



## Basic # 3 – Protein + Fiber 5 X per day – Part 2 of 3. “Is that Sugar in my Protein?”

- In 1700, the average person consumed about 4 pounds of sugar per year.
- In 1800, the average person consumed about 18 pounds of sugar per year.
- In 1900, individual consumption had risen to 90 pounds of sugar per year.
- In Canada we eat slightly less than average Americans holding at 40 Kg/ year (88lbs)
- In 2009, more than 50 percent of all Americans consume one-half pound of sugar PER DAY— translating to a whopping 180 pounds of sugar per year!

# 10 Ways Sugar Harms Your Health

## 1. Sugar causes blood glucose to spike and plummet.

Unstable blood sugar often leads to mood swings, fatigue, headaches and cravings for more sugar. Cravings set the stage for a cycle of addiction in which every new hit of sugar makes you feel better temporarily but, a few hours later, results in more cravings and hunger. On the flip side, those who avoid sugar often report having little or no cravings for sugary things and feeling emotionally balanced and energized.

## 2. Sugar increases the risk of obesity, diabetes and heart disease.

Large-scale studies have shown that the more high-glycemic foods (those that quickly affect blood sugar), including foods containing sugar, a person consumes, the higher his risk for becoming obese and for developing diabetes and heart disease<sup>1</sup>. Emerging research is also suggesting connections between high-glycemic diets and many different forms of cancer<sup>2,3,4</sup>.

## 3. Sugar interferes with immune function.

Research on human subjects is scant, but animal studies have shown that sugar suppresses immune response<sup>5</sup>. More research is needed to understand the exact mechanisms; however, we do know that bacteria and yeast feed on sugar and that, when these organisms get out of balance in the body, infections and illness are more likely.

## 4. A high-sugar diet often results in chromium deficiency.

It's sort of a catch-22. If you consume a lot of sugar and other refined carbohydrates, you probably don't get enough of the trace mineral chromium, and one of chromium's main functions is to help regulate blood sugar. Scientists estimate that 90 percent of Americans don't get enough chromium. Chromium is found in a variety of animal foods, seafood and plant foods. Refining starches and other carbohydrates rob these foods of their chromium supplies.<sup>6</sup>

## 5. Sugar accelerates aging.

It even contributes to that telltale sign of aging: sagging skin. Some of the sugar you consume, after hitting your bloodstream, ends up attaching itself to proteins, in a process called glycation. These new molecular structures contribute to the loss of elasticity found in aging body tissues, from your skin to your organs and arteries<sup>7</sup>. The more sugar circulating in your blood, the faster this damage takes hold.

## 6. Sugar causes tooth decay.

With all the other life-threatening effects of sugar, we sometimes forget the most basic damage it does. When it sits on your teeth, it creates decay more efficiently than any other food substance<sup>8</sup>. For a strong visual reminder, next time the Tooth Fairy visits, try the old tooth-in-a-glass-of-Coke experiment—the results will surely convince you that sugar isn't good for your pearly whites.

## 7. Sugar can cause gum disease, which can lead to heart disease.

Increasing evidence shows that chronic infections, such as those that result from periodontal problems, play a role in the development of coronary artery disease<sup>9</sup>. The most popular theory is that the connection is related to widespread effects from the body's inflammatory response to infection.

## 8. Sugar affects behavior and cognition in children.

Though it has been confirmed by millions of parents, most researchers have not been able to show the effect of sugar on children's behavior. A possible problem with the research is that most of it compared the effects of a sugar-sweetened drink to one containing an artificial sweetener<sup>10</sup>. It may be that kids react to both real sugar and sugar substitutes, therefore showing no differences in behavior. What about kids' ability to learn? Between 1979 and 1983, 803 New York City public schools reduced the amount of sucrose (table sugar) and eliminated artificial colors, flavors and two preservatives from school lunches and breakfasts. The diet policy changes were

followed by a 15.7 percent increase in a national academic ranking (previously, the greatest improvement ever seen had been 1.7 percent)<sup>11</sup>.

#### 9. Sugar increases stress.

When we're under stress, our stress hormone levels rise; these chemicals are the body's fight-or-flight emergency crew, sent out to prepare the body for an attack or an escape. These chemicals are also called into action when blood sugar is low. For example, after a blood-sugar spike (say, from eating a piece of birthday cake), there's a compensatory dive, which causes the body to release stress hormones such as adrenaline, epinephrine and cortisol. One of the main things these hormones do is raise blood sugar, providing the body with a quick energy boost. The problem is, these helpful hormones can make us feel anxious, irritable and shaky.

#### 10. Sugar takes the place of important nutrients.

According to USDA data, people who consume the most sugar have the lowest intakes of essential nutrients—especially vitamin A, vitamin C, folate, vitamin B-12, calcium, phosphorous, magnesium and iron. Ironically, those who consume the most sugar are children and teenagers, the individuals who need these nutrients most<sup>12</sup>.



## World Health Organization: New Public Guidelines on Sugar Intake

By Natalia Sanchez, Mar. 2014

As the World Health Organization (WHO) releases their new recommended sugar intake makes news today, it turns out that Mary Poppins might not have been far from the mark in recommending just a spoonful of sugar. A recent update from the WHO reports that they will be starting a new public consultation on establishing guidelines for sugar intake. After years of research that has suggested the dangers of high levels of sugar consumption, the WHO finally take a position on the matter.

