gain and excess body fat. Cumin has been proven to work as well as some commonly used diabetic drugs at regulating insulin and glycogen. Cumin is also a very good source of iron, vitamin C and vitamin A, which benefit the immune system.

Fenugreek – Fenugreek is a plant that has been used as far back as 1500 B.C., in both food and as a medicinal herb from South Asia, North Africa and parts of the Mediterranean. The leaves are sold as a vegetable or as an herb, while the seeds are used as a spice.

The seeds are high in soluble fiber, which helps to lower blood sugar and slows the absorption of carbohydrates. Several clinical studies have shown fenugreek seeds to improve many of the symptoms associated with both Type 1 and Type 2 Diabetes, by lowering blood sugar and improving glucose tolerance, either by taking capsules of the seed powder, or by eating baked goods made with fenugreek flour.

Fenugreek seeds are also a good source of vitamins, minerals and antioxidants, which help protect the body and prevent diseases as well. In addition their blood sugar benefits, they are often used as an effective herbal remedy for colds and sore throats, as well as high cholesterol, skin problems, stomach and kidney problems, milk production in lactating females, digestive issues, and more.

Fenugreek is found in most health foods stores, and dosages can range from 5 to 30 grams a day—depending on the reason, but be sure to consult with your physician first.

Ginger - Ginger is a VERY powerful ally for good health! Ginger has been a 'go-to' spice for centuries, having been used for motion sickness, pregnancy morning sickness, inflammation, and immune function to name a few things. Now, it appears this super spice is good for one more thing: helping to control blood sugar in Type 2 diabetics.

In a study done at Shahid Sadoughi University of Medical Sciences in Yazd, Iran, with 88 people, those who took ginger capsules saw a significant reduction in blood sugar, after just 8 weeks.

Scientists are not exactly sure how ginger works to control blood sugar, but it is possible that it inhibits an enzyme that breaks down glucose storage molecules, which in turn lowers blood sugar.

Ginger contains over 25 different antioxidants, which makes it extremely effective at fighting free radicals in many different body systems. Because ginger is such a strong anti-inflammatory, it helps reduce the pain and swelling of arthritis and muscle aches. Ginger also fights cancer, reduces cholesterol, and prevents blood clots that lead to strokes or heart disease. I like to use a slice of ginger root in my hot teas sometimes, and of course, I love piling ginger on top of sushi!

Basil – Basil, especially Holy Basil, contains powerful oils in its flavorful, big, green leaves. While basil has many other health benefits, studies are beginning to focus in on basil's effectiveness with blood sugar control and insulin-sensitivity—along with pancreatic beta cell function.

In one small study of 40 people with Type 2 Diabetes, patients were given holy basil leaves to take instead of their diabetes medications. The average fasting glucose declined from 134 mg/dL to 99 mg/dL after four weeks. Although there was no typical dosage established for basil, it is suggested that approximately 2.5 grams of dried leaf powder once a day on an empty stomach may be effective.

Basil is a very effective anti-inflammatory herb with extraordinary healing benefits that work for arthritis, allergies, and inflammatory bowel conditions, as well. In addition, basil helps kill harmful bacteria that cause food-poisoning including: *Listeria*, *staph*, and *E. coli* O:157:H7. Basil is also an excellent source of betacarotene, a powerful antioxidant that prevents free radical damage. Free radical damage is the primary cause of heart disease, cancer, and many other serious health conditions, as well as aging.

Because of its dark green color, it is an excellent source of vitamin K, calcium and magnesium, which is good for the bones. It is also a great source of iron, manganese, vitamin C and potassium. Try fresh basil and dried basil generously in your foods to maximize its benefits.

Turmeric – Turmeric is a powerful super spice, known primarily as a highly effective anti-aging, anti-inflammatory miracle ingredient. Turmeric spice has had devoted followers of its medicinal and culinary benefit since ancient times.

The main ingredient of turmeric is curcumin. Turmeric's yellow-orange pigment, *curcumin*, is the main active ingredient in this super spice. Curcumin's anti-inflammatory benefits are actually comparable to drugs like hydrocortisone and over-the-counter anti-inflammatory medicines like Advil and Motrin. But, unlike the drugs, curcumin is not toxic to the liver—it is actually beneficial for liver function.

In a recent study on humans that was published in the journal of the American Diabetes Association, it was found that turmeric extract was “100% successful in preventing prediabetic patients from becoming diabetic over a 9 month period.

Considering the staggering numbers of people all over the world who are pre-diabetic, this study has some pretty profound benefits in light of preventing new cases of Type 2 Diabetes, especially in underdeveloped and poorer countries of the Caribbean, Western Pacific, and North Africa, where diabetes and pre-diabetes is prevalent.

Curcumin is more effective slowing down the development of Alzheimer's disease than many medications, because it decreases inflammation and oxidation in the brain. And for those with diabetes or pre-diabetes, the risk of developing Alzheimer's is multiplied.

This spice also speeds up the recovery time from strokes as well. Turmeric is also highly effective against diseases like irritable bowel disease, ulcerative colitis, Crohn's, and arthritis. Turmeric also improves liver function, lowers homocysteine, and prevents heart disease. Most importantly, turmeric is one of the most potent anti-cancer spices that helps protect you. Turmeric and its derivatives are currently being studied in alternative cancer treatments.

Try this trick: Using black pepper along with turmeric, which helps to increase the absorption of turmeric's curcumin in the body.

Rosemary - Rosemary contains active ingredients that are potent antioxidants as well as anti-inflammatory agents. Rosemary has long been known to improve concentration, boost memory, and lift depression. And now, researchers from the University of Illinois have found that this herb can help lower blood glucose. It was found however, that the fresh form of the herb were more likely to have polyphenols and flavonoids and antioxidants that the dried commercially-grown types of this herb.

Rosemary also strengthens the immune system, improves circulation, stimulates digestion, and fights cancer, as well. Rosemary is highly effective for respiratory problems including asthma, chest congestion, and respiratory infections.

While rosemary adds a delicious savory flavor to meat dishes, it also helps digestion by stimulating the gallbladder to release bile as well. Rosemary will protect your body

against harmful carcinogenic toxins and prevents colon cancer, stomach, breast, and lung cancer.

Oregano - This herb contains oil that is a very potent anti-bacterial, anti-fungal and anti-viral agent, rosmarinic acid (also found in rosemary). Oregano oil has been used to treat a wide range of conditions from bacterial and viral infections—to parasites and stubborn fungal infections. Although the oil of oregano is most often used for medicinal purposes, the herb itself can provide many of the same benefits when consumed regularly.

Recently, along with rosemary, it was found in a study published in the Journal of Agricultural Food and Chemistry, that oregano can actually help to lower blood sugar and increase insulin sensitivity in those with diabetes. However, it was found that the fresh herb was far more effective than the commercially grown and dried oregano that you find on your grocery store's spice shelf.

Oregano also relieves inflammation, internal or external, and can offer relief from allergies, aches and pain, without side effects. Oregano is very high on the ORAC scale of measured antioxidant value.

Thyme — Thyme's active ingredient is known for treating bronchitis, sore throats, chest congestion, laryngitis and asthma. Thyme is so effective it is often an ingredient in cough drops and mouthwashes to treat inflammation and infections. Thyme is also effective as a soothing stomach aid to relieve gastritis, indigestion and colic.

Thyme helps prevent cancer, improve memory, treat Alzheimer's, calm the nerves, and alleviate depression, nightmares, and insomnia. An interesting new discovery about thyme shows that it actually boosts the amount of DHA (an important ingredient in omega 3 fatty acids) in the brain, heart and kidney cells.

Other health benefits of some of the most popular herbs and spices include:

- Stabilizing insulin and blood sugar: Cayenne, cumin, coriander and cinnamon
- Calming effect: Lemon grass, nutmeg, bay leaves and saffron
- Heart health: Garlic, mustard seed, hawthorne, and chicory
- Anti-aging, smooth skin: Basil and thyme
- Immune system/anti-inflammatory: Turmeric, garlic, basil, cinnamon, thyme, saffron, garlic and ginger
- Mood boosters: Coriander, rosemary, cayenne, allspice and black pepper

Chapter 11



More High Impact Ways to Improve Insulin Sensitivity and Lower Blood Sugar

One of the most important things you can do to your health back on track and defeat your diabetes is to realize that ***small changes can yield big results if done consistently.***

While diet is a huge part of this equation, there are other effective means to fighting this disease and getting your lifestyle and health back on track. Not only will the following suggestions help fight diabetes, but they will improve your health in a myriad of ways—from weight loss and muscle gain, to improved mood and happiness, to more energy, and a longer, healthier, happier life.

Let's take a look at some of the most effective things you can do to improve your insulin sensitivity and stabilize and lower your blood sugar.

Exercise—Our bodies tend to go back and forth between fat burning and glucose burning as needed when our blood sugar levels are low and stable. But when glucose is high, it either needs to be burned off right away or it gets stored as fat and body fat gets even harder to burn.

For diabetics who are already insulin resistant, burning fat and burning glucose becomes even more difficult. Unless you exercise!

Exercise burns off excess glucose and makes cells more sensitive to insulin.

Regular exercise will also help to ward off diabetes complications, especially heart disease and strokes. Besides the health reasons, you will look more fit, gain muscle and lose body fat—all great reasons to get on a regular exercise plan!

Make exercise a daily habit—as if your life depended on it—because it does.

If you strive to get in some form of exercise every day—whether it's lifting weights, interval training, a walk or run, or any kind of sustained activity, it makes a huge difference long-term to increase insulin sensitivity and to control blood glucose, as well as upgrading your quality of life in general, increasing your level of fitness, and decreasing your chances of all other diseases down the road. Exercise, especially weight lifting and high intensity interval training can also raise your levels of testosterone which has also been found to help prevent diabetes and lower blood sugar levels.

Effective exercises to burn glucose and increase insulin sensitivity:

1. Lifting weights

Lifting heavy weights is an intense exercise and not only helps to burn off excess glucose, but it improves insulin sensitivity as the muscles take up more glucose in order to replace glycogen (stored glucose in the body). In addition, lifting weights not only burns calories while you are actively working, but it actually raises your metabolism significantly the rest of the day as it works to rebuild muscles. Muscle tissue is highly metabolically active, and building muscle means that you also raise your metabolism overall, so you actually begin to burn more calories even at rest, than would a sedentary person.

2. Interval Training

Any type of intense exercise that burns off glucose in your blood, and glycogen from your muscles and your energy reserves will most definitely increase insulin sensitivity. Running stairs, sprint intervals on a track, hill sprints or cycling sprints will do the trick.

3. Tabatas

Tabatas are proven way to burn through energy reserves at a high intensity. Very similar to sprint interval training, in fact. The general rule on tabatas is to do an intense exercise (burpees, jumping jacks or jumping squats, sprints, etc.) for 20 seconds, with 10 seconds rest. You really only need to do 4-5 total minutes of these intervals and maximum effort, and you will find yourself turning to jelly. Tabatas not only increase insulin sensitivity, but they are also an excellent way to

train the cardio vascular system, boost your metabolism for several hours, and to burn calories like crazy in a very short time. Try one 4-minute cycle, then add more as you can.

4. Training at altitude

Because exercise at altitude takes extra effort and you not only burn more calories, you burn more glucose, you will be pushing your body even more. Hiking or biking at altitude can effectively improve glucose tolerance and insulin sensitivity. The most effective altitudes to hike are above 10,000 meters, but even at half that much, it will tax your system more than sea level. If you are slightly breathless, you are working your cardiovascular system at an optimal level, so take advantage of altitude whenever you can.

