How to Give Up Sugar—and Be Successful

Winston Churchill once said, “A lie gets halfway around the world before the truth has a chance to get its pants on.”

In the 1960s, the Sugar Research Foundation orchestrated one such lie to dupe the public into believing dietary fat was to blame for heart disease. Although the research data clearly implicated sugar, the sugar lobby funded their own studies and financially swayed the conclusions to recommend low-fat diets for preventing heart disease. Not only did it take the focus off the dangers of sugar, it was a great marketing opportunity. The sugar lobby estimated in 1954 that if low-fat diets were adopted, the replacement for fat would be sugar and per capita sugar consumption in this country would increase by a third.

The plan worked. For the next 50 years, patients, doctors, and other researchers bought the story that sugar was basically harmless and fat was killing us.

For the past 30-plus years, I’ve been saying that sugar kills and it’s one of, if not the primary, causes of heart disease. But this backstory about the sugar industry isn’t some conspiracy story of mine. Three researchers uncovered internal documents of the Sugar Research Foundation from the 1960s, which outlined details of how this hoax was accomplished. These details were published in 2016. (*JAMA Intern. Med 2016 Nov 1;176(11):1680–5*)

It’s not unusual that food companies and industries manipulate research so that conclusions come out favorable to their interests. Sadly, it’s become the norm. Part of my commitment to you each month is to look through these smoke screens and ferret out the truth.

Pharmaceutical companies are notorious for not releasing or publishing known side effects of their products. From a financial standpoint, they know they can rake in tens of millions of dollars in sales before the dangers become obvious and they are forced to pay out a small percentage in damages years down the road. I suspect the decision to launch a product with serious side effects is in large part decided by the accounting departments. Paying off future death and disability claims is just another cost factored into the profitability equation.

Companies like Coca-Cola, McDonald’s, PepsiCo, Kraft Foods, Hershey’s, and others spend millions of dollars forming partnerships and funding research to help determine the causes of obesity and other health problems. Not surprisingly, any ill effects of their products seem to be negligible in these corporately funded studies. For some reason (funding bias), their own products are never found to be a factor in obesity. Instead, the research conclusions downplay the effects of eating poorly and focus on the need for more exercise. But common sense tells us exercise isn’t the remedy for poor dietary choices.

A 12-ounce can of Coca-Cola contains 140 calories, which is roughly the same as 10 teaspoons of sugar. To put that in perspective, it takes three miles of walking to offset that one drink. A Hershey’s milk chocolate bar contains 214 calories—over four miles of walking.

As you well know, it not just about the calories. Sugar also causes spikes in insulin, raises triglyceride levels, increases fat storage, depletes vitamins, and leads to inflammation. It would be interesting to know how many people suffered from diabetes or...
cardiovascular disease, underwent bypass and heart replacement surgeries, and/or died prematurely from heart disease as a result of this one lie perpetrated by the sugar industry.

Unfortunately, much of the research being reported these days is tainted and influenced by parties with vested interest in the outcome. And even by reading the disclosures, it’s difficult to tell who’s actually funding the research. Partnerships and nonprofit companies are set up to channel the research funds.

Keep this in mind next time you read that eating chocolate is good for your heart, or that fruit juice, soda, or sports drinks are great “pick-me-ups” and can be part of a nutritious diet. This is the same bull that has led to our obesity, diabetes, and cardiovascular disease epidemics.

**Sugar: An Addictive Drug**

It’s one thing to tell people they need to eliminate sugar, and another for people to actually do it. A sugar addiction can be difficult to overcome. The older the habit, the harder it can be to break. Like other addictions, it involves the brain.

Compared to other organs, the brain has one of the highest demands for energy. This energy comes in the form of glucose. When blood glucose levels fall, the brain releases neurotransmitters, which elicit cravings for sugar in an effort to rapidly increase levels.

