

Why Is Corn Syrup In So Many Foods?

HFCS Can Block Brain From Knowing What You Eat

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Robin Nolan first heard about high fructose corn syrup while watching Oprah Winfrey.

On the show, Dr. Mehmet Oz listed [five ingredients to avoid](#) for those who want to live longer. One of them was high fructose corn syrup.

Oz said that HFCS alters the body's ability to regulate appetite; it can make you feel like you're not full, and then you often consume extra calories.

"This was my red flag (that) made me think, 'Of course -- no wonder kids are fat,'" said Nolan, a mother of two in Raleigh, N.C.

She said she was devastated that everything she had been packing in her son's lunch -- including bread and peanut butter -- had high fructose corn syrup listed as an ingredient.

"I was blindsided by how that (junk) is in every single thing I was feeding him," Nolan said. "I got so freaked out I went to the health section of the (grocery) store and started buying organic chewy bars, organic peanut butter, even organic yogurt and applesauce."

Why Is High Fructose Corn Syrup Used?

There has been controversy about high fructose corn syrup since it flooded the food market nearly 30 years ago. The process of making this sweet, thick syrup was refined by Japanese scientists in the 1970s -- just as America had an abundance of corn and the cost of sugar was high, according to the book, "Fat Land: How Americans Became the Fattest People in the World," by nutrition journalist Greg Critser.

HFCS was six times sweeter than cane sugar, blended well with food and could be produced more cheaply than any high-sugar product. It extended the shelf life of vending machines refreshments, it protected frozen foods from freezer burn and it made bakery products look "more natural," Critser writes.

Now, high fructose corn syrup is commonly used in all kinds of processed products, including cereals, soft drinks, condiments, candies, pasta sauces and fruit juices.

63 Pounds A Year

"Our consumption of high fructose corn syrup has skyrocketed from zero consumption in 1966 to approximately 63 pounds per person per year in 1997," said [Janet Bond Brill](#), a registered dietician and author of "Cholesterol Down: 10 Simple Steps to Lower Your Cholesterol in 4 Weeks -- Without Prescription Drugs."

A debate erupted in the 1980s when researchers suggested that HFCS may be a causal factor in the obesity epidemic. It's a matter of chemical makeup -- HFCS was developed by changing cornstarch into glucose (blood sugar) and then into fructose (fruit sugar).

However, the ratio of those two sugars can be manipulated. HFCS can contain equal amounts of fructose and glucose or up to 90 percent fructose and 10 percent glucose, hence the first part of its name, Brill said.

This relationship is important because some researchers say that fructose is metabolized differently than glucose. They think that fructose isn't broken down before it arrives in the liver, but instead is readily converted to fat, which increases the level of fat in the bloodstream. Critser referred to the fructose process as "metabolic shunting."

However, Roger Clemens, a nutritional biochemist and spokesman for the [Institute of Food Technologists](#) said he doubts that effect is real.

"HFCS is metabolized like any other carbohydrate that contains fructose and glucose," he said.

Blocking Brain From Sensing Fat

Furthermore, HFCS and obesity have been linked because fructose ingestion does not increase the production of insulin and leptin -- the two hormones that play key roles in the long-term reduction of food intake and energy expenditure, resulting in possible weight gain, said [Ronni Litz Julien](#), a registered dietician and author of "What Should I Feed My Kids? How To Keep Your Children Healthy by Teaching Them to Eat Right."

"(High fructose corn syrup) blocks the ability of a chemical called leptin, which is the way your fat tells your brain it's there," Oz explained on the show. "It's not so much the 150 calories in the soda pop -- it's the fact at that same meal you will normally consume an extra 100 calories of food than you would have."

Other Factors To Blame

Despite the research claims, Julien said there are more pressing culprits in America's obesity epidemic than HFCS, such as poor lifestyle habits, little exercise, high fat and calorie intakes and a lack of healthy messages to children.

"No single food or food component is responsible for the growing obesity problem. The issue is really calories in addition to minor genetic disposition," Clemens said.

Clemens said the availability of high fructose corn syrup will diminish within the next decade because of increased use of corn as a biofuel and emerging food technology that will identify alternative sources for inexpensive sweeteners.

Concerns Spreading

Meanwhile, the concerns about HFCS seem to be spreading.

"More and more people are becoming aware of how hard ingredients like high fructose corn syrup are on their bodies. They're looking for alternatives with organic ingredients and higher standards," said Traci Danielson Mitchell, a nutritionist and founder of [DM Nutrition and Fitness](#) in Chicago.

Registered dietitians Brill and Julien are in that group -- both said they avoid eating foods containing HFCS. "If you eat a diet that contains lots of unprocessed, natural foods, such as fruits, vegetables, whole grains, nuts and olive oil -- grown the way nature intended and free of unhealthful additives -- you automatically cut down on your intake of potentially harmful ingredients that Americans eat too much of, such as HFCS, sodium, saturated fat and cholesterol," Brill said.

People who should avoid HFCS are diabetics, those who are hypoglycemic and people who are overweight, Julien said. Brill added that parents should restrict children's intake of HFCS due to the growing problem of childhood obesity.

Clemens said, however, that the research that suggests HFCS causes obesity, diabetes and increases the risk of cardiovascular disease remains controversial.

"I do not avoid products that contain HFCS. I reduce my energy intake by limiting portion sizes and consuming lower calorie foods," he said.

Pushing For Change

Brill said she foresees a public backlash against the production and consumption of foods that have any connection with fueling the growing epidemic of obesity and associated diseases.

Nolan is already pushing for change.

"They should label all foods with 'Contains High Fructose Corn Syrup' because it is a dangerous product and the manufacturers are profiting and putting so many people at risk in the name of making shareholders happy," Nolan said.

She advised all consumers to carefully check a product's ingredients before they buy it.

"Read the labels -- marketing gets you to pick up (the product), reading the label makes you put it back," Nolan said.

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