5. Exercise first thing in the AM without eating

When we wake in the morning, most of the glycogen that has been stored in the liver and muscles (glucose is converted into this for energy storage) has been burned up. Training in a 'fasted' state enhances the effect of training on insulin sensitivity. Studies show medium to high intensity cardio performed before eating breakfast, increases insulin sensitivity. If you are taking medication, you may want to reduce it in the morning to reduce any possibilities of very low blood sugar. Be sure to check in with your physician on this before doing it.

6. Take a daily walk

A post meal or morning walk before breakfast are effective glucose lowering and insulin sensitizing activities. A daily walk can be a stress-reducing activity to do after dinner, or if time is short, incorporate it into your day. Park your car further away, and walk. Take the stairs when you can instead of an elevator, walk the dog, walk at the mall or find the closest public school with a track and do a few laps there.

Other ways to improve insulin sensitivity and control blood glucose:



- **Meditation**

Stress releases hormones such as cortisol and adrenaline, which in turn raise blood glucose levels (fight or flight syndrome at a chronic level), and increase insulin resistance. By reducing these hormones through meditation, this lowers glucose and in turn, helps insulin sensitivity.

Stress also can cause overeating of carb-rich junk foods, so meditation helps with this as well. Meditation does not have to be a long or complicated procedure. Simply sitting quietly in a darkened quiet room for 15-20 in a room without distractions, while breathing deeply, and focusing on something calming in your head can serve the purpose. If you'd like to look into meditation and its health benefits more there are plenty of places online you can read more about it. There are various methods for mediation; check here for some ideas:
<http://psychcentral.com/lib/relaxation-and-meditation-techniques/0003200>

- **Yoga**

It seems like everyone in the world is doing yoga now, but there are plenty of good reasons for it. Doing yoga on a regular basis can help to restore movement and balance in the physical body, reduce stress and calm the mind. Yoga has also been shown to reduce blood sugar levels, along with lowering blood pressure.

Since stress can be a primary contributor to higher levels of blood sugar, reducing stress reduces blood sugar and increases insulin sensitivity. Your best bet is to sign up for a yoga class near you or look online—there are many good free YouTube yoga routines you can follow at home, as well as online memberships to yoga classes.

- **Sleep**

Be sure to get adequate sleep. Sleep deprivation increases cortisol levels in your body and that in turn increases glucose. When we are chronically tired, day after day, it becomes easy to turn to food for an energy boost. Quite often, the foods we turn to for energy are short lived, as they are usually starchy, or sweet carbohydrates, which raise blood sugar. After the 'buzz' wears off, you will end up more tired than before, and it becomes vicious cycle.

Getting adequate sleep helps to lower cortisol levels and stabilizes your blood glucose levels. And your energy levels and mood will be higher with a decent night's sleep, so you will be less tempted to reach for the sugary junk food for a lift.

Chapter 12



Phase 1—The Sugar and Junk Detox

Your diabetes reversal diet is divided up into two phases. The first phase will last about 2 weeks, **or** until you are able to get your blood sugar stabilized and under control. In this first phase, you will totally restrict high glycemic, starchy carbohydrates and sugars and reset your body's appetite and metabolism, while enjoying eating plenty of satisfying, low glycemic, high quality proteins, healthy fats, fresh, organic vegetables, with a few delicious, low glycemic fruits. During this phase, you will detox your body from sugary and starchy foods, chemicals and preservatives, and inflammatory foods.

This is where you will break the addictions you have to sugar and sugary, starchy foods. It may seem difficult at first, but since sugar addiction has been proven to be more powerful than a cocaine addiction, getting through the first 3-5 days will help to break this cycle. If you find that you are craving sugary or starchy foods, there are two things you can do that will help:

1. Drink plenty of water—often when you think you are hungry, your body is actually telling you it needs water. Drink water and you will feel more full and satisfied.
2. Eat protein—Protein satisfies hunger without causing any spikes in blood sugar. Studies show that when people eat a healthy breakfast that contains a high

quality protein, they are less hungry all day long—and it increases your body's fat burning ability as well.

Your primary aim is to restrict the carbohydrates that do not contain fiber, along with a few of the starchy root vegetables. Vegetables are technically classified as carbohydrates as well, but it is important to stick to the specific list of vegetables on the Phase 1 diet, along with total avoidance of all foods containing sugar (including natural sugars), and grains—including 'whole grain' foods. Grain is grain and it all converts to sugar over time. You do want to avoid root vegetables on Phase 1, as they are starchy and easily convert to sugar as well.

Avoid: beets, parsnips, carrots, potatoes, sweet potatoes, Jerusalem artichokes, yucca, and other root veggies—on Phase 1.

Keep this in mind—while it takes a little bit of time for your body to convert to burning fat for fuel, it will always burn carbohydrates and sugar as its first choice. It will take a few weeks to convert your body's fuel-burning system over to fat, but it does happen, and when it does, blood sugar levels become stable, your body burns its own fat, and you defeat diabetes and lose weight. This is your optimal health program.

While everyone's body chemistry is different, it is important that you monitor your blood sugar carefully during the beginning phases of this diet. Aim to eat 50 grams or less of (vegetable-based) carbohydrates a day. You may adjust this up or down for Phase 1 as you monitor your blood sugar.

If at all possible, it is best that you prepare and eat most all of your meals from home for this phase, especially. If you need to, pack a lunch for work or anytime you may be out, so that you will not get off track by eating out at restaurants with all the temptations available. Pack a small cooler for the car if you have a lot of errands or driving to do—this will keep you from being tempted by fast food restaurants when hunger strikes.

You may eat three satisfying meals full of protein, healthy fats, and lots of low glycemic, filling vegetables—as well as two healthy snacks—if you desire. As your blood sugar comes down, you may be surprised to find out that your cravings will be reduced and that you are not as hungry. Appetite and cravings are often the result of blood sugar and insulin fluctuations.

Most vegetables, meat, fish, and healthy fats are very low glycemic. There are a few low-carb, low glycemic fruits in Phase 1 that include raspberries, strawberries, blueberries, and blackberries, but most other fruit will be re-introduced when you get to Phase 2. This is the jumpstart your body needs to get back on track. Fruit contains a lot of natural sugar.

While proteins and fats are low glycemic, and help to stabilize your blood sugar, they are calorically dense. Depending on the amount of protein you eat, your body can still convert some of it into glucose, if you eat a larger portion than necessary. Plan to eat only a serving about the size of the palm of your hand or less at a time.

Do your best to find grass-fed meat and wild-caught, naturally raised fish and chicken. While these meats may be harder to find, they contain more of the healthy, fat-burning, blood sugar stabilizing, anti-inflammatory Omega 3 fats. Most farmers' markets and health food stores carry naturally raised meat, poultry and fish—as well as ample supplies of delicious, locally grown, nutrient-dense veggies! You may eat as many veggies as you would like, provided they are not starchy or high glycemic vegetables.

This is a 'cold-turkey' approach—and while it may seem harsh—it is nearly impossible to 'cut back' on these foods. The only way to get rid of the cravings and to get the toxins out of your system is to totally cut them out. Food addictions are very similar to drug and alcohol addictions, and 'cutting back' only feeds your addiction and makes it worse.

The only way that works is total avoidance. Phase 1 of this diet breaks your carb addiction and the cravings that come with it. Eating starchy and/or sweet carbs only makes you hungrier and makes you want to eat more carbs. It is a vicious cycle and has to be broken! You can DO this!

The benefits of Phase 1 go beyond lowering your blood sugar:

- The constant craving for carbs and sugar goes away.
- You lose weight quickly and without really trying. (6-10 lbs on average)
- Your pancreas gets a much-needed rest from supplying insulin constantly.
- Your body resets itself and you begin to crave healthier foods.

*Again, be sure to let your doctor know you are starting on a low carb, low glycemic diet to naturally and safely lower your blood sugar. **Many people—and you included—may need to reduce or even stop diabetes medications—even in the first week or so on Phase 1.***

Foods to Avoid:

- **Grains and Gluten**—All grains, including oats, wild rice, brown rice, white rice, quinoa, teff, corn, and especially wheat and gluten. Even if you do not think you are gluten-intolerant, I highly advise you avoid gluten and wheat. Avoid all 'gluten free' products as well—many of these are very high glycemic, processed starches.
- **All Sugars and Foods Containing Sugars**—Honey, maple syrup, cane sugar, high fructose corn syrup, corn syrup, fruit juices (even unsweetened fruit juice), sucralose, brown sugar, raw sugar, fructose, glucose, rice syrup, dextrose, erythritol, beet sugar, and more. If you are unsure whether a food contains added sugar, look at the label for "sugars" and you will see a listing of grams of sugar. Avoid ALL artificial or 'low-calorie' sweeteners.
- **Dairy Products**—Dairy products increase inflammation, and many diabetics are actually allergic to dairy products—especially pasteurized processed dairy. Plus dairy does contain a natural sugar, lactose, which can affect blood sugar. Avoid dairy the first two weeks of this diet and add it back in slowly and record any changes in blood sugar or other physical or allergic reactions in Phase 2.
- **Processed, Packaged Foods**—Avoid any foods that come in a box, package, or can and have multiple ingredients. Many of the added ingredients are starches, fillers, sugars, and other chemical additives. Avoid 'diet' frozen dinners as well, these are full of fillers, chemicals, starches and sugars!
- **Sweetened Beverages, Including (100%) Fruit Juices**—These drinks hit your system and inject sugars into your bloodstream almost instantaneously. Even fruit juice with no added sugar is very high in fructose.
- **Starchy Vegetables**—In Phase 1, you will eliminate starchy vegetables. You may add them back in during Phase 2, while monitoring their effect. These include white potatoes, sweet potatoes, yams, beets, corn, parsnips, carrots, squash, and peas. Eat legumes in limited amounts, unless you are a vegetarian, then you may use them as a meat/protein substitute. Always eat a protein and veggies before these starchy vegetables to maintain better control over blood sugar.
- **Moderate to High Glycemic Fruits**—Avoid all canned fruits—these often contain sugar. Also avoid watermelon, pineapple, cantaloupe, apricots, peaches, raisins, papaya, kiwi, banana, mango, and oranges. You can enjoy delicious low glycemic, high antioxidant berries such as strawberries, blueberries, raspberries, blackberries, and cherries, however on Phase 1.

After the initial few days of adjustment, you will find that not only will your blood sugar start to level off, but also your appetite will decrease and meals are very satisfying and delicious. You will focus your diet on high quality, nutrient-packed foods that are rich in nutrients, anti-oxidants, and powerful phytochemicals that will heal your body, add energy, burn fat and maximize your health.

The other great thing you may notice about this part of the diabetes reversal diet is that you will lose weight effortlessly—often a significant amount in the first week or so! The extra carbs and sugar you USED to eat were turned into glucose, and because insulin was released, all that extra glucose was stored immediately as fat. Without the constant supply of glucose-producing foods, your body actually learns to burn fat for energy, and will become very proficient at this over time.

Once your *fasting blood sugar* stabilizes under 100 (allow yourself 2 weeks—or more if necessary) you may advance to Phase 2 of the diabetes reversal diet, where you can start adding in some healthy complex carbohydrates.

If you ever feel you are slipping and getting off track, just switch back to Phase 1 for a couple of weeks, or however long it takes for you to get back on track with STABILIZED blood sugar. Then you can go back to Phase 2 again.