Sugar and other refined carbohydrates (high-fructose corn syrup, honey, white flour, etc.) are rapidly absorbed by the body and then flood into the bloodstream. This triggers the release of insulin, which removes the excess glucose from the blood and stores it as fat. Once removed, the level of blood glucose falls below normal and it triggers the release of cortisol from the adrenal glands, which causes the liver to convert protein into glucose to increase blood levels.

Being able to stabilize your blood sugar and minimize fluctuations that require excess insulin and cortisol are key to breaking a sugar addiction. In fact, it’s the key to preventing some of the most serious health problems of our day, including diabetes, cardiovascular disease, and Alzheimer’s.

The roller-coaster effect that comes from eating sugar includes:

- **Constant production of insulin, leading to insulin resistance, metabolic syndrome, and diabetes;**
- **Fat storage in the abdominal area, which is linked to diabetes, cardiovascular disease, and cancer;**
- **Adrenal fatigue (hypoadrenia) and a long list of related symptoms, one being carbohydrate cravings;**
- **Excess cortisol production, resulting in problems like fatigue, depression, muscle weakness, erectile dysfunction, headaches, high blood pressure, bone loss, acne, and cognitive difficulties.**

### Break the Addiction

Here are a few tips that can help you get off the roller coaster and break the addiction.

**Get Sugar Out of Your House**

Substitute either stevia extract or xylitol. While these are great alternatives to sugar, I recommend using these natural sweeteners as a tool to also help you break away from the idea that every food has to taste sweet.

Over the last few decades, it seems like sugar is added to practically every dish. Sugar isn’t just for dessert anymore. As a result, most people have no idea of just how wonderful foods can taste and how satisfying they can be on their own.

Both stevia and xylitol don’t raise blood sugar levels, and they have other benefits, too. Stevia can lower blood pressure and clear glucose from the bloodstream. And xylitol has been shown to remineralize tooth enamel, reduce dental plaque and cavities, prevent ear infections, and even increase bone density.

Some people don’t like the taste of stevia, while others can’t tolerate xylitol. (It can cause mild...
digestive upset in some people, but it helps to use it in small amounts in the beginning and gradually increase. Probiotics also help.)

My favorite by far is xylitol. It doesn’t have a funky flavor and can be purchased in bulk. It has the consistency of sugar and can be used in practically every recipe that calls for sugar. (Even still, to break the sweetness addiction, I suggest cutting the amount of xylitol you use in half in recipes that call for sugar.) It also works well in hot drinks like coffee and tea.

Finally, don’t use artificial sweeteners like sucralose or aspartame, as these can disrupt the body’s natural ability to regulate food intake and body weight. If they were effective weight loss tools, everyone in our society would be skinny.

Adjust How and What You Eat

Skipping meals, particularly when they consist of high-carbohydrate foods, can lead to low blood sugar and cortisol release. This is especially a problem when you’re first trying to eliminate sugar. The cravings will be intense. Protein and fat are digested and assimilated by the body at a slower rate. Their conversion and release into the bloodstream is slow and steady, providing an even release of glucose. Consistently spacing meals with higher protein and fat content minimizes the need for insulin and also gives the adrenal glands a rest and time to re-energize.

Once the adrenals have built up a reserve, then it’s possible to skip a meal or go longer between meals. Even programs or routines that include intermittent fasting can be tolerated. More and more research supports the benefits of intermittent fasting, and I believe our primitive bodies where designed to operate this way. The eating pattern we’ve adopted—three meals plus snacks—isn’t normal from an evolutionary standpoint. This pattern has only been embraced within the last century or two.

Intermittent food (energy) restriction for as little as 16 hours has been shown to have very significant health benefits and even counteract the disease process. It shifts the body into fat metabolism, ketone production, and a beneficial cellular-stress mode that promotes cellular repair and preservation. I’m a strong proponent of intermittent fasting and will be covering that topic in a future issue. However, it should be noted that intermittent fasting is best undertaken when the adrenal glands are functioning properly.

