

How high fructose corn syrup affects your liver

by [Christine O'Callaghan](#)

SWEET DELUSIONS?

High fructose corn syrup is sweeter than sugar but has sour health consequences

The incidence of glucose intolerance and Type 2 diabetes has skyrocketed in recent years. Reports of children with fatty livers more common to end-stage alcoholics have also increased dramatically. The culprit, according to nutrition experts, is high fructose corn syrup, a sweetener used in a wide variety of foods (including some you might not expect, like pizza, beer, or protein bars). Unfortunately, this popular additive is metabolized very differently than sugar, which makes its widespread use a potential health threat.

Crystalline fructose Packed in 25 kg and 1000 kg bags

High fructose corn syrup is a thick, clear liquid made from corn starch. Originally introduced in the 1970s, its use almost tripled between 1980 and 1995. According to the United States Department of Agriculture (USDA), by the late 1990s (a time when people became primarily concerned with fat content) Americans' use of high fructose corn syrup exceeded that of sugar. Compared to 1970, the average American today consumes more than 100 times the amount of this sweetener. High fructose corn syrup is one of the top four ingredients in soft drinks, low-fat salad dressings, and the majority of fast and processed food.

High fructose corn syrup is an American food manufacturer's dream. The low cost of corn production (especially when compared to the high cost of sugar importation) make it inexpensive to produce. Because high fructose corn syrup is actually sweeter than refined sugar, smaller amounts may be used. It's liquid nature makes it easier to blend into drinks. It's easy to transport, has a long shelf life, and prevents foods from drying out.

Despite all of its seemingly positive attributes, high fructose corn syrup has one fatal flaw: unlike sugar, high fructose corn syrup goes directly to the liver to be metabolized. The liver releases enzymes that signal the body to store fat, which elevates triglyceride levels. Also, the liver is unable to metabolize excess fructose.

What does this mean for you and your liver?

- An increased risk of heart disease due to elevated triglyceride levels.
- Potential weight gain due to fat storage and slower burning of fat.
- Gastrointestinal problems due to failure to metabolize excess fructose.
- Liver disease.

While conversion of high fructose corn syrup in the liver can result in negative consequences throughout the body, the most severe damage appears in the liver itself. This is especially true of a diet high in both fat and high fructose corn syrup. A recent study conducted at St. Louis University, in which mice were fed such a diet for 16 weeks, surprised researchers with the speed and severity of the development of health problems. After only four weeks, the livers of the mice resembled those of alcoholics: they were full of the fat deposits characteristic of "fatty liver" and had developed cirrhosis. Similar studies conducted in both the United States and Europe point to a diet high in fat and high fructose corn syrup as the cause of the increase in liver disease among children and teens.

While the prevalence of high fructose corn syrup in American foods may seem daunting, there are several things you can do to safeguard your health:

- Restrict your consumption of fast food and processed foods.
- Read labels. If high fructose corn syrup is one of the top four ingredients, think twice.
- Restrict your intake of fat.
- Remain active in order to properly burn fat.