What Do You Eat if You Are Vegetarian

I do not promote a vegetarian or vegan lifestyle—I think our bodies need the complete protein/fats and nutrients that animal protein sources provide—including red meat, fish, poultry, eggs, and dairy (if tolerated). Many people—especially diabetics, cannot synthesize the amino acids necessary for complete protein from plant sources, and the grains and other foods that are used as protein sources for vegetarians/vegans are highly inflammatory and can cause allergic reactions or chronic food sensitivities.

Vegetarians also miss out on heme-iron (bioavailable iron your body needs), essential omega 3 fatty acids, conjugated linoleic acid, saturated fats (necessary for hormones and proper brain function, among other things), as well as vitamin B-12, an essential vitamin. However, that being said, I understand that many people are vegetarian or vegan because of personal beliefs, religious or cultural beliefs, or for the environment.

By combining incomplete plant proteins with other foods—cheese, eggs or fish—you increase the protein availability in your diet. If you are a vegan, you must combine foods such as: legumes with grains and/or seeds to get the correct combination of amino acids necessary for your health.

If you eat soy, be sure it is non-GMO soy, as about 90% of soy grown is genetically modified and very unhealthy for you. Because soy has ‘anti-nutrients’ that actually block the absorption of certain nutrients, the best soy food to eat is Tempeh, which is

fermented soy and does not block nutrients. Tempeh is also delicious and chewy with a satisfying, meat-like texture. You may substitute tempeh anywhere eggs or meat are suggested in recipes. Also utilize beans and other legumes often for protein as well.

Because this diabetes reversal diet is very low carbohydrate and low grain, it is harder to get the protein necessary—especially in Phase 1. I recommend you keep spirulina, soy, hemp, pea, chickpea, rice or other vegetarian protein on hand for Phase 1 and rely on that to help fill in your protein needs. Add protein powder to your morning smoothie and afternoon snack. Stir some into your unsweetened almond, soy, or hemp milk for additional protein. This also helps with carbohydrate cravings as well.

While many people have very legitimate reasons to become and stay vegetarian, it may be worth considering adding meat, fish, or eggs to your diet if you are having trouble keeping your blood sugar stable on a vegetarian diet. Vegetarian diets in general, and vegan diets, especially, are high in carbohydrates and grains and it is extremely difficult to maintain stable glucose levels and nutrient levels on this type of diet.



Don't forget to drink copious amounts of water or other non-sweetened beverages. Try these if you aren't good at just drinking plain water:

- ***Make your own flavored water with cut up cucumber, limes, lemons, oranges, strawberries, raspberries, mint, basil, etc. Cut up and allow to sit for a while to flavor water.***
- ***Sparkling mineral water with or without fruit added***
- ***Green or black tea, hot or on ice***
- ***Herb tea, hot or on ice***
- ***Iced coffee-decaf or regular***

DIABETES DEFENSE DIET MEAL PLANS

PHASE 1

MEALS IN MINUTES

Breakfast

Morning Smoothie

- Unsweetened (or sweetened with stevia only) protein powder (rice, hemp, pea, or cold-processed whey)
- ½ cup frozen or fresh berries
- Unsweetened hemp, almond or coconut milk
- Small handful of almonds or walnuts
- Tsp cinnamon, tsp pure vanilla flavoring
- Greens, if desired: baby kale, spinach, chard, etc. (you won't be able to taste it!)
- Toss ingredients in a blender with a few ice cubes and blend

Lunch

Protein Power Salad

- Prewashed baby greens, arugula, baby kale, spinach, etc.
- Tomato, green pepper, red onion, other veggies
- Any leftover meat from dinner: cooked chicken, fish, beef, etc. or add a boiled egg, or half a can of tuna, sardines, or sockeye salmon.
- Dressing: extra virgin olive oil, balsamic vinegar, minced garlic, sea salt and pepper, oregano, basil, and/or rosemary

Dinner

Easy veggie/meat packets (can be made ahead of time and kept in fridge)

- 1 chicken breast or piece of fish
- Any combination of veggies: zucchini, onion, carrot, green beans, etc
- Chopped garlic cloves, sea salt and pepper, oregano, basil, rosemary or other favorite herbs
- Drizzle of extra virgin olive oil
- On square piece of foil, add meat, veggies, garlic, olive oil and seasonings
- Wrap up ingredients in foil, folding edges together
- Bake or grill at about 350-375 (medium grill heat) for 15-20 minutes

BREAKFAST CHOICES

Veggie Egg Scramble

- Any low glycemic veggies you have on hand:
- Onion, red or green pepper, kale, spinach, zucchini, green beans, carrots, tomato
- 1 tsp grass fed butter, melt in pan
- Sauté veggies in pan with a ½ tsp of turmeric and hot pepper flakes (optional)
- Whip 1-2 eggs in cup, and add to hot pan with veggies and scramble together

Mini Quiche Eggs

Mix together:

- 4 eggs
- Chopped natural bacon or natural ham
- Chopped cooked onion
- Drained spinach
- Small amount of Tabasco or other hot sauce
- Bake in foil muffin cups for 20 minutes. Make in advance and warm up for breakfast, lunch or snacks

Breakfast Stir fry

In a pan over medium heat add:

- 1 Tbsp of butter
- Sliced mushrooms
- Chopped red, yellow or green pepper
- Chopped zucchini
- Chopped red onion
- Chopped garlic
- Cut up natural (cooked) bacon or leftover meat or fish
- Garnish with fresh tomato and season with Tabasco or other hot sauce

Flax and Berry Pancakes

Mix in a bowl:

- 2/3 cup ground flax seeds
- 2 eggs
- 1 tsp of vanilla
- 1 tsp of cinnamon
- ¼ tsp of nutmeg

Adjust mixture, so it is like thick pancake batter. If too thin add more flax seed, if too thick add water or almond, flax or hemp milk. Cook in pan with 1 Tbsp of butter over medium heat. Turn over when golden brown. Top with mashed strawberries, raspberries, blueberries or blackberries.

SNACK, MID-MORNING CHOICES (only if desired)

- 2 Handfuls of raw almonds, walnuts, pistachios or other nuts
- 2 Tbsp nut butter
- 1/2 avocado with hot sauce
- 2-4 slices of organic, raw, grass-fed cheese
- Natural (no chemicals added) beef jerky
- 1 hard boiled egg with cut up carrots, celery, cucumber or yellow and red bell peppers

LUNCH CHOICES

Lettuce Wraps

- 2-3 slices of natural (no nitrates/no nitrites) deli turkey or beef
- Avocado, red onion, tomato, shredded carrots or any other bright veggie
- Sprouts
- Large leaf of Boston, bib, or leaf lettuce OR
- Roll in lettuce leaf

Tuna Salad Avocado Boats

- Mix one small can or ½ larger size can of albacore tuna (use olive oil variety or no oil).
- Red onion, carrots, green or red pepper, (any other veggies you'd like to add).
- Tbsp of extra virgin olive oil, squeeze of fresh lemon or lime.
- Toss together and scoop into half avocado with pit removed, drizzle with Sriracha sauce.

My favorite 'go to' lunch:

- Huge salad of arugula or baby greens with a variety of veggies: tomato, cucumber, avocado, tomato, red peppers, mushrooms, green or red onion, etc.
- Add 1-2 hard-boiled eggs, or sliced turkey, chicken, tuna, or salmon (any meat or fish leftovers from dinner work great here).
- Dressing: 1 tablespoon olive oil and balsamic vinegar, tsp of Dijon mustard, minced garlic, and fresh or dried herbs (basil, oregano, sage, thyme).

Egg Salad

- 2-3 hardboiled eggs
- 1 tbsp (homemade) mayo or virgin olive oil
- Chopped onion, chopped celery
- Mustard--as much as you want
- Salt, pepper or hot pepper flakes

- Serve on a bed of fresh Swiss chard or organic baby spinach or wrap in lettuce leaves

Deli “sandwich”

- 1 or 2 large pieces of romaine, Bibb or Boston lettuce
- 2 slices natural deli turkey or leftover baked chicken breast
- Lettuce, tomato, red onion, avocado
- Slice up avocado on lettuce, stack with turkey, tomato, red onion, and top with lettuce and a few fresh basil leaves.

Guacamole deviled eggs

- Make guacamole with fresh avocado, garlic, lemon juice, onion, tomato, cilantro
- Hard boil 4-6 eggs, cool, slice in half lengthwise, and scoop out yolks
- Smash yolks and add to guacamole, spoon into cooked egg whites
- Chill until served
- Enjoy with chopped fresh veggies or on top of organic baby greens

SNACK MID-AFTERNOON CHOICES (only if desired)

- 1 hardboiled egg and baby carrots, red or green bell peppers
- 2 pieces natural (no preservatives like nitrites/nitrates) sliced turkey with apple or avocado
- ½ cup berries and handful of nuts, nut butter
- Handful of raw almonds, walnuts, cashews, mixed nuts
- A handful of natural beef jerky, turkey jerky or salmon jerky
- Couple slices of natural (no nitrites/nitrates) deli turkey with half of a sliced avocado.

DINNER CHOICES

Grass Fed Beef Burger

- No Bun! Cooked medium (this is safe if it is grass fed beef, and actually healthier) with sea salt and pepper. Add mustard if desired. Avoid ketchup—it contains too much sugar.
- Sautéed organic kale lightly cooked with butter, garlic and lemon juice, sprinkle with pine nuts, almonds or walnuts.
- Serve burger on lettuce leaves to use as a ‘bun’. Add mustard, tomato and onion slices if desired.

Wild Salmon Veggie Stir-fry

- Cut salmon in chunks and sauté in pan with:
- Asparagus, zucchini, sliced red bell pepper, mushrooms, onion, garlic
- 1 tablespoons olive oil or grass fed butter
- Fresh basil or fresh cilantro
- Add chopped fresh tomatoes just before serving
- Lime juice, hot pepper flakes to taste

Salad Nicoise

- Baby greens, spinach, arugula or any combination
- 1 boiled egg, sliced
- ½ cup green beans
- ½ cup white beans
- Small can of water packed tuna or salmon
- Dressing: 2 tbsp lemon juice, 1 tbsp extra virgin olive oil, tsp of Dijon mustard, capers, sea salt and pepper

Meatless Marinara Spaghetti Squash

- Cut in half and cook spaghetti squash in cut side down in pan with ½" of water at 375 for 45 minutes or until tender. Scoop out and drizzle with olive oil, sea salt and pepper.
- Sauté chopped garlic in pan, add:
- 1 can tomato sauce
- 1-2 tsp oregano
- 1 tsp basil
- You may add tempeh, tofu or black beans for added protein
- Serve over spaghetti squash or cooked veggie spirals

Chili Chicken in Slow cooker

- Add chicken thighs or cut up chicken to crockpot
- 1 small can mild green chili peppers
- 1 small or half a large red onion, chopped in chunks
- 1-2 Tbsp chili powder
- 2 tsp cumin
- 1 small can or jar of organic tomatoes, OR add a small container of salsa (check ingredients to be sure there is no sugar or corn syrup added)
- Sea salt, red pepper flakes to taste
- Cook on low for 6 hours
- Garnish with chopped cilantro, tomatoes, and avocado. Serve on large lettuce leaves as 'taco shells'.