If you become irritable, have headaches, or experience dizziness or fatigue when you go too long without eating, these are signs of weak adrenal function. It means the adrenals don’t yet have the reserve or ability to raise blood sugar levels back to normal, and you’re experiencing the symptoms associated with low blood sugar.

Some research indicates that another simple technique called the “carbohydrate last” principle is beneficial. The research shows that when proteins and vegetables are eaten first, followed 10 minutes later by carbohydrates, the result is significantly more blood sugar control, reduced levels of insulin, and higher levels of the satiety hormone (GLP-1). The opposite effect occurs when the carbohydrates are eaten first, followed by the proteins and vegetables 10 minutes later. In simple terms, you should eat your carbs after you consume your proteins and veggies. (BMJ Open Diabetes Res Care 2017;5(1):e000440)

Studies have also shown that eating larger meals earlier in the day and smaller meals in the evening are beneficial in a couple of ways.

First, our tolerance or ability to handle carbohydrates deteriorates over the course of the day. Postprandial glucose is a measurement of glucose in the blood following a meal. Typically, glucose levels will increase during and following a meal, but under normal circumstances, insulin lowers it back to normal. Research shows that both blood sugar and insulin levels remain higher for longer periods of time when meals are eaten later in the day or night. This is a good reason to cut out late night dining or snacking.

Another important reason to eat larger meals during the day rather than at night has to do with your circadian rhythm. It’s a complex situation that I’ll do my best to explain in a couple paragraphs.

When you eat helps to synchronize your biological clock, or circadian rhythm. The levels of various hormones have their peaks and troughs at specific times of the day based on the circadian cycle. These include hormones like melatonin, cortisol, insulin, leptin, glucagon, and ghrelin. Eating at the proper times doesn’t disrupt this timing and helps ensure optimal metabolic, immune, and endocrine function by maintaining the natural levels of these hormones.

There’s some amazing research that shows that, when meal timing reinforced the circadian timing system, cancer progression was
Magnesium & Heart Disease

Magnesium is probably the most deficient mineral in our diet. Estimates are that around 68 percent of the population doesn’t consume adequate amounts of this necessary mineral. The recommended daily intake (RDI) for adult males is 420 mg a day. Keep in mind the RDI is considered the very minimum. The average intake for over two-thirds of our population is only 327 mg, and worse, 19 percent of the population doesn’t even get half the RDI.

Studies have shown that consuming anything less than the RDI of magnesium can almost double the risk of having elevated C-reactive protein levels, a well-known risk factor for heart attack and stroke.

There are several laboratory methods to check magnesium levels in the body, and there are some telltale physical signs related to a deficiency as well. One of the most common symptoms is eye twitching. A lack of magnesium causes the small muscles surrounding the eye to spasm and twitch.

Another common symptom is the inability to stay asleep. Magnesium is necessary in the production of the neurotransmitter gamma-aminobutyric acid (GABA), which is necessary for relaxation and sleep. A nightly dose of 500 mg before bedtime, taken for eight weeks, has been shown to remedy many insomnia problems.

Other common symptoms of a magnesium deficiency include depression, migraines, chronic fatigue, acne, eczema and other skin problems, chocolate cravings, and an irregular heartbeat.

Taking certain drugs will deplete magnesium as well. Drug-induced deficiencies can result from diuretics, osteoporosis drugs, corticosteroids, estrogen, asthma drugs, medications used to treat heart arrhythmias, and antacids. If you take any of these drugs, you definitely need to take supplemental magnesium.

For the life of me, I can’t understand why we aren’t adding magnesium to our food and/or water supplies. In 1924, Morton Salt Company began adding another essential micronutrient, iodine, to salt to help stop an epidemic of iodine deficiency. It was done at the request of the government and it was huge success. Almost overnight, it reversed the growing problems of goiter and other thyroid-related issues. It was subsequently found that the addition of iodine actually increased our nationwide IQ by 3.5 points.

