



<https://youtu.be/RjSSfaepVGM>

## How does fructose harm your body?

*\*The researchers suggest that, unlike glucose, used as immediate fuel, unfortunately, fructose triggers the body to store fuel.*

*\*High fructose corn syrup (HFCS) is a central ingredient in many traditional soft drinks, including Coca-Cola, Pepsi, and Sprite. It's what gives your drink a sweet taste, but it's also what accounts for chronic diseases like insulin resistance, non-alcoholic fatty liver, and obesity among others.*

Fructose also called “fruit sugar,” is a naturally occurring sugar found primarily in fruits (such as apples, dates, figs, pears, and prunes), but also in vegetables (such as artichokes, asparagus, mushrooms, onions, and red peppers), honey, sugar beets, corn, potatoes, and sugar cane.

On the other hand, Glucose is sourced by breaking down dietary carbs into disaccharides or polysaccharides, which are larger sugar molecules. Like all sugars, both glucose and fructose are carbohydrates. But not all carbs are created equal!

Though fruits containing natural fructose may have health benefits, adding fructose in the form of corn syrup to beverages may have harmful effects on your body. Limes, lemons, Cranberries, Passion fruit, Prunes. Apricot and guava have very little fructose.

Discouraging eating fruits is not our purpose, they are high in fiber, polyphenols, nutrients, and antioxidants, but limiting is advised if you have an obesity problem, or fatty livers, among others.

Fructose is harmful only in large amounts, and it's difficult to get excessive amounts of fructose from fruit. For most people, the amount of sugar in fruit is safe to eat.

Evidence suggests that fructose can cause harm when consumed in excess. However, there is not enough fructose in fruit to cause concern.

Is fructose a sugar or carbohydrate?

The two main forms of carbs are simple carbohydrates (or simple sugars): including fructose, glucose, and lactose, which also are found in nutritious whole fruits, and complex carbohydrates (or starches) found in foods such as starchy vegetables, whole grains, rice, bread, and cereals.

Thus, sugar and high-fructose corn syrup are the same from a health perspective.

Many studies show that sugar and high-fructose corn syrup has similar effects on health and metabolism. Both are harmful when consumed in excess. While all sugar is harmful to your health when consumed excessively, in this case, fructose may be the less healthy option.

Here's why: Excess fructose puts an extra burden on your liver since it's where fructose is converted to energy. This may result in a series of metabolic problems, including fatty liver.

Some fruits have no fructose, that includes, limes, lemon, cranberries, Prunes, Apricots, Guavas, and Passion fruit, among others.

How bad is fructose?

However, limiting added sugar sources of fructose or any other type of added sugar is a good idea, as consuming too much can lead to adverse health effects.

Studies have found that excessive fructose consumption may lead to obesity, chronic inflammation, non-alcoholic fatty liver disease, and insulin resistance.

Foods high in added fructose include sauces, salad dressings, sugary drinks, colas, yogurt, baked goods, and fast foods.

One problem with added fructose to your drinks, obviously consumed in excess in developed countries may lead to obesity and other health issues.

Sri Lankans are blessed because they drink young coconut called Kurumba and king coconut water from the coconuts and drown their thirst, freely available on the roadsides, while in the West they quench their thirst by drinking soft drinks with added fructose to sweeten them.

The study, published in Philosophical Transactions of the Royal Society B, suggests that fructose may drive obesity due

to an evolutionary “survival switch” that causes people to store energy from fructose, rather than using it.

Sugar from carbs is converted into glucose, used mainly for immediate energy purposes, and the excess is couriered with insulin for storage in fat cells as triglycerides.

The researchers have found that unlike glucose used for immediate energy fuel, fructose seems to trigger the body to store fuel. In other words, glucose is used as immediate energy fuel while fructose tends to be stored mainly in the liver.

Most processed foods are high in added fructose corn syrup that includes-

Fast food items.

Breakfast cereals.

Bread and baked goods.

Sweetened dairy products like yogurts.

Candies.

Canned foods like soups and fruit.

Soft drinks.

Soft drinks highest in Fructose are.

25.5g per 16oz bottle of Sprite.

18.1g per 16oz bottle of ginger ale.

4.2g per 8oz can of Red Bull.

Fructose becomes stored in your liver. The researchers suggest that, unlike glucose, which is used as immediate fuel, fructose triggers the body to store fuel mainly in the liver as mentioned earlier.

So consuming foods with high fructose as mentioned earlier may lead people to lay down fat stores leading to obesity and related health problems. This includes- type 2 diabetes, high blood pressure, heart disease, stroke, sleep apnea, metabolic syndrome, osteoporosis, osteoarthritis, some cancers, and mental health problems.

Fructose doesn't suppress appetite as much as glucose does. As a result, it might promote overeating. Excess fructose

consumption may cause leptin resistance, disturbing body fat regulation and contributing to obesity.

Fructose is metabolized in the liver, but excess consumption can cause fat buildup, leading to insulin resistance in the liver and non-alcoholic fatty liver disease. Keep fructose consumption to a minimum and only from natural sources, like the occasional piece of fruit.

In the mitochondria in the cells in your body energy from sugar and fats is stored as adenosine triphosphate or ATP the molecule that provides energy to power all cells' processes. However, fructose lowers ATP concentration in cells and reduces the ability to make more ATP.

When ATP levels drop enough, this sets off a series of chemical reactions that stop the mitochondria from producing more ATP and causes oxidative stress. Further consuming fructose in food and fruit drinks repeated oxidative stress can lead to low ATP levels by reducing the resting metabolic rate resulting in mitochondrial dysfunction.

Hope this video article was useful. So, limit your soft drinks and stay safe. Goodbye until we meet again.