South of the Border Salad

- Chopped romaine lettuce, baby greens, arugula
- Tomato
- Black beans
- Chopped red onion
- Minced garlic
- Red pepper or roasted red pepper
- Black olives
- Cilantro
- Avocado
- Chopped cooked chicken or fish
- Salsa (no sugar added)
- Dressing: 1-2 fresh limes, squeezed, olive oil, garlic, sea salt and pepper or red pepper flakes
- Assemble all ingredients in large bowl, add dressing

DESSERT OR LATE EVENING SNACK CHOICES (only if desired)

- 2-3 pieces dark chocolate (70% cocoa or more is best).
- Raw almonds or walnuts, ½ cup blueberries, blackberries, strawberries, cherries or raspberries, with a teaspoon of cinnamon sprinkled on top.
- Cup of green, white or red rooibos tea, sweetened with stevia.

See many more delicious, satisfying recipes in the Diabetes Defense Diet Recipe Book or join Cat's Diabetes Defense Diet monthly membership for updated meal plans, recipes, community support and personalized support from a professional healthcare Diabetes Defense Diet Coach <http://www.simplesmartnutrition.com/>

Important Note—

*Because herbs and spices have such potent blood sugar lowering, antioxidant, anti-inflammatory powers, add them liberally to most every dish you prepare. Keep fresh or dried basil, oregano, sage, thyme, cilantro, and parsley on hand and add in to your salads, cooked dishes and even eggs. And don't forget to include the diabetes-reversing, super spices: **Turmeric, cayenne, cloves, cinnamon, fresh garlic, oregano, basil, rosemary and ginger.***

Chapter 13



Phase 2

Blood Sugar Maintenance and Optimizing Your Health— You're Almost There!!

Now that you have detoxed your system from sugar, chemicals, gluten and processed food addictions and have your blood sugar stabilized, you will begin to introduce some new foods (SLOWLY) to maintain your blood sugar and optimize your health. Once you have your blood sugar under control on a regular basis (2-4 weeks), you can move on to Phase 2 of the Diabetes Defense Diet.

In this phase, you will re-introduce some of the **unprocessed** carbohydrates, fruits and other foods that were not allowed on Phase 1.

You will need to carefully and slowly reintroduce new foods and monitor your blood sugar to gauge your reaction to these foods. Not everyone will respond in the same way—so some things you think wouldn't affect your blood sugar, may affect it—and other things may not affect it as much as you'd think.

And—important to note—some days you may react differently than other days. There are many variables that we discussed earlier that can affect your blood sugar levels on a day-to-day basis. That is why keeping a journal of your blood sugar reactions along with the different variables can be extremely helpful to establish patterns and your new healthier habits.

Now is the time to become more familiar with the Glycemic Index and Glycemic Load to be sure you stay in the ‘low’ to ‘moderate’ range of glycemic foods. In Phase 2, you may also re-introduce some whole, intact grains, such as brown rice, wild rice, quinoa, and (old fashioned, slow cooking—not instant) oats, as well certain fruits in the moderate GI/GL range.

It is recommended that you continue to avoid gluten due to its inflammatory properties, and because most foods with wheat or gluten in them are highly refined. Wheat also has the ability to raise blood sugar significantly, even whole wheat. And remember that foods labeled “gluten free” are often very highly refined starches—and often WORSE for your blood sugar—so continue to avoid these foods as well. Avoid corn and foods containing corn, cornstarch, corn syrup and high fructose corn syrup.

If you do not have dairy allergies, sensitivities, or lactose intolerance, you may try adding back in raw, unpasteurized cheese and unsweetened (whole) yogurt or kefir. Again it is better if you totally avoid milk—it has many inflammatory properties.

Avoid skim milk—without any fat in it, it will raise blood sugar, and is basically worthless as far as nutrients go. This may be a good time to try foods with dairy in them, and monitor your reactions. Dairy can cause inflammation, weight gain, excessive hunger, blood sugar fluctuations, depression/anxiety/ADHD, acne, sinus issues, increased allergies, and decreased immune function. Pay attention to your reaction immediately after you eat it, a couple hours later, and then 24-48 hours later. Often food allergies don’t show up immediately, but actually have noticeable effects 24-48 hours later.

Don’t forget that *the order in which you eat your foods* has a very big impact on how your blood sugar responds. Eat protein and vegetables BEFORE you eat carbohydrates to keep your blood sugar up to 30% lower. And you fill up on the most nutrient-dense, healthy foods first before you eat carbohydrates. Another reason to pass on the bread basket, or chips and salsa prior to your meal, and eat a healthy salad instead.

By this time, you may be working with your doctor and be on reduced medication or no medication, as you have learned to control your blood sugar with your diet and exercise. You should see that your blood sugar levels remain consistently under 100, and you should be able to keep it in the most optimal range of 75-85 mg/dL. Pay attention to your HbA1c levels as well, they should be at BELOW 5%.

Hopefully you are on your way to creating new and powerful health habits that are bringing you great benefits, and will stay with you for the rest of your life. Habits generally take AT LEAST 4 weeks to become learned and to stay with you, so this phase of the diet will be about helping you retain those healthy habits you have learned and maintaining your diet for the rest of your life, and be a bit easier and less strict to maintain as well.

You may be seeing some of the benefits of eating a healthy, REAL food diet of highly nutrient-dense foods for the first time ever. Benefits like: more refreshing sleep, a better overall mood, clearer, smoother skin, better breath, more energy, weight loss, and a reduction in cravings for junk food, while craving those foods that are healthful and beneficial to your body. These are the benefits of a healthy lifestyle and they have far-reaching effects to every part of your life. Relationships improve, productivity at work improves, and you find strength and energy to pursue more activities!

This is the part of the Superfood Diabetes Turnaround diet that I want to encourage you to strengthen your resolve and stay with this! As you continue these new healthy eating and lifestyle habits, you will find the wonderful effects will continue to accumulate and build on each other. Your body will continue to change, evolve and transform for the better, your health will continue to improve, and your risk of other diseases will continue to decrease dramatically. Your weight will continue to come off and you will see a new, leaner you looking back from the mirror—with a big smile!

Your body will begin to adjust and habitually become a fat burning mechanism, as you shift away from burning carbohydrates for food. Remember though carbohydrates and glucose are what your body will turn to as the easiest fuel source, so as soon as you begin to take in more carbohydrates, glucose levels rise, and you will go back to burning glucose—meaning that you no longer burn fat. Once you have established the fat burning ability however, a slip or two will not totally derail your efforts.

The goal of Phase 2 is to help you continue to re-educate your tastes in healthy food and to continue to reinforce those healthy habits you began in Phase 1. And you will get to add in small amounts of complex carbohydrates and more moderate Glycemic Index/Glycemic Load foods, while continuing to take stock of your body's responses to foods, maintaining a low and steady blood sugar level and forging more concrete and secure habits. But, maintaining your diet and developing healthy eating habits is important, and it's wise to continue eating mostly LOW glycemic foods for the rest of your life.

Any time you feel you are sliding off the path and picking up some of the old unhealthy habits or eating foods that you shouldn't be eating, return to Phase 1 for a week or two, and reset your body back to where it was, get it back on the fat burning track, and push your blood sugar levels back down.

Even though you may be able to reverse your blood sugar back to healthy levels, remember that you will always retain a tendency to have diabetes, so your blood sugar levels can easily creep up, if you don't keep tabs on your diet and monitor your blood sugar regularly.

In Phase 2, you may eat as much as you want of the foods that were listed in Phase 1, while adding back in small amounts of some moderate GI vegetables such as white potatoes, sweet potatoes, squash, beans, beets, corn, carrots, and peas. Always eat a protein and some veggies at the same time you eat any of these foods—better yet—eat the protein and veggies FIRST to best control the effect on your blood sugar. Keep your portions of these higher glycemic vegetables down to ½ cup or less PER DAY.

Don't forget these important principles for eating any type of food containing carbohydrates:

- 1. Never eat carbs by themselves. Study the Glycemic Index and know which foods are high glycemic and low glycemic.***
- 2. Combining low glycemic foods with the higher glycemic foods helps to lower the overall glycemic effect on your system.***
- 3. The more refined the grain is (whole grain vs flour), the higher the glycemic value.***
- 4. Size matters—the size of the portion of high glycemic food you eat makes a difference in the glycemic load. So eat SMALL portions of any food with a higher glycemic index.***
- 5. Always eat protein, fats and vegetables BEFORE you eat carbohydrates or foods that are moderate to high glycemic. This slows the effect on your blood sugar and is proven to keep blood sugar lower, when eaten in this order.***

Monitor your blood sugar to gain effective control over the foods that cause your blood sugar to react. Use your journal and be sure to record blood sugar immediately after dinner, and 1-2 hours later as well as before bed and upon waking. Any foods that cause your blood sugar to spike—especially if it stays higher for a period of time, should be removed and then carefully re-introduced one more time. If the offending food continues to affect your blood sugar, it is best to avoid it or only eat in small amounts and following the above principles. Also record how you feel: sluggish, tired, irritable, hungry, craving certain foods, etc.

You may try adding in dairy in small amounts and recording your reaction. Eat dairy on just one day; record any immediate effects, effects in 2-4 hours, and any effect 12-24 hours later.

(For example, my general reaction to eating dairy is that I instantly notice my head getting stuffy and a stomachache; 2-4 hours later, I am very sleepy; and 12-24 hours later, I am groggy, have dark circles, have brain fog and am very depressed. All from eating dairy.)

Remember some reactions may not seem connected to the offending food, but they can be. They can be as varied as a spike in blood sugar, irritability, cravings, sleepiness, brain fog or depression. Pay attention to how you feel—physically, emotionally, and mentally.

Important to note: while you MAY add in some of these complex carbs on Phase 2, you do not HAVE to. It's best to get in the habit of eating a low carbohydrate diet of the foods in Phase 1 and *occasionally* adding in some of the Phase 2 foods. Keep the portions small and limit to meal times when you can eat proteins, healthy fats and fiber from vegetables along with these foods.

Be sure to get adequate protein in your diet. A brand new study shows that eating protein at breakfast actually slows post-prandial (post meal) blood sugar spikes the rest of the day. A simple rule of thumb for getting the right amount of protein is to eat a palm-sized portion of chicken, fish, beef or other protein source of your choice, at each meal—if you're a woman, and if you're a man, allow for two palm-sized portions per meal.

Foods To Include From Phase 1

- Grass Fed Beef
- Wild Caught Fish—especially salmon, sardines, cod and halibut
- Free Range Pastured Poultry
- Whole organic, cage-free or pastured eggs
- Healthy Fats—Virgin coconut oil, grassfed, pasture-raised butter, extra virgin olive oil, avocado oil, raw nuts
- Vegetables—as much as you want to eat
- Avocados
- Nuts
- Berries—Cherries, Strawberries, Raspberries, Blackberries

Phase 2 Foods You May Add (*small portions)**

- Slow cooking oats
- Buckwheat
- Brown Rice (whole brown rice—not brown rice flour)
- Wild Rice
- Quinoa
- Gluten Free Flour: Chickpea, bean, hemp, coconut, almond flour, chia flour or flax meal
- Ezekiel Bread-if not gluten intolerant
- Whole Pearled Barley
- Beans—black, pinto, chickpeas, navy, lentils, soy, kidney, black-eyed peas, etc.
- Whole grain brown rice pasta—cooked al dente

- Sweet Potatoes, white potatoes (with skin, preferably the red skinned variety, they are lower glycemic)
- Hummus
- Ice Cream
- Full Fat Milk and Cheese (preferably raw, unpasteurized)
- Plain Yogurt and Greek Yogurt
- Apple (small or half a large apple—apples from grocery stores keep getting bigger and bigger)
- Grapefruit
- Orange
- Peach
- Pear
- Grapes

**Keep portion sizes to about a ½ cup or less a day.*

Always monitor blood sugar carefully when adding these foods back to your diet. Eat them in combination with other healthy foods—proteins, fats and veggies to minimize the effect on blood sugar. Eat proteins, fats and veggie first which will help keep blood sugar lower. Phase 2 foods should only be eaten one time a day!

