

High Fructose Corn Syrup

If you're a label reader (read compulsive) like me, you will see High Fructose Corn Syrup (HFCS) listed on many products. The next time you go to your local grocery store, pick up even things you think are "healthy" like fruit juice or fruit flavored yogurts and I bet you'll see it listed. So how is High Fructose Corn Syrup (HFCS) different than regular table sugar, and does it really matter?

Like anything with me, there is usually not a short answer, but I'll try. Table sugar is made from sucrose; which is a disaccharide, literally two sugars, 50% fructose and 50% glucose. Glucose is a simple sugar or monosaccharide as is fructose. Every cell in your body can metabolize glucose. Fructose is primarily metabolized in your liver; herein lays the difference. Although fructose is the sugar contained in fruits (isn't that healthy?), the amount is relatively small compared to a soda; and obviously fruit has other nutrients and fiber.

Fructose is twice as "sweeter" tasting than sucrose. And although due to its metabolism in the liver, it has been recommended as a sugar with a lower glycemic index compared to sucrose, in excess, it has been linked to problems with plasma lipids, fatty liver and more controversially diabetes and obesity. Okay, I am sensing the urge to turn the page, so stay with me here.

High Fructose Corn syrup is like sugar on steroids. It also is a manufactured product, one that is highly processed. HFCS didn't exist 20 years ago, but it now represents 40% of caloric sweeteners added to American food and beverages and is the most common sweetener found in non diet soda.

The preference of the food industry for HFCS can be placed on high US tariffs on imported cane sugar, the abundance of price subsidized domestic corn and the relative scarcity of beet sugar compared to demand. HFCS is manufactured by milling corn to create corn starch, then processing the corn starch into glucose and ultimately into fructose after multiple enzymatic treatments (read lots of chemicals).

HFCS comes in a variety of concentrations; HFCS 90 (90% fructose and 10 % glucose), HFCS 55 (55 % fructose and 45% glucose). HFCS 55 is the sweeter of choice in soda and "fruit" drinks including those labeled "all natural;" hence read the labels. Remember table sugar, Sucrose, has 50% fructose and 50 % glucose; HFCS can have 90% fructose (remember only metabolized in the liver not all cells) so you can see it is all in the proportions.

There have been studies comparing the "satiety" effects of fructose compared to sucrose, meaning you want to eat more for longer when a food is made with fructose, but these haven't really borne out. I am sure more to come on this topic however.

Overconsumption of sugars (all sugars) has been linked to many health problems in our country. We must remember, however, that the increase in the amount of sugar in the American diet can be related to the increased consumption of soda, sweetened drinks of all kinds even "fruit juice" and "all natural drinks" (read the labels), packaged foods and prepared foods; aka, the conveniences of modern society. The caloric math adds up when you remember that one soda or similar sweetened drink, which can even be all natural, too, has the equivalent of 12 teaspoons of table sugar.

To me this sounds disgusting. This combined with we Americans being more inert due to longer work weeks, longer commute times (I have no time to work out!) and time spent on TV/computers also contributes to obesity and all its related health problems; with diabetes, high cholesterol, heart disease being one of the fastest growing (excuse the pun) epidemics not only in our country but others as well. So you can see, it isn't just pointing a finger at HFCS and blaming that; it just isn't as simple as blaming it on a simple sugar.

Bored yet? What are the bullet points then to remember?

- **Pack water in your child's snack/ lunch bag**
- **Make Soda a treat like birthday cake: once a year**
- **Beware of "All natural" and "100 %" Fruit labels**
- **Read labels in an educated manner**
- **Try to cook at least a few meals "from scratch"; just steam some carrots and broccoli ahead of time and its good for many meals (it's actually really easy, takes 10 minutes!)**
- **More whole grains, brown rice and fruits/veggies**
- **Get off the couch/computer chair for at least 30 minutes per day**

How is that for a long winded simple answer!

- Laura Foster, MD