

Part 4, Chapter 45: High Fructose Corn Syrup

I can't leave the subject of sugar without talking about one other really nasty substance: high fructose corn syrup. In that it's partly made up of fructose is an indication that it's a sugar that is processed in the liver. Being processed in the liver, as with traditional processed sugar, it can and will readily convert to fat (triglycerides). Still, it's considered even more dangerous than crystallized processed sugar.

Pictured here is where it is made. The "plumes [of smoke] from ADM's high fructose corn syrup factory in Cedar Rapids, Iowa can be seen for miles."^{2} It's not a pretty picture, and the end result is even worse.

Of all the substances mankind has created, high-fructose corn syrup is one of the most destructive. It is used extensively in the food industry because it's cheap! Pure and simple.

What makes high fructose corn syrup such an unhealthy, fat-promoting form of sugar is because the body handles fructose differently than it does other sugars. For starters, the body metabolizes fructose into triglycerides more than other sugars, which raises blood triglycerides significantly and increases the risk of heart disease. Unlike glucose, fructose does not stimulate the release of leptin, the hormone that tells you "I'm full," but ... [increases] ghrelin hormone levels, which tell you "I'm still hungry." It's essentially empty calories. It is in many processed food products and is even more dangerous than processed sugar because it is concentrated.

Dr. Marc Hyman, MD adds five reasons why high fructose corn syrup will kill you. (His words, not mine.)

- 1 Sugar in any form causes obesity and disease when consumed in pharmacologic doses. Cane sugar and high fructose corn syrup are indeed both harmful when consumed in pharmacologic doses of 140 pounds per person per year. [By way of comparison] our hunter gatherer ancestors consumed the equivalent of 20 teaspoons **per year**.
- 2 HFCS [high fructose corn syrup] and cane sugar are NOT biochemically identical or processed the same way by the body. High fructose corn syrup is an industrial food product and far from "natural" or a naturally occurring substance. It is extracted from corn stalks through a process so secret that Archer Daniels Midland [ADM] and Cargill would not allow the investigative journalist Michael Pollan to observe [its manufacturing process].^{3}

What makes high fructose corn syrup particularly dangerous is that unlike processed cane sugar which is 50% fructose and 50% glucose, high fructose corn syrup is 55% fructose and 45% glucose. Moreover, there is no chemical bond between the fructose and glucose.



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The two sugars are **immediately** assimilated into the body triggering both a flood of triglycerides from the liver (lipogenesis) and a spiked insulin level from the glucose.

- 3 HFCS contains contaminants including mercury that are not regulated or measured by the FDA.
- 4 Independent medical and nutrition experts DO NOT support the use of HFCS in our diet, despite the assertions of the corn industry.
- 5 [Probably the biggest reason to stay away from this stuff] HFCS is almost always a marker of poor-quality, nutrient-poor disease-creating industrial food products or “food-like substances”.^{4}

Essentially, food products that are loaded with high fructose corn syrup aren't real food at all. The best your body can do is to try to get rid of whatever it is as quickly as possible.

Nevertheless, some food manufactures are steering away from high fructose corn syrup if, for no other reason, than that consumers demand it. For Emmale and me, if it has high fructose corn syrup on the label then we won't buy it. It's commonly used in salad dressings and various kinds of sauces but it is possible to find products that don't contain it.

As with so many of these substances, it's almost impossible to eliminate it completely. Still, you can minimize it by living on a 90%-95% vegan diet. When it comes to high fructose corn syrup the best defense is to be forewarned and, of course, to always read the label.