Record findings along with other variables: sleep, stress, exercise, medications and amounts, and other food eaten at the same time.

Continue to Avoid These Foods:

- **Refined Grains/Flour and Gluten**--Avoid all 'gluten free' products as well—many of these are extremely high glycemic, processed starches. If you'd like to use a gluten free flour, use one made from flax, chickpeas, beans, coconut or hemp flour. These flours are low glycemic.
- **All Sugars and Foods Containing Sugars**—Honey, maple syrup, cane sugar, high fructose corn syrup, corn syrup, fruit juices (even unsweetened fruit juice), sucralose, brown sugar, raw sugar, fructose, glucose, rice syrup, dextrose, erythritol, beet sugar, and more. If you are unsure whether a food contains added sugar, look at the label for "sugars" and you will see a listing of grams of sugar. Avoid ALL artificial or 'low-calorie' sweeteners.
- **Dairy Products**—Add back dairy foods as tolerated—pay attention to blood sugar reactions, as dairy can raise blood sugar. Eat only organic, unprocessed, grassfed, raw and whole fat dairy. There are many delicious unpasteurized raw cheeses out there. Avoid dairy with any added sugar.

- **Processed, Packaged Foods**—Avoid any foods that come in a box, package, or can and have multiple ingredients. Many of the added ingredients are starches, fillers, sugars, and other chemical additives. Avoid ‘diet’ frozen dinners as well.
- **Sweetened Beverages, Including (100%) Fruit Juices**—These drinks hit your system and inject sugars into your bloodstream almost instantaneously. Even fruit juice with no added sugar is very high in fructose.
- **Moderate to High Glycemic Fruits**—Avoid all canned fruits—these often contain sugar—and they are cooked, which means most of their nutrients are gone. Eat only small servings of fresh fruit like: watermelon, pineapple, cantaloupe, apricots, peaches, raisins, papaya, kiwi, banana, mango, and oranges. You can enjoy delicious low glycemic, high antioxidant berries such as strawberries, blueberries, raspberries, blackberries, and cherries.

DIABETES DEFENSE DIET MEAL PLANS

PHASE 2

The meal plans in Phase 1 and Phase 2 are similar, except that in Phase 2, Phase 2 foods were added in, such as: beans, rice, potatoes, quinoa, dairy, etc.

MEALS IN MINUTES

BREAKFAST

Morning Smoothie

- Unsweetened (or sweetened with stevia only) protein powder (rice, hemp, pea, or cold-processed whey)
- ½ cup frozen or fresh berries of your choice
- Unsweetened hemp, almond or coconut milk
- Small handful of almonds or walnuts
- Tsp cinnamon, tsp pure vanilla flavoring
- Greens, if desired: baby kale, spinach, chard, etc. (you won't be able to taste it!)
- Toss ingredients in a blender with ice and blend
- Other add-ins: ½ can organic pumpkin, nutmeg and half an apple

LUNCH

Protein Power Salad

- Prewashed baby greens, arugula, baby kale, spinach, etc.
- Tomato, green pepper, red onion, other veggies
- ½ can or ½ cup of rinsed black beans, navy beans, cooked lentils, or other beans, brown rice, or quinoa
- Any leftover meat from dinner: cooked chicken, fish, beef, etc.
- Dressing: extra virgin olive oil, balsamic vinegar, minced garlic, sea salt and pepper, oregano, basil, and/or rosemary

DINNER

Easy veggie/meat packets (can be made ahead of time and kept in fridge)

- 1 chicken breast or piece of fish
- Any combination of veggies: zucchini, onion, carrot, green beans, etc.
- You may add a 1/3 cup beans, small red potato, brown rice or quinoa if desired
- Chopped garlic cloves, sea salt and pepper, oregano, basil, rosemary or other favorite herbs
- Drizzle of extra virgin olive oil
- On square piece of foil, add meat, veggies, garlic, olive oil and seasonings
- Wrap up ingredients in foil, folding edges together
- Bake or grill at about 350-375 (medium grill heat) for 15-20 minutes

BREAKFAST CHOICES

Veggie Egg Scramble

- Any veggies you have on hand: Onion, carrots, red or green pepper, kale, spinach, zucchini, green beans, carrots, tomato, squash
- 1 tsp grass fed butter, melt in pan
- Sauté veggies in pan with a ½ tsp of turmeric and hot pepper flakes (optional)
- Top with raw cheese, if desired
- Whip 1-2 eggs in cup, and add to hot pan with veggies and scramble together

Mini Quiche Eggs

Mix together:

- 4 eggs
- Chopped natural bacon or natural ham
- Chopped cooked onion
- Drained spinach
- ½ cup shredded cheese if desired
- Small amount of Tabasco or other hot sauce
- Bake in foil muffin cups for 20 minutes. Make in advance and warm up for breakfast, lunch or snacks.

Breakfast Stir fry

Sauté in pan until tender:

- 1 Tbsp of butter
- Sliced mushrooms
- Chopped red, yellow or green pepper
- Chopped zucchini
- Chopped red onion
- Chopped garlic
- Cut up natural (cooked) bacon
- Garnish with fresh tomato and season with Tabasco or other hot sauce

Flax and Buckwheat Berry Pancakes

- ½ Cup ground flax seed
- ¼ cup pure buckwheat flour
- 2 eggs
- Water or flax, almond or coconut milk, if needed
- ½ tsp vanilla
- 1 tsp cinnamon
- ½ cup blueberries, blackberries, or raspberries, smashed up
- Mix up pancakes in bowl, cook until brown on each side, serve with a scoop of berries on top

Breakfast Power Yogurt Bowl

- Plain Greek yogurt
- Add in ½ cup fresh or frozen berries
- Almonds, pecans, macadamias, or walnuts

SNACK, MID-MORNING CHOICES (if desired-choose one)

- 2 Handfuls of raw almonds, walnuts, pistachios or other nuts, 1/2 cup fresh blueberries
- 2 Tbsp nut butter and ½ apple or ½ pear
- 2-4 slices of grass-fed cheese or hard-boiled egg
- Natural (no chemicals added) beef jerky
- Hummus with cut up carrots, celery, cucumber or yellow and red bell peppers

LUNCH CHOICES

Lettuce wraps

- 2-3 slices of natural (no nitrates/no nitrites) deli turkey or beef
- Avocado, red onion, tomato, shredded carrots or any other bright veggie
- Black beans or quinoa
- Large leaf of Boston, Bibb, or leaf lettuce
- Roll in lettuce leaf

Tuna salad lettuce wraps

- Mix one small can or ½ larger size can of albacore tuna (no oil variety)
- Red onion, carrots, green or red pepper, sprouts (any other veggies you'd like to add)
- Tbsp of extra virgin olive oil, squeeze of fresh lemon, and
- Wrap in Boston, Bibb, or leaf lettuce or seaweed Nori wrap

My favorite 'go to' lunch:

- Huge salad of arugula or baby greens, tomato, cucumber, avocado, tomato, red peppers, mushrooms, green or red onion, etc.
- Add 1-2 hard-boiled eggs, or sliced turkey, chicken, tuna, or salmon (any meat or fish leftovers from dinner work great here).
- Add in ½ cup beans of your choice—garbanzos are great
- Dressing: 1 Tbsp olive oil and balsamic vinegar, tsp of Dijon mustard, minced garlic, and fresh or dried herbs (basil, oregano, sage, thyme).

Egg salad

- 2-3 hardboiled eggs
- 1 tbsp (homemade) mayo or virgin olive oil
- Mustard--as much as you want
- Salt, pepper
- Serve on a bed of fresh Swiss chard or organic baby spinach or wrap in lettuce leaves
- Or dip cucumber and celery 'chips' into it and eat as dip

Deli sardine 'sandwich'

- 1 or 2 large pieces of romaine, Bibb or Boston lettuce
- Boneless, skinless sardines in olive oil, or any leftover fish, canned salmon or tuna
- Lettuce, tomato, red onion, avocado
- Slice up avocado on lettuce, stack with turkey, tomato, red onion, and top with lettuce and a few fresh basil leaves.
- Or, you can use one piece of whole grain, gluten free or Ezekiel bread instead of lettuce

Guacamole deviled eggs

- Make guacamole with fresh avocado, garlic, lemon juice, onion, tomato, cilantro
- Hard boil 4-6 eggs, cool, slice in half lengthwise, and scoop out yolks
- Smash yolks and add to guacamole, spoon into cooked egg whites
- Chill until served
- Enjoy with chopped fresh veggies or on top of organic baby greens

Any leftover meat, fish or chicken, heated up and served with either baby greens or cooked greens, broccoli, etc. You may have ½ sweet potato with butter if desired, or ½ cup quinoa.

SNACK MID-AFTERNOON CHOICES (if desired)

- 1 hardboiled egg and baby carrots, red or green bell peppers
- 2 pieces natural (no preservatives like nitrites/nitrates) sliced turkey with apple or avocado
- ½ cup berries and handful of nuts, nut butter
- Handful of raw almonds, walnuts, cashews, mixed nuts, add ¼ cup raisins if desired
- Natural beef jerky, turkey jerky or salmon jerky
- Couple slices of natural (no nitrites/nitrates) deli turkey with half of a sliced avocado or ½ piece of apple or pear

DINNER CHOICES

Roasted chicken and veggies

- Store-roasted all natural (no bbq sauce added) chicken (great for leftovers, lunches and snacks too!)
- Steamed Brussels sprouts or broccoli
- Serve veggies topped with tsp butter, and squeeze of fresh lemon
- ½ cup cooked spaghetti squash with butter

Burger and greens

- Grass fed beef burger (no bun), cooked medium (this is safe to do with grass fed beef) with sea salt and pepper. Add mustard if desired. Avoid ketchup—it contains too much sugar.
- Sautéed organic kale lightly cooked with butter, garlic and lemon juice
- Serve burger on lettuce leaves to use as a ‘bun’. Add mustard, tomato and onion slices if desired.