Adding magnesium in a similar fashion could dramatically change the overall health of our nation. It could prevent millions of deaths from cardiovascular disease and diabetes. It could provide millions more relief from migraines, chronic fatigue, depression, and other problems. It would also cut back on the need for billions of dollars worth of drugs and surgery. (Come to think of it, this probably explains why it hasn’t yet been done.)

The time you eat affects the phases of circadian rhythms. Numerous studies have confirmed that our society’s habit of eating at all times of the day and night can have serious consequences. For instance, individuals working the night shift and eating during that period have an increased incidence of cancer, cardiovascular disease, obesity, and diabetes.

Other studies have found that without altering caloric intake or even the source of calories, obese individuals had an increase in weight loss simply by changing the timing of their meals. (Am Assoc Cancer Res 2010;70(8):3351–60)

Another way to help stabilize blood sugar levels between meals is to eat small high-protein/high-fat snacks. But it’s important not to get carried away. Weight gain is still dependent on the amount of daily calories you consume and how many of these calories are offset by your activity.

You can include a small healthy snack between meals, but ideally it should fill you up to the point that you consume less during your meals. You don’t want to eliminate an addictive habit by replacing it with one that causes different problems.

Having said that, great snacks that stabilize blood sugar include a tablespoon of natural unsweetened peanut butter (choose a brand like Laura Scudder’s, which contains only peanuts and salt), a couple tablespoons of cottage cheese, a slice or two of cheese, half an avocado, or a small serving of nuts. Nuts are my favorite. They are convenient, healthy, and adding them in moderation does not cause weight gain.

Until recently, I felt the best way to consume nuts was between meals. But new research suggests that may not be the case if you’re...
trying to process glucose from a meal as efficiently as possible.

In a study out of South Korea, individuals who were following a high-carbohydrate diet were instructed to consume 56 grams (2 ounces) of almonds a day. Part of the group ate the nuts immediately before meals and the others ate the nuts between meals. At the end of the 16-week study, the researchers found that the timing of when the nuts were consumed had varying effects to health and weight/fat loss. Those who ate the almonds as a daily snack reduced their total and LDL cholesterol. But those who ate them just prior to meals decreased their overall body fat and visceral fat. This would suggest that eating nuts just before mealtime somehow improves the ability to clear excess glucose from the bloodstream so that it doesn’t get stored as fat. (Nutr Res Pract 2017 Dec;11(6):479–86)

The bottom line is that nuts are great whenever you eat them. However, if you are just starting to seriously eliminate sugar from your diet, it might be best to preload with nuts immediately prior to a meal. Then later, after you’ve adapted, nuts can be eaten between meals as a snack.

Take L-Glutamine

The first few weeks of trying to shake a long-standing sugar addiction are when the cravings are most intense. Stabilizing your blood sugar will help you get over this hump. The amino acid L-glutamine can be a godsend in this regard.

Glutamine doesn’t get much publicity, except among bodybuilders. One of its well-known functions is working in combination with other amino acids to form muscle proteins. One of its lesser-known attributes, though, is the ability to stabilize blood sugar rapidly.

Glutamine has been shown to both increase and decrease blood sugar. It seems to have a balancing effect, depending on the situation. Research shows the changes aren’t dramatic, but they are just enough (continued on page 8)
Can Diabetes Be Cured?

NEWCASTLE UNIVERSITY, LONDON—One of the questions I get asked all the time is “Can type 2 diabetes be cured, and if so, how?”

The answer is always yes, type 2 diabetes can be cured, despite doctors telling most patients it’s not curable and can only be managed with life-long medication. The problem is, it requires more effort, discipline, and willpower than most people want to expend.

Roy Taylor, professor of medicine and metabolism, demonstrated as far back as 2011 that type 2 diabetes could be reversed with a very low-calorie diet. But his original study was questioned because it only lasted eight weeks, and many thought the disease could return. That prompted him to do another study.

