

Webinar 11 Handout: **SUGAR**

Note: There is also a tool provided for you to distribute to clients who may benefit from this information.

Blame it on Your Ancestors

Growing up in a culture where sugary foods are ubiquitous, it's no wonder that many Americans develop not only 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 naturally found in the foods our ancestors ate (fruit, milk) is much less than the amount of added sugar we consume today in the form of cookies, candy, fruit juice, flavored yogurt, crackers, sweetened beverages and snack foods. It is the added sugar in the American diet, not the natural sugars found in fruit and dairy, that causes greatest concern. On average, we eat about 300 calories worth of added sugar daily – the equivalent of 31 pounds per year!

What is Added Sugar?

Added sugars have been officially defined by the FDA as sugars that are either added during the processing of foods, or are packaged as such. This includes any type of refined or raw sugar, sugars from syrups and honey, and sugars from concentrated fruit or vegetable juices that are in excess of what you would get from the same volume of 100 percent fruit or vegetable juice. Though sugars like honey, maple syrup, coconut sugar and turbinado sugar are slightly better choices than refined white sugar, they are still considered added and need to be eaten in small amounts.

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 the most recent scientific literature finds "addiction" to sugar does not occur in the exact same ways as does addiction to drugs, there are some striking similarities to consider. Animal studies have indeed shown eating sugar can cause neurochemical changes in the brain that also occur with addictive drugs, including changes in dopamine release. There is also evidence that animals can become sugar dependent and experience bingeing, withdrawal, and cravings, all behaviors that

characterize addiction. Unfortunately, there are very few human studies to support the neuroscience behind sugar addiction, partly because it's difficult to examine--we rarely eat sugar in isolation. Sugar in our diets typically comes with fat, protein and other nutrients in food; not the case in rats, who are willing to eat nothing but straight-up sugar, making it easier for researchers to pinpoint the effects. Still, those addictive-like behaviors shouldn't be discounted just because the human research is not 100%. The sugar "highs" and "lows" one can experience are likely the result of a sugar "dependency," defined as a relationship between conditions. In this case, the body gets accustomed to being fueled with a high level of sugar, so when you consume less, you feel out of sorts (withdrawal) – which causes you to crave more sugar and can lead to binges.

What are the Problems?

Although sugar might not be addictive by definition, overconsumption of refined and added sugar can promote obesity and other weight-related problems such as type 2 diabetes, high blood pressure, and coronary artery disease. Research is now showing that sugar is worse for your heart than salt. Dependency, binges and withdrawal can lead to changes in blood sugar that can disrupt sleep, fuel overeating and lead to fatigue. 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!

A. 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 HFCS and too much of either can contribute to poor health. Bottom line: there are better options out there, such as honey or maple syrup.*

***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. It can be in EVERYTHING from hot dogs to cereal to peanut butter to yogurt. Though prevalence has been on the decline, it is still 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.*

B. Check the nutrition information panel:

Look for total grams of sugar (listed under “Total Carbohydrate”) and added sugars, which is a new component of the updated nutrition panel.

- 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. The new Daily Value for added sugar is 50 grams, but I think this is still too much. The American Heart Association recommends no more than 25 grams of added sugar per day for women (6 teaspoons, 100 calories) and 36 grams per day for men (9 teaspoons, 150 calories). That is a better goal, although I still tell clients to aim for no added sugar at all.