Wild Salmon Veggie Stir-fry

- Cut in chunks and sauté in pan with:
- Asparagus, sliced red bell pepper, onion, garlic
- 2 tablespoons olive oil
- Fresh basil or fresh cilantro
- Add chopped fresh tomatoes just before serving
- Lime juice, hot pepper flakes to taste
- Toss in ½ cup cooked brown rice

Salad Nicoise

- Baby greens, spinach, arugula or any combination
- 1 boiled egg, sliced
- ½ cup green beans
- 1-2 small (cooked firm) red potatoes with skin on, quartered
- Small can of water packed tuna or salmon
- Dressing: 2 tbsp lemon juice, 1 tbsp extra virgin olive oil, tsp of Dijon mustard, capers, sea salt and pepper

Marinara and Meat Spaghetti Squash

- Cut in half and cook spaghetti squash in cut side down in pan with ½” of water at 375 for 45 minutes or until tender. Scoop out and drizzle with olive oil, sea salt and pepper. OR, use precut veggie spirals and sauté lightly.
- Brown 1 lb grass fed ground beef or bison
- Sauté chopped garlic in pan, add:
- 1 can tomato sauce
- 1-2 tsp oregano

- 1 tsp basil
- Serve over spaghetti squash or cooked veggie spirals

Chili Chicken in Slow cooker

- Add chicken thighs or cut up chicken to crockpot
- 1 small can mild green chili peppers
- 1 small or half a large red onion, chopped in chunks
- 1-2 Tbsp chili powder
- 2 tsp cumin
- 1 small can or jar of organic tomatoes, OR add a small container of mild salsa (check to be sure there is no sugar or corn syrup added)
- Sea salt, pepper
- Cook on low for 6 hours
- Garnish with chopped cilantro, fresh salsa or tomatoes, and avocado. Serve with large lettuce leaves as 'taco shells'.
- Serve over ½ cup brown rice or quinoa, optional

Mexican Fiesta Salad

- Chopped romaine lettuce, baby greens, arugula
- Tomato
- Black beans, kidney beans or pinto beans
- Chopped red onion
- Red pepper or roasted red pepper
- Black olives
- Cilantro
- Avocado
- Chopped cooked chicken or fish
- Salsa (be sure no sugar added)
- Dressing: 1-2 fresh limes, squeezed, olive oil, garlic, sea salt and pepper
- Assemble all ingredients in large bowl, add dressing

DESSERT OR LATE EVENING SNACK CHOICES (if desired)

- 2-3 pieces dark chocolate (70% cocoa or more is best)
- Raw almonds or walnuts, ½ cup blueberries, blackberries, strawberries, cherries or raspberries, or half a slice apple, with a teaspoon of cinnamon sprinkled on top
- Cup of green, white or red rooibos tea, sweetened with stevia.

Important Note—

*Because herbs and spices have such potent blood sugar lowering, antioxidant, anti-inflammatory powers, add them liberally to most every dish you prepare. Keep fresh or dried basil, oregano, sage, thyme, cilantro, and parsley on hand and add in to your salads, cooked dishes and even eggs. And don't forget to include the diabetes-reversing, super spices: **Turmeric, cayenne, cloves, cinnamon, fresh garlic, oregano, basil, rosemary and ginger.***

Phase 1 and Phase 2 Recipe Sampler

Individual Egg and Veggie Quiche Cups



This is a great meal or snack for Phase 1 or Phase 2. This is a great meal to make ahead and keep on hand in the fridge for a fast, healthy, high protein, low glycemic, fat burning meal or snack. Be sure and use all the egg yolks as well as the whites, because the yolks contain most of the healthy fats, vitamins, minerals and nutrients. Try spinach or kale, chopped mushrooms, green onions, sweet red peppers, asparagus, or zucchini, or whatever else you can dream up.

Ingredients

6 large eggs, beaten
1 small package of frozen organic spinach or chopped kale or other greens
½ cup of chopped red pepper, asparagus, or other vegetable
½ cup or so of shredded raw, grass fed cheese (optional)
¼ cup of minced onion
Dash of Tabasco, or other hot sauce, or red pepper flakes
Sea salt
1 - 2 slices of natural, nitrite/nitrate free ham, sausage or bacon if desired, diced
Muffin pan sprayed with nonstick cooking oil for 12 servings

Directions

Heat oven to 350 degrees F. Spray muffin pan with cooking spray. Thaw and drain the spinach. You can wring out the spinach with your hand and get most of the excess liquid out of it.

Mix all ingredients in with beaten eggs, and pour into muffin cups. Bake in 350-degree oven for 20 minutes, or when a knife inserted comes out clean. Cool and serve.

Can be refrigerated and re-warmed in a pan (low heat with lid on) to reheat. Great topped with fresh salsa and avocados! Makes 10.

Low Glycemic Flax Seed Pancakes with Berry Topping



Pancakes are something that get eliminated from a diabetes reversal diet—until now. These low-glycemic pancakes are allowable on Phase 1 if you feel you have your blood sugar under control. Great for Phase 2 as well.

Ingredients:

2-4 eggs
¼ cup coconut flour or buckwheat flour
2/3 cup ground flax meal
1 pinch nutmeg
2 tsp cinnamon (or more if you like)
1 pinch salt
1 tsp pure vanilla
1/4 to 1/3 cup unsweetened almond, hemp, or coconut milk or water
Pecans or walnuts
Raspberries, Blackberries, and/or Blueberries, fresh or frozen

Directions

Mix all ingredients except for nuts and berries. Mash berries and nuts in small bowl, set aside. Add more liquid if you find batter is too thick. Add coconut oil or butter to a pan and heat over medium heat. Pour about a ¼ cup of batter for each pancake, allowing

each side to brown before flipping it. Serve with a small amount of grassfed butter and mashed berries. Serves 2-4.

Wine Country Chicken Salad



Delicious and healthy for Phase 1 or Phase 2. This recipe is a favorite, adapted from a recipe from the Robert Mondavi Winery in Napa Valley. It makes a perfect meal with high quality protein, good-for-you fats, and healthy greens including diabetes-fighting basil, loaded with antioxidants and fat burning power. Enjoy!

Salad

2 cooked chicken breasts
½ lb asparagus, cut into 2" pieces
½ cup Nicoise or other black olives, pitted
10 cherry tomatoes, quartered
2 Tbsp capers, drained and rinsed
2 Tbsp finely chopped fresh basil
Parmigiana Reggiano, shaved or grated

Dressing

½ cup extra virgin olive oil
1 medium shallot minced
2 generous tsp finely chopped fresh thyme
1 Tbsp or more finely chopped fresh parsley

¼ cup fresh lemon juice (1 medium lemon)
Sea salt and pepper to taste

Directions

Cook the asparagus for 3-4 minutes until tender but crisp. Drain and cool under cold water. Add olives, tomatoes, capers, basil and pepper to the chicken and stir to combine.

Mix the ingredients for the dressing, and add to the salad mixture. Stir gently to combine. Arrange on a bed of organic baby greens, spinach, Bibb lettuce, or red leaf lettuce. Garnish with some Parmigiana Reggiano (this is the Italian version of Parmigiana cheese, it's usually raw and aged, and way tastier). Using a vegetable peeler, just peel a few thin pieces onto the salad.

This can be prepared up to 6 hours ahead of time and refrigerated. Add the dressing just prior to serving. Serves 2-4, depending on appetites.

Guacamole Deviled Eggs



Perfect meal or snack for Phase 1 or Phase 2. These delicious eggs have guacamole as a healthy addition to the egg yolks. On top of all the great blood sugar stabilizing, fat burning benefits you get from eating the eggs and the yolk, you get the healthy fats, vitamins and minerals in the avocado as well.

The healthy fat in avocados helps control insulin levels and gives your brain a signal that you are satisfied when you eat them, so you eat less. This hunger satisfying low glycemic snack will keep your blood sugar stable, and replenish and fuel your body with lean, fat burning nutrition.

Ingredients

4-6 eggs, hard-boiled and cooled

1 avocado

1 clove minced garlic

¼ cup finely minced red onion

1 small roma or plum tomato, seeded and finely chopped

2-4 Tbsp chopped cilantro

Frank's Redhot sauce or Tabasco, more or less to taste, depending on its hotness

1 tsp lemon or lime juice

Sea salt

Directions

Peel hard-boiled eggs and cut in half length-wise. Gently pop out yolks into a small bowl with avocado, garlic, tomato, onion, hot sauce and lemon juice. Mash yolks and avocado mix together. Season with sea salt, and freshly ground black pepper to taste. Refill egg whites with the yolk/guacamole mixture, sprinkle with chopped cilantro.

Serves 4.

World's Best Ever Chili



I like to add some unexpected ingredients into my chili recipe, not only for a taste sensation, but to increase the nutrient and antioxidant punch. You can adjust the seasonings for a milder or spicier version.

Oregano contains thymol and rosmarinic that are also very potent antioxidants. Cinnamon can lower LDL (the bad kind) cholesterol, lowers blood sugar, fights certain types of cancer, and helps prevent harmful blood clots.

Chocolate powder is chock full of flavonoids, which are antioxidants to benefit your heart and your body. It also contains a rich source of magnesium, a mineral the majority of people are deficient in.

Red chili peppers help burn fat, raise the metabolism, open up the blood vessels, fight inflammation, and lift mood. Don't forget the blood sugar-lowering power and the anti-inflammatory ability of the onions and garlic.

In Phase 1, omit beans.

Ingredients

- 1 lb of grass fed ground beef, or beef stew meat, chopped in small pieces
- 1-2 Tbsp of extra virgin olive oil
- 1 medium red onion chopped
- 2 or 3 cloves of garlic chopped
- 1 small can of mild green chilies, chopped

2 Tbsp of cumin, or more to taste
2-4 Tbsp of chili powder
1 Tbsp of oregano
1 Tbsp of cinnamon
2 tsp of unsweetened organic cocoa
1 can of crushed fire roasted organic tomatoes
1 to 2 cups of water
1-2 Tbsp of Frank's red-hot sauce
½ to 1 tsp of sugar
Red pepper flakes to taste (be careful, this gets hotter as it cooks!)
Sea salt and red pepper flakes to taste

Phase 2 2 -14 oz cans of any combination of kidney beans, black beans or pinto beans

Directions

Brown meat over medium heat and add in onions, garlic, salt, cumin and chili pepper when meat is almost cooked. Add in rest of ingredients, and simmer over low heat, 1-2 hours, stirring occasionally. Adjust seasonings to taste, keeping in mind that red pepper flakes pick up heat and intensity as they cook.

Garnish with avocado slices and a big handful of chopped cilantro. Serves about 4.

Note: This is great for leftovers and tastes even better when it's re-heated as a leftover. The flavors and spices all mingle together and become richer and tastier.

Italian Veggies with Spaghetti Squash



Photo courtesy of www.imarriedanutritionist.com

For Phase 1, omit spaghetti squash. Tomatoes and tomato sauce are full of a super nutrient called lycopene. Lycopene is a carotenoid that has been proven to help protect against breast, pancreatic, prostate and intestinal cancer, and it reduces heart attack risk.

Tomatoes also provide vitamin C, vitamin K, and vitamin A. The vitamin A comes from the carotenoids and beta carotene, known for their diabetes fighting power. These antioxidants travel through the body neutralizing dangerous free radicals that could damage cells, cause inflammation and heart disease, diabetic complications, asthma, and colon cancer.

Sauce

1 lb (natural, nitrite/nitrate free) ground Italian sausage, or grass fed ground beef
(If you cannot find ground sausage, you can purchase it in links and slice it before cooking)

4 cloves of garlic, mashed and minced

1 medium onion, chopped

Sliced mushrooms

Sliced zucchini

2 14 oz. cans organic tomato sauce
1 small can organic tomato paste
¼ -½ cup white wine or organic chicken stock
1-2 Tbsp oregano
½ tsp honey
1 tsp thyme
1 tsp basil
1 bay leaf

Phase 2 Spaghetti squash, split lengthwise and de-seeded

Directions

Slice sausage and cook. Add veggies to pan and cook on medium heat until tender and translucent. Stir in spices, tomato sauce, paste and water. Add honey, stir together and simmer, covered, on low heat for about an hour. Stir occasionally.

Phase 2 Spaghetti Squash ‘Spaghetti’

Heat oven to 375, and place squash in shallow baking pan with about ½ “ of water. Cover with foil, and cook in oven 30-40 minutes until squash is tender, stringy and can easily be removed with fork. Drizzle with extra virgin olive oil and sea salt before serving.