He recruited 30 volunteers with type 2 diabetes who undertook the same diet as before, consisting of only 600–700 calories a day. These individuals had diabetes for at least eight years and some as long as 23 years. Twelve of the patients who had the disease for less than 10 years reversed their condition and were still disease-free after six months. A thirteenth patient reversed their disease after the six-month period. Forty percent of the patients in this study cured their diabetes and no longer needed medication.

A diet of 600–700 calories a day is very strict, and the patients lost an average of 30 pounds. None of them regained any of the weight they had lost over the next six months. Although all the patients were still classified as obese at the end of the study, many apparently lost enough fat from the pancreas to allow it to resume normal insulin production. I suspect the weight loss also had a positive effect on insulin sensitivity.

Roy Taylor made some telling comments at the end of the study that probably didn’t sit well with the pharmaceutical companies. Sales of diabetes medication have jumped from over $35 billion in 2012 to an estimated $55 billion last year. Coupled with the obesity epidemic and our sedentary lifestyles, the long-term sales are expected to continue surging. These figures don’t include the billions spent on lab tests, doctor’s visits, hospital stays, amputations, etc. And, in an effort to further increase drug sales, the diabetes treatment industry will undoubtedly start to encourage “combination therapy,” where more than one drug is prescribed. The same technique has been hugely profitable in other diseases.

Professor Taylor commented, “What we have shown is that it is possible to reverse your diabetes, even if you have had the condition for a long time, up to around 10 years. If you have had the diagnosis for longer than that, then don’t give up hope, major improvement in blood sugar control is possible. The study also answered the question that people often ask me, if I lose weight and keep the weight off will I stay free of diabetes? The simple answer is yes! Interestingly, even though all our volunteers remained obese or overweight, the fat did not drift back to clog up the pancreas. The bottom line is that if a person really wants to get rid of their type 2 diabetes, they can lose weight, keep it off, and return to normal.”

Diet Details

Here are the details of the diet and program these participants followed. But obviously, I would recommend that anyone thinking about doing this diet work with their doctor since six of the non-responding volunteers needed to be restarted on their medication during the study.

At the beginning of the study, all oral anti-diabetic agents and insulin were stopped. The dietary program consisted of the following:

For the first eight weeks, volunteers consumed three diet shakes and 240 grams (8.5 ounces) of non-starchy vegetables. Additionally, they were encouraged to drink at least two
liters of calorie-free beverages and maintain their normal level of physical activity.

The liquid diet formula was the Optifast shake made by Nestle Nutrition. The following is a list of common non-starchy vegetables, published by the American Diabetes Association.

- Amaranth or Chinese spinach
- Artichoke hearts
- Asparagus
- Baby corn
- Bamboo shoots
- Beans (green, wax, Italian)
- Bean sprouts
- Beets
- Broccoli
- Brussels sprouts
- Cabbage
- Carrots
- Cauliflower
- Celery
- Chayote
- Coleslaw (no dressing)
- Cucumber
- Daikon
- Eggplant
- Greens (collard, kale, mustard, turnip)
- Hearts of palm
- Jicama
- Kohlrabi
- Leeks
- Mushrooms
- Okra
- Onions
- Pea pods
- Peppers
- Radishes
- Rutabaga
- Salad greens
- Sprouts
- Squash (cushaw, summer, crookneck, spaghetti, zucchini)
- Sugar snap peas
- Swiss chard
- Tomato
- Turnips
- Water chestnuts
- Yard-long beans

After the initial eight weeks, volunteers were gradually returned to eating normal food over the next two weeks. The liquid shakes were slowly replaced by solid food over a seven-day period, with one meal replacing a shake every three days. Daily total calories after this was based on daily caloric need, explained below.

