



the nutrition school

Sugar

Blame it on Your Ancestors

Growing up in a culture where sugary foods are ubiquitous, it's no wonder that many Americans grow up not only with a "sweet tooth", but a whole mouth full of "sweet teeth"! But did you know that a **craving for sugar** is a **basic biological function**? Most scientists agree that babies are born with an instinctive preference for sweets, due to an evolutionary adaptation from when food was scarce. In prehistoric times, sugar implied calories; our ancestors learned to seek out foods that tasted sweet, knowing that they were a guaranteed source of energy.

Then vs. Now

Over time, sugar has become available in more concentrated doses thanks to food processing and manufacturing. The amount of sugar found in the foods our ancestors ate (fruit, milk) is much less than the amount we consume today in the form of cookies, candy, fruit juice and even yogurt, crackers and snack foods with *added* sugar. Although sugar does occur naturally in many foods, it is the **refined sugar** in the American diet **that causes greatest concern**. On average, we eat 300–400 calories worth of refined sugar daily – the equivalent of 31-41 pounds per year!

Is Sugar Toxic or Addictive?

There's been a lot of buzz in the news about sugar being a "toxic" substance that people abuse. Although there is no definitive scientific evidence to date that proves sugar is addictive, (defined as a strong and harmful need to do or have something) researchers agree that high sugar foods can stimulate the brain in the same way drugs do, inducing behaviors that resemble addiction. The sugar "highs" and "lows" you experience are likely the result of a sugar "dependency." Dependency is defined as a relationship between conditions. In this case, your body gets accustomed to being fueled with a high level of sugar, so when you consume less, you feel out of sorts – which causes you to return to the vending machine. Such a dependency is problematic because changes in blood sugar can disrupt sleep, cause increased consumption of calories, and lead to fatigue.

Although sugar might not be addictive, over-consumption of *refined sugar* can promote obesity and other weight-related problems such as type 2 diabetes, high blood pressure, and coronary artery disease. Your body doesn't require processed

sugar, but it does need the sugar that comes from breaking down whole grains, fruits and starchy vegetables. Instead of shunning sugar altogether, *avoid foods with added sugars*. These foods have fewer vitamins, minerals, antioxidants, and/or fiber – all of the most nutritious parts!

How to Proceed

The first step is to **become aware of the refined or added sugars** in the foods you eat!

- 1. Check the ingredient list:** When refined or added sugars are listed among the first few ingredients, you know the product is likely to be high in sugar.

Sugar can be listed on a label in any of these forms:

· Agave nectar*	· Honey
· Brown sugar	· Hydrolyzed starch
· Cane sugar/Evaporated cane juice	· Invert sugar
· Concentrated fruit juice sweetener	· Lactose (“milk sugar”)
· Confectioner’s sugar	· Levulose
· Corn syrup	· Maltose
· Corn sweeteners	· Maple sugar
· Dextrose	· Molasses
· Fructose (“fruit sugar”)	· Powdered sugar
· Galactose	· Raw sugar
· Glucose	· Sucrose (“table sugar”)
· Granulated sugar	· Table sugar
· High fructose corn syrup**	· Turbinado

*Agave nectar has a low glycemic level, which means this form of sugar is absorbed more slowly by the body and causes a relatively lower spike in blood sugar (less of a “sugar rush”) than other forms of sugar. There is some controversy that agave is “as damaging” as HFCS (see note below). I believe this is not the case, because agave is

non GMO and can be organic. However, it is processed the same way as HCFC and the bottom line is that too much of either can contribute to poor health.

****High fructose corn syrup (HFCS)** you have probably heard, is a popular ingredient in sodas, fruity drinks, and other processed foods. HFCS is made by extracting the sugar from corn, which is cheaper and easier in America than using sugarcane. It is considered worse than most sugars because enzymes are added and the molecular structure is tampered with to turn regular old corn syrup into high fructose corn syrup. If that doesn't make it unnatural enough, It is always GMO and even though we know it is toxic to our health, it is in EVERYTHING from hot dogs to cereal to peanut butter to yogurt. It is so widespread in our food supply because it is still subsidized for farmers to grow and cheaper than sugar. Unfortunately, studies show conflicting results about the effects of high fructose corn syrup on weight and overall health. Beverages and foods that contain high fructose syrup are high in calories and low in nutritional value. I always recommend steering clear. Regular consumption of these products promotes obesity and other medical conditions, including type 2 diabetes, high blood pressure, and coronary artery disease to name just a few.

2. Check the nutrition information panel: Look for total grams of sugar (listed under "Total Carbohydrate").

- A product is high in sugar if it contains more than 15 grams of sugar per 100 grams
- A product is low in sugar if it contains less than or equal to 5 grams of sugar per 100 grams
- Expect that healthful foods such as dried fruit and whole grains may be considered high in sugar but the sugar comes in a healthful and nutrient dense form (assuming no added sugar!). These foods can still be incorporated into a healthy diet.
- Aim to consume as little added sugar as possible. There is no nutritional need for added sugar.