While squash is in oven, prepare vegetables as above and serve over spaghetti squash. Serves 4.

Easy Chicken or Fish and Veggies in Foil Packets



This is a delicious meal for Phase 1 or Phase 2. Cooking in foil packets is the basis for a great, quick and easy meal. Once you get the hang of it, you will find there are infinite variations—the only limit is your imagination!

Try substituting fish instead of the chicken, along with whatever veggies are in season at the time. You can use the oven, a charcoal or gas grill. If grilling, place packets away from direct heat so they do not overcook. I have even used this recipe a few times when camping as well, and it works beautifully on a grate over a fire too.

Fresh or dried herbs and spices have huge amounts of concentrated antioxidants and nutrients, so try different combinations for a different taste sensation. And always be generous with the garlic too!

Ingredients

2 lbs skinless, boneless chicken breasts, sliced thin; or boneless, skinless thighs, or
2 lbs wild salmon or cod or other wild caught fish
1 red or white onion, sliced
½ lb fresh green beans, asparagus, sliced fresh zucchini, summer squash, etc.

2-4 Tbsp grass fed butter, or extra virgin olive oil

1-2 cloves minced garlic

1 tsp (or more) oregano, basil, thyme, rosemary or other herbs; fresh or dried

Sea salt, pepper

Foil sheets, approximately 12" x 10"

Phase 2 2-4 white or sweet potatoes, quartered and sliced in ¼" or less thick pieces to foil packet with other veggies.

Directions

Heat oven to 350-375 degrees F, or grill at medium heat.

Place a serving of meat in middle of foil sheet, spread vegetables on top, drizzle with extra virgin olive oil or a small chunk of grass fed butter, season with garlic, herbs, salt and pepper, and wrap in a rectangular shaped package, bringing edges of foil together on top and sides and folding tightly a couple of times to seal in juices.

Place packets on a cookie sheet or shallow baking pan and bake in oven for about 30-40 minutes or until meat is cooked and vegetables are tender. If cooking on a grill, cook over medium high heat, and place packets away from direct heat source. If cooking over a fire, wait until fire has died down some, and coals are glowing red.

For fish, shorten cooking time to about 20 minutes or less, as fish usually cooks quicker, depending on the size and type. Try wild caught salmon, cod or tilapia.

Serves 4.

Salad Nicoise



High in protein, healthy fats and fiber, this salad Nicoise makes a satisfying and incredibly healthy meal. You can make it hours before, and add the tuna and dressing just before serving. Substitute tuna with canned or leftover wild salmon, or any other piece of cooked fish you may have left over.

Dark green leafy salad greens and vegetables are alkalizing foods. Arugula is a member of the cabbage family, which makes it antioxidants, cancer fighting phytochemicals, and an excellent source of vitamins A and C, folic acid, calcium, manganese, and magnesium, as well as potassium, iron, zinc, riboflavin, and copper.

Salads stimulate growth of healthy gut bacteria, which helps to stabilize blood sugar and prevent diabetes. By having a good supply of probiotics in the gut, you also boost your immune system, and absorb nutrients from food better.

For Phase 2 you may add firmly cooked red skinned potatoes. An occasional potato will not hurt your efforts, especially when it is combined with other fiber rich vegetables, healthy fats, and good quality protein.

Salad Ingredients

2 or 3 big handfuls of baby greens, chopped red leaf lettuce or romaine
2 handfuls of baby arugula

½ lb or so fresh or frozen organic green beans or asparagus
4 eggs hard-boiled, quartered
2 large or 3 smaller ripe tomatoes, chopped
1/3 cup kalamata or Greek olives
½ large red onion sliced thinly
Handful of chopped parsley
1 small can of tuna or wild salmon (drained), or equal amount of cooked fish
Capers for garnish
Phase 2 2 new red potatoes, quartered, boiled and cooled

Dressing Ingredients

1-2 garlic cloves, smashed and minced
1 small shallot, minced
½ cup extra virgin olive oil
¼ cup balsamic vinegar or fresh lemon juice
½ tsp Dijon mustard
Sea salt and pepper to taste

Directions

Steam green beans or asparagus lightly until tender crisp and then cool under cold water. Whisk together ingredients for dressing.

On a large plate or shallow bowl, place greens on bottom, and arrange potatoes, green beans, eggs, tomatoes, olives and tuna in separate sections on top of greens. Drizzle with dressing and garnish with capers. Serves 2-4.

Raw Berry Crisp Dessert



Crunchy nuts and naturally sweet berries make a tasty and easy dessert—packed with antioxidants, fiber and vitamins. For Phase 2, you may add in a tablespoon of pure maple syrup. A sweet treat your body will love!

Ingredients

4-6 cups of mixed berries or berries of your choice: blackberries, blueberries, raspberries and strawberries

Stevia to taste

1 cup raw pecans

½ cup walnuts

¼ cup raisins

2 tsp cinnamon

Plain Greek yogurt

1 tsp vanilla

Phase 2 1 Tbsp pure maple syrup

Directions

Place nuts, cinnamon, raisins and stevia in food processor, and process just till coarsely chopped. Sprinkle nut mixture over berries and serve.

Phase 2 Mix maple syrup in with nut mixture.

Mix vanilla with Greek yogurt and add a small amount of stevia if desired, serve on top of berries.

See many more delicious, mouth watering Phase 1 and Phase 2 recipes in the Diabetes Defense Diet Recipe Book, including a mouth-watering variety of delicious, low glycemic meals and desserts including:

- ***Superfood Green Energy Smoothie***
- ***Mediterranean Chicken Piccata with Artichoke Hearts and Capers***
- ***Moroccan Chili Paprika Seafood Tagine***
- ***Tuna Apple Veggie Salad***
- ***Quinoa 'Tabouli' Salad***
- ***Summery Cantaloupe Salad***
- ***Roasted Brussels Sprouts with Bacon and Siracha Sauce***
- ***Roasted Curry Cauliflower***
- ***Cashew Hummus***
- ***Roasted Red Pepper Baba Ghanouj (eggplant) Dip***
- ***Coconut Flour Strawberry Shortcake***
- ***Very Berry Pie with Whipped 'Cream'***
- ***Nutty Energy Balls***
- ***Avocado Key Lime Pudding***

Quick, easy and delicious!

Sources

Adams, Mike. "How I cured diabetes in five steps, and why one-third of U.S. adults will have diabetes by 2050" Natural News, October, 2010.

http://www.naturalnews.com/030150_diabetes_Americans.html

American Diabetes Association, "Statistics About Diabetes",

Data from the *National Diabetes Statistics Report, June 2014*

(<http://www.diabetes.org/diabetes-basics/statistics/#sthash.ifGow0lr.dpuf>)

Khan, Safdar, Muzaffar, Khattak, Anderson. American Diabetes Association, Diabetes Care, "Cinnamon Improves Glucose and Lipids of People With Type 2 Diabetes",

American Diabetes Association, Diabetes journal. December 2003.

<http://care.diabetesjournals.org/content/26/12/3215.full>

Bernstein, Dr. Richard K., MD, Dr. *Bernstein's Diabetes Solution: A complete Guide to Achieving Normal blood Sugars*. Little, Brown and Company. March, 2007.

Bernstein, Dr. Richard K., MD, Dr.

"Avoid these 5 common mistakes to control diabetes." *Bottom Line, Everyday Health online*. July, 2013.

<http://bottomlinehealth.com/avoid-these-5-common-mistakes-to-control-diabetes/>

Bowers, Elizabeth Shimer. "Drinking tea for diabetes prevention." *Everyday health*.

2014. <http://www.everydayhealth.com/news/drinking-tea-diabetes-prevention/>

Kasia Joanna Lipska MD, Bottom Line Health.com, "Don't be one of the millions of Americans Overtreated for Diabetes." *Bottom Line Health online*. March 2015.

<http://bottomlinehealth.com/dont-one-millions-americans-overtreated-diabetes/>

Centers for Disease Control and Prevention, National Center for Health Statistics.

Division of Health Interview Statistics, data from the National Health Interview Survey.

Statistical analysis by the Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation.

Diabetes Chart, United States Statistics. March 28, 2013.

Diabetes.co.uk. "Vitamin D deficiency increases type 2 diabetes risk." March, 2015.

<http://www.diabetes.co.uk/news/2015/mar/vitamin-d-deficiency-increases-type-2-diabetes-risk-92657342.html>

Ebeling, Catherine, Geary, Mike. *The Top 101 Foods that Fight Aging*, ebook. 2011.

<http://www.truthaboutabs.com/foods-that-fight-aging.html>

Fuhrman, Joel. *The End of Diabetes: The Eat to Live Plan to Prevent and Reverse*

Diabetes. HarperCollins. Kindle Edition. December, 2012.

"Ginger Shown To Lower Blood Sugar." *Prevention Magazine*. April 10, 2014.
<http://www.prevention.com/health/diabetes/ginger-shown-lower-blood-sugar-diabetics>

Gorman, Christine. "Why so Many of Us are Getting Diabetes." *Time: Health*. December 27, 2003.

Greenberg, Riva. *50 diabetes myths that can ruin your life: and the 50 diabetes truths that can save it*. Amazon.com. July 2009.
<http://www.amazon.com/Diabetes-Myths-That-Ruin-Your/dp/0738213209>

Greenberg, Riva. "Glycemic Load and Glycemic Index: What's the Difference and Why Does it Matter?" *Huffington Post*. June, 2011.
http://www.huffingtonpost.com/riva-greenberg/gl-and-gi_b_863126.html

Harvard T.H. Chan School of Public Health. "Sugary drinks and obesity fact sheet." June, 2012. <http://www.hsph.harvard.edu/nutritionsource/sugary-drinks-fact-sheet/>

Huang, Elbert MD, MPH1, Basu, Anirban PHD1, O'Grady, Michael, PHD2 and Capretta, James C. MA3, "Projecting the Future Diabetes Population Size and Related Costs for the U.S". *Diabetes Care*. December 2009, vol. 32 no. 12 2225-2229.

Hyman, Mark, MD. *The Blood Sugar Solution*. Little, Brown and Company. February 2012. http://www.amazon.com/dp/031612737X/?tag=googhydr-20&hvadid=31562439317&hvpos=1t1&hvexid=&hvnetw=g&hvrnd=16390893044258236484&hvpone=&hvpstwo=&hvpqmt=b&hvdev=c&ref=pd_sl_3fm3mbgolp_b

International Diabetes Federation. "Complications of diabetes." 2014
<http://www.idf.org/complications-diabetes>

Jensen, MG et al. "Effect of alginate supplementation on weight loss in obese subjects completing a 12-wk energy-restricted diet: a randomized controlled trial." *American Journal of Clinical Nutrition*. July 2012.

Ji, Sayer. "Grape Seed Extract Superior To Blockbuster Diabetes Drug, Preclinical Study Finds." *Green Med Info*. September, 2013.
<http://www.greenmedinfo.com/blog/grape-seed-extract-superior-blockbuster-diabetes-drug-preclinical-study-finds>

Khadori, Romesh, MD, PhD, FACP. *Medscape*, "Type 1 Diabetes Mellitus." *Medscape*.
<http://emedicine.medscape.com/article/117739-overview>

Manzella, Debra, RN. "Fructosamine – How is it different from HbA1c test." Diabetes About.com

<http://www.labtestsonline.org/understanding/analytes/fructosamine/test.html>

MacLean CH, Mojica WA, Morton SC, Pencharz J, Hasenfeld Garland R, Tu W, Newberry SJ, Jungvig LK, Grossman J, Khanna P, Rhodes S, Shekelle P. "Effects of omega-3 fatty acids on lipids and glycemic control in type II diabetes and the metabolic syndrome and on inflammatory bowel disease, rheumatoid arthritis, renal disease, systemic lupus erythematosus, and osteoporosis." Pub Med.gov. March, 2004.