After the weight loss, to keep their weight steady, the volunteers followed an isocaloric diet, consuming about one-third fewer calories than they were before the study. Bodybuilders often follow an isocaloric diet. It's a moderate-carbohydrate, moderate-fat diet where you consume the same number of carbohydrate, fat, and protein calories per day. It's a method of maintaining muscle mass while losing weight and excess fat.

With an isocaloric diet, you first figure out your daily caloric need. There are numerous calorie calculators online, such as the one found at freedieting.com.

You plug in your current weight, age, height, gender, and approximately how much exercise you do. It provides the number of calories you need to maintain that weight.

You need to divide your daily caloric need by three. That gives you the number of calories of carbohydrates, fats, and protein to consume each day. For example, if your daily caloric need is 1,800 calories, then you would consume 600 calories from carbohydrates, 600 calories from fat, and 600 calories from protein.

Keep in mind that one gram of carbohydrate contains four calories, one gram of fat contains nine calories, and one gram of protein contains four calories. So in the example of 1,800 calories a day, it would work out to 150 grams of carbohydrate, 67 grams of fat, and 150 grams of protein.

An isocaloric diet requires doing a little bit math in the beginning, but it works. It’s a way to eat normal foods and still maintain any weight loss you’ve achieved. You can also use it as a starting point to help achieve a goal of losing or gaining weight. (Diabetes Care 2016 May;39(5):808–15) (Diabetologia 2017 Mar;60(3):406–15)
that glutamine can be used safely and effectively to quickly blunt blood sugar dips without causing corresponding spikes.

When blood sugar is low, the body easily and quickly converts glutamine to glucose. In fact, glutamine was found to be even better than glucose in treating hypoglycemia. And, as a bonus, it also improves insulin sensitivity, lessening the need for more insulin production. (#Int J Endocrinol 2013:2013:841514#)

Glutamine can be purchased in capsules or in bulk. If you experience a sugar craving, simply break open a 500 mg capsule onto your tongue and most likely the craving will subside almost immediately.

If, for some reason, glutamine doesn’t stop the craving, eat a few strawberries, half of a small grapefruit, or an apricot (fresh, not dried). Although they may taste sweet, these particular fruits have both a low glycemic index and low glycemic load, so they will not spike your blood sugar.

Check for Nutrient Deficiencies

Certain nutritional deficiencies have been linked to sugar cravings. Specific vitamins/minerals are essential for proper glucose utilization. If you’re taking a multivitamin, you may already be getting adequate amounts of these. I suggest you check your multi and compare it to the list below, as many don’t contain vanadium. You can also increase your intake by eating more of the following foods.

- **B vitamins; food sources include** beef liver, sardines, fish, eggs, nuts
- **Zinc; food sources include** pine nuts, pecans, almonds, pumpkin seeds, oysters, prawns
- **Chromium; food sources include** mussels, oysters, Brazil nuts, broccoli
- **Vanadium; food sources include** shellfish, parsley, dill weed, mushrooms
- **Magnesium; In supplement form, aspartate seems to work best. Food sources include** Brazil nuts, almonds, pumpkin seeds, sunflower seeds, avocados, dark leafy greens, and chocolate. (This explains why those deficient in magnesium often crave chocolate. But chocolate typically contains a lot of sugar, which defeats the goal. Raw, organic cacao powder, the substance from which chocolate is made, is a good source of magnesium without the sugar. To learn more about this superfood, read the December 2014 issue of Alternatives.)

In case you didn’t notice, you can supply most of these missing nutrients by eating various nuts. As I mentioned earlier, nuts are great, especially during the initial period of stabilizing blood sugar levels when you give up the sweet stuff. Once your blood sugar has stabilized, you can preload your meals with nuts to help reduce fat, particularly belly fat.

Rebuild Your Adrenals

I’ve written so many times about adrenal function that I won’t take up the space here to do it again. You can visit drwilliams.com to learn more, and if you are a long-time subscriber and still have the back issues, you can refer to the December 1995 newsletter, which contains a lot of information on restoring adrenal function.

Until next month,

Dr. David Williams