Just little more than a few spoonful's, the World Health Organization says that the daily intake of sugar should be no more than 5 percent, which is a 50 percent reduction in the WHO's previous recommended value of 10 percent. This includes all forms of sugar added to food such as honey, fruit juices, and syrups like high-fructose corn syrup. The experts involved in the WHO's research found that consuming food with high sugar content is strongly associated with health problems like tooth decay and obesity. The influence that sugar has in causing problems like obesity sparks a chain reaction that leads to the development of other chronic diseases like type 2 diabetes and heart disease.

For many Americans sugar intake is highly misunderstood. While there is an awareness of the risks involved with consuming too much sugar, it is not always easy to know how much is too much just by looking at the food itself, or the labels for that matter. Something as common as ketchup can be easily overlooked when it comes to sugar content, yet in just one tablespoon of ketchup there is at least one teaspoon of sugar. The WHO argues that most people lack a solid understanding of just how much sugar is hidden in the processed or packaged food they are consuming.

Limiting sugar intake to 5 percent a day means very little when not understood in practical terms. If the average daily values are based on a 2000 calorie diet, 5 percent of 2000 calories equals about 100 calories a day. The amount of sugar added in food is measured in grams, and as a carbohydrate, one gram of sugar converts to about four calories. That means that the recommended amount of sugar is about 25 grams per day. That would require the average American to reduce their daily sugar intake by 66 percent. Needless to say, 25 grams of sugar does not go very far.

The new guidelines for reducing sugar intake established by the World Health Organization might not be easy for people to adopt. The many common food products fulfill the daily recommendation in a single serving. Something like one 12 ounce can of original Coke can have upwards of 39 grams of sugar, which automatically puts the person consuming it over the daily recommended limit. And less obvious products like low-fat milk are largely overlooked.

Reading over low-fat milk labels, sugar content ranges anywhere from 11 grams of sugar per eight ounces to 27 grams per one cup, with sugar content rising above 28 in fat-free milk products. With most people never linking low-fat milk with high sugar content, consumers do not realize that lactose, a carbohydrate, is a disaccharide sugar derived from glucose and that taking the fat content out of milk essentially reduces its nutritional content to just sugar alone.

Experts involved in the WHO's research panel on sugar reviewed over 9,000 studies and concluded that dropping daily sugar percentages will help reduce the incidence of health problems associated with tooth decay or obesity. Dr. Robert Lustig, professor of clinical medicine at the University of California, San Francisco, argues that the less sugar people eat, the better, but this will undoubtedly cause frustration for processed food companies. Lustig continued to explain that food manufactures will have to reassess their use of sugar in processed food such as soups, pasta sauces, salad dressings, and even bread.

The World Health Organization explains that their new guidelines will apply to all monosaccharides, like glucose or fructose, and disaccharides like sucrose or table sugar that are added by food manufactures or are incorporated as part of home cooking, as well as naturally occurring sugars. The WHO's new public guidelines will clear up many of the misconceptions surrounding sugar consumption and help reeducate people on appropriate levels of sugar in their diet, as well as the very real harms associated with high level sugar usage. Ultimately this will help greatly reduce the incidence of health problems associated with high level sugar consumption and the chronic diseases that can develop as a result.....

So how do we reduce sugar intake and how do we know where it is?

1. Packaged foods- as the article states, food manufacturers add sugar to appeal to our palate and get you to want more. Money speaks! So if you are eating packaged foods, look at both the nutrition label and the ingredients list. With changes to nutrition label guides lines and when consumers started becoming more savvy about the products they were buying, especially when a movement to look at the first 3 ingredients hit North America, the manufacturers responded by changing the types of sugars and adding smaller bits so they could list them farther down on the ingredient lists. Words that end in **-ose** (fructose, glucose, dextrose etc.) are the most common ways to identify added sugars, however there are lot's of other added sugars,

**Regardless of how they sound, the following are all SUGAR** Cane juice, Dehydrated cane juice, Cane juice solids, Cane juice crystals, Dextrin, Maltodextrin, Dextran, Barley malt, Beet sugar, Corn syrup, Corn syrup solids, Caramel, Buttered syrup, Carob syrup, Brown sugar, Date sugar, Malt syrup, Diatase, Diastatic malt, Fruit juice, Fruit juice concentrate, Dehydrated fruit juice, Fruit juice crystals, Golden syrup, Turbinado, Sorghum syrup, Refiner's syrup, Ethyl maltol, Maple syrup.

2. You add sugar at home: whether it's your morning yogurt, cereal or coffee, buying the simplest packaged food then adding a touch of sweetness at home is the best way to go. That way you can control the amount and types of sugars found in your diet. Using natural sweeteners in small amounts such as unpasteurized honey, maple syrup, or applesauce for example. You can substitute these in home baking as well.

This week, become hyper aware of your sugar intake, record, each day how many grams of sugar you are eating, and see if you would fit in the WHO's recommendations for sugar consumption.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Breakfast							
Snack							
Lunch							
Snack							
Dinner							

Total grams