Mercola, Joseph, DO. "Diabetes Epidemic Expected to Double", December 15, 2009. Mercola.com.

Mitchell, Deborah. "How certain seaweeds may help type 2 diabetes." EMaxHealth. August, 2013. <http://www.emaxhealth.com/1275/how-certain-seaweeds-may-help-type-2-diabetes>

National Center for Chronic Disease Prevention and Promotion, "Diabetes Latest Figures." June, 2014.

Newcastle University. "Type 2 diabetes reversed by losing fat from pancreas." ScienceDaily. ScienceDaily, December 2015. www.sciencedaily.com/releases/2015/12/151201141231.htm

Raw Michelle. "Studies show diet soda is linked to belly fat, type 2 diabetes and obesity." Natural News. June 2015. http://www.naturalnews.com/050123_diet_pop_soda_consumption_obesity.html#ixzz3dfE4atcA

Sears, Al, MD. "Glycemic Index and glycemic load chart". AlSearsMD.com <http://www.alsearsmd.com/glycemic-index/>

Sisson, Mark. "25 ways to improve your insulin sensitivity." Mark's Daily Apple.com. April 2015. <http://www.marksdailyapple.com/25-ways-to-improve-your-insulin-sensitivity/#axzz3ZNYM4alq>

Weil, Andrew, M.D., and Becker, Brian, M.D., "Vitamim Library, Alpha Lipoic acid". September, 2012. <http://www.drweil.com/drw/u/ART03051/AlphaLipoic-Acid-ALA.html>

World Health Organization. "The cost of diabetes." Fact sheet No. 236. <http://www.who.int/mediacentre/factsheets/fs236/en/>

About the Authors

Catherine Ebeling, RN BSN

Catherine (Cat) Ebeling is an RN with a Bachelor of Science in Nursing, with thirty years of studying diet, nutrition, food allergies, weight loss and disease. Catherine is an international expert on Anti-Aging, Longevity, Wellness, and 'Green' living, and has traveled worldwide to study, research, teach, and observe optimal sustainable diets and health practices of the healthiest, longest-living populations.



Catherine is also an expert on food allergies and has studied this area of diet extensively. When she discovered she had several food allergies at the age of 25, (including wheat, dairy, corn, soy, and nuts), as well as celiac disease—a serious autoimmune disease of the GI tract in which the body attacks the digestive system, she set out to look for solutions.

Undiagnosed food allergies and celiac disease can lead to severe malnutrition, osteoporosis, anemia and many other serious diseases, including cancer. Not willing to sit around waiting for her health to deteriorate, she studied every nutrition and diet book available in search of the answers to her health problems.

Cat has been intensely studying, writing and giving seminars on diet, nutrition, disease, and natural alternatives to drugs. In addition, she has helped many people overcome their health issues, avoid harmful medications, and the resulting negative side effects. As a part of the medical community, it was clear that there was a lot of ignorance among doctors and her peers in regard to nutrition and health, so she often became a resource for both doctors, other nurses, and patients for their dietary concerns.

Through the study of diet and health, as well as her twelve years as a certified fitness professional, she has learned tried and true ways to lose weight, look great, feel young and have tons of energy. This "simple, smart, nutritional" approach has created real results for many people.

Catherine graduated Magna Cum Laude with a BS in Nursing ('05) from St. Louis University, a prestigious medical and scientific university. She is currently studying for her Masters of Science in Nursing and Public Health. She also has a Bachelor's Degree in Marketing from Ball State University in Indiana. She is certified as a Personal Trainer by the American Council on Exercise.

As a mother of 24, 22 and 20-year-old children, she had to fight to lose weight after having children, and now is back to the size she was in high school and more fit than ever. Cat has been an athlete since she was a child, participating in track as a sprinter and hurdler, and in gymnastics and cheerleading. Throughout her active adulthood, she has pursued many activities including cycling, running, weight lifting, aerobics, water skiing, and snow skiing. She now races mountain, cyclocross and road bikes against women half her age, and often wins.



Cat attributes her success in athletics as well as her youthful, healthy outlook on life to a healthy diet and exercise.

For more great tips on diet, health and delicious low glycemic fat burning recipes, see her website <http://www.simplesmartnutrition.com/>

If you'd like extra help with managing your diabetes reversal diet, including personalized weekly meal plans, recipes, health tips, weekly webcast, along with your own diabetes reversal community and one-on-one tips to stay on track from Cat, sign up for Cat's Diabetes Defense Diet membership, on her site at www.simplesmartnutrition.com.

Mike Geary:

Hey there my fellow nutrition/fitness/health/foodie enthusiast! My name is Mike Geary and I've been a Certified Nutrition Specialist and Certified Personal Trainer for over 15 years now, as well as a best-selling author of 5 different books/ebooks with more than 1.2 million copies sold in the last 10 years (I'll list out all of my best-selling books/ebooks for you later.)



I've also been studying nutrition and exercise for almost 25 years now, ever since I was about 15 years old and used to carry around a little book called "The Vitamin Bible" with me everywhere I went. I know, I know...what a **nerdy teenager** I must have been, right?

Oh well, at least it gave me my healthy obsession with Nutrition from a very young age, and I've continued to immerse myself in the study of health and nutrition for the last 25 years of my life.

I just turned 40 this year, but I feel WAY better and healthier than I was 20 years ago when I was in college. This just shows that you don't have to gain weight and let your health fall apart as you get older. Instead, you can decide to get SMARTER with what you put inside your body, and make yourself feel younger even though your chronological age keeps getting older.

And if you think eating "healthy" means eating nothing but dry flavorless chicken breasts and broccoli, you're sadly mistaken... Here's a quick glance at some of the great quality enjoyable food (that's still very healthy as I'll explain throughout this blog), that I LOVE to eat every day, yet that I know is protecting my health...

- Organic coffee or espresso with REAL heavy cream (pasture-raised cream of course) and a small touch of coconut sugar (for the [awesome health benefits you can get from grass-fed dairy fat as I explain here](#))
- 2-3 WHOLE eggs most days of the week, along with grass-fed sausage and veggies (I certainly HOPE you already know that [whole eggs are WAY healthier than egg whites](#), right?)
- Delicious high-fat foods like creamy avocados, butter, coconut cream/oil, dark chocolate, walnuts, almonds, pecans, macadamias, and even paleo muffins made out of delicious nut flours instead of the typical blood-sugar destroying and

glutenous wheat flour. You can see my [article here with 7 of my favorite lean-body fatty foods](#).

- Grass-fed steaks, organ meats, veggies with melted pasture-raised cheese, sweet potatoes with real butter, and other rich-tasting but healthy dinners
- A tasty and healthy glass of red wine with dinner (Too much might not be healthy, but 1-2 glasses per day can be very heart-healthy, but also [good for your gut health as explained here](#))
- Delicious rich and creamy [healthy chocolate pudding recipe](#), or maybe my [healthy chocolate superfood fudge recipe](#)...Mmm! Btw, here's another super-tasty [healthy coconut oil fudge](#) from our PaleoHacks blog.
- and so much more tasty treats that many people don't realize can fit into a healthy lifestyle.

I grew up in Pennsylvania, attended a small college called Susquehanna University, spent 8 years living in New Jersey, and finally have found a permanent home and happiness in the incredibly beautiful rocky mountains of Colorado and Utah. I enjoy skiing most days during the winter in Utah and spend a lot of time mountain biking, hiking, golfing, fishing, kayaking, paddle boarding, gardening, and enjoying other fun outdoor activities and sports here in the mountains.

Although this has nothing to do with nutrition per se, you might want to know just a tad bit more about my personality and what I do for fun when I'm not writing about health, so.... As an avid adventurer, here's some incredibly fun stuff I've done in the last 10 years:

- 3 skydiving jumps (2 of them from 17,000 feet in Colorado)
- 6 whitewater rafting trips including some of the most extreme Class 5 rapids in North America in the well-known Gore Canyon, and Class 5 rapids in Thailand.
- Piloting an Italian fighter plane over the desert of Nevada (wow, what a blast!)
- Taking part in a "Zero-Gravity Flight" where you actually experience weightlessness and float around the airplane cabin (the same training given to astronauts)
- Heli-skiing in the Andes of Chile and the Canadian Rockies of British Columbia.
- Scuba diving the Silfra Ravine in Iceland in 34-degree F water and 300-feet visibility underwater.
- Snowmobiling and hiking on a glacier that overlies a volcano in Iceland
- Driving Porsche powered dune buggies through the entire length of the Baja Peninsula of Mexico for 3 weeks.
- Dog sledding in the Arctic circle of Sweden, along with staying at the famous Ice Hotel in northern Sweden, made entirely of ice!
- Ziplining over canyons and forests in the Rocky Mountains, Costa Rica, and Mexico
- Cruising most of the Caribbean
- Traveling through Thailand, Nicaragua, Spain, Belize, Costa Rica, Mexico, Iceland, Chile, Sweden, Hawaii, Dominican, the Bahamas, Jamaica, Cayman

Islands, Turks & Caicos, Trinidad & Tobago, Croatia, France, and all over the US/Canada.

You may have heard before that I authored what's become sort of a famous program over the years for six pack abs enthusiasts...a book/ebook called [*The Truth About Six Pack Abs*](#) that has sold over 1 Million copies in the last 10 years. This ebook has also been translated currently into Spanish, German, Italian, Portuguese, and French as seen below:

- [German version of Truth About Abs](#)
- [Spanish version of Truth About Abs](#)
- [French version of Truth About Abs](#)
- [Italian version of Truth About Abs](#)
- [Portuguese version of Truth About Abs](#) _____

I'm also super-passionate about skiing and I've authored a program [here for hard core skiers to get their legs in the shape of their lives for the skiing season](#). Even if you're not a skier, these programs are some very unique leg training programs and will help anyone to get rock solid legs of steel, if that's one of your goals!

Other popular best-selling books/ebooks that I've written are [*The Top 101 Foods that Fight Aging*](#) (all about anti-aging foods, spices, herbs, and other tips), [*The Fat Burning Kitchen*](#) (super-popular manual that I co-authored with Cat Ebeling), and a fun little ebook called [*Do THIS, Burn Fat — 101 Sneaky \(but simple\) Weight Loss Tricks*](#) (co-authored with Jeff Anderson.)

I'm also the President and owner of the [#1 most popular Paleo Community on the internet, PaleoHacks.com](#). You can always check for updates at the [PaleoHacks blog here](#).

I'm also a contributing author and advisor for one of the biggest [alternative health sites on the internet, called TheAlternativeDaily.com](#).

In addition, I'm a contributing author and advisor for [DanetteMay.com](#), and Danette is a good friend and one of the top women's fitness experts in the country.

Okay, enough about me! The purpose of this blog isn't about me...I created this blog to help YOU live a healthier, more energetic and youthful life, and actually ENJOY the food you eat, and enjoy the exercise that you do! It's all about happiness in LIFE, and much of that health and happiness starts with one of THE most important aspects of your life...what you EAT!

You can go back to the [homepage of this blog here](#) to browse current articles, recipes, and more.

-Mike Geary, aka – The Nutrition Watchdog