

Top Published Myths About High Fructose Corn Syrup

Myth: Sugar is healthier than high fructose corn syrup.

Reality: High fructose corn syrup is nearly identical in composition to table sugar — both contain approximately 50% glucose and 50% fructose. Sugar and high fructose corn syrup have the same number of calories as most carbohydrates; both have four calories per gram. Because they are nearly compositionally equivalent, the human body cannot tell the difference between high fructose corn syrup and sugar.

Myth: High fructose corn syrup is to blame for obesity and causes diabetes.

Reality: There is no scientific evidence to suggest that high fructose corn syrup is uniquely responsible for people becoming obese. Obesity results from an imbalance of calories consumed and calories burned.

U.S. Department of Agriculture data shows that per capita consumption of high fructose corn syrup is actually on the decline, yet obesity and diabetes rates continue to rise. In fact, obesity rates are rising around the world, including in Mexico, Australia and Europe, even though the use of high fructose corn syrup outside of the United States is limited. Around the world, high fructose corn syrup accounts for about 8% of caloric sweeteners consumed.

The leading causes of diabetes are obesity, advancing age and heredity. All caloric sweeteners trigger an insulin response in the body. Table sugar and high fructose corn syrup trigger about the same insulin release because they contain nearly equal amounts of fructose and glucose.

Myth: High fructose corn syrup is not natural.

Reality: High fructose corn syrup is made from corn — a natural grain product. High fructose corn syrup contains no artificial or synthetic ingredients or color additives and meets the Food and Drug Administration's requirements for use of the term "natural."

Myth: High fructose corn syrup is sweeter than sugar.

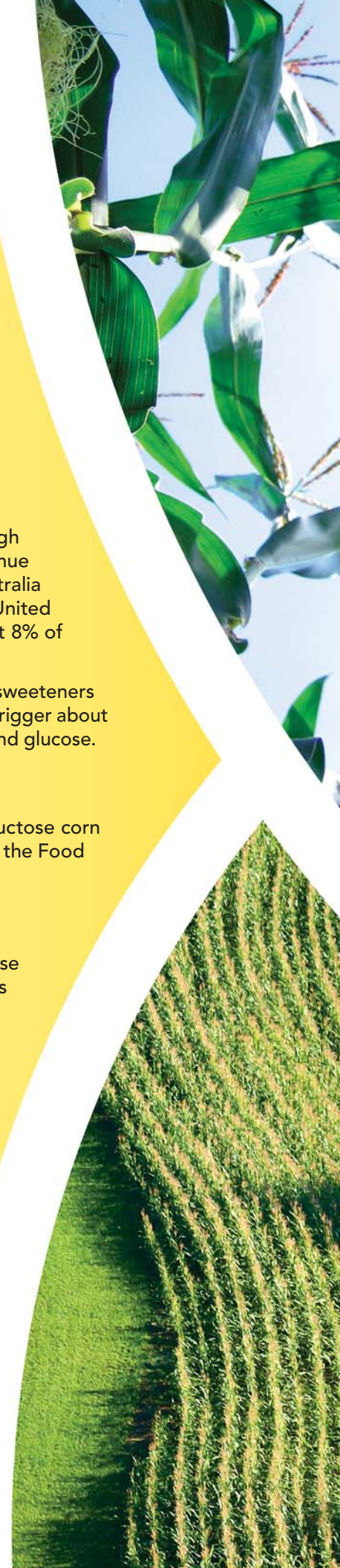
Reality: High fructose corn syrup and sugar have virtually the same sweetness. High fructose corn syrup was made to provide the same sweetness as sugar so that consumers would not notice a difference in sweetness or taste.

Myth: High fructose corn syrup is high in fructose.

Reality: Contrary to its name, high fructose corn syrup is not high in fructose. In fact, the composition of high fructose corn syrup is essentially "half fructose corn syrup" which is similar to sugar. Sugar is composed of 50% fructose and 50% glucose and high fructose corn syrup has either 42% or 55% fructose, with the remaining sugars being primarily glucose.

Myth: Studies conducted with pure fructose can be applied to high fructose corn syrup.

Reality: Pure fructose is as different from high fructose corn syrup as it is from table sugar or honey. Most studies conducted with pure fructose have been performed with abnormally high levels of fructose. Such studies are not representative of normal diets because we consume fructose and glucose in combination, with glucose acting as a moderator to fructose as they are consumed together. High fructose corn syrup, like sugar and honey, contains both fructose and glucose in nearly equal proportions. Studies comparing high fructose corn syrup to sugar have found no differences.





Myth: High fructose corn syrup is metabolized differently. It blocks the ability of the body to know when it is full.

Reality: A study published in the July 2007 issue of the *American Journal of Clinical Nutrition* (AJCN) by Pablo Monsivais, et al., at the University of Washington found that beverages sweetened with sugar, high fructose corn syrup and 1% milk all have similar effects on feelings of fullness.

Another study published in the December 2007 issue of AJCN by Stijn Soenen and Margriet S. Westerterp-Plantenga from the Department of Human Biology at Maastricht University, The Netherlands, also found that beverages sweetened with sugar and high fructose corn syrup, as well as milk, have similar effects on feelings of fullness.

The November 2007 AJCN included a study on the effect of solutions containing sugar, high fructose corn syrup and various ratios of glucose to fructose on food intake, average appetite, blood glucose, plasma insulin, ghrelin and uric acid in men by Tina Akhavan and G. Harvey Anderson at the Department of Nutritional Sciences, Faculty of Medicine, University of Toronto. The researchers found that sugar, high fructose corn syrup and 1:1 glucose/fructose solutions do not differ significantly in their short-term effects on subjective and physiologic measures of satiety, uric acid and food intake at a subsequent meal.

A study published in the February 2007 issue of *Nutrition* by Kathleen J. Melanson, et al., at the University of Rhode Island reviewed the effects of high fructose corn syrup and sugar on circulating levels of glucose, leptin, insulin and ghrelin in a study group of lean women. The study found "no differences in the metabolic effects" of high fructose corn syrup and sugar.

Links to full studies are available at www.HFCSfacts.com/Related_Links.html.

Myth: High fructose corn syrup, fructose and corn syrup are the same.

Reality: High fructose corn syrup and corn syrup are different products with distinctly different functions. Corn syrup, which is mainly glucose, is used as a non-sweet thickener. High fructose corn syrup, on the other hand, is made of almost equal portions of fructose and glucose and is used as a sweetener. Fructose is a naturally occurring sweetener found in fruits and honey.

Myth: Consumers know why high fructose corn syrup is found in many foods and beverages.

Reality: If consumers are sometimes surprised to find high fructose corn syrup in particular foods or beverages, it may be because they do not have a full appreciation of its versatility and value. High fructose corn syrup often plays a key role in the integrity of food and beverage products that has little to do with sweetening.

In baked goods, high fructose corn syrup gives a pleasing brown crust to breads and cakes, contributes fermentable sugars to yeast-raised products, reduces sugar crystallization during baking for soft-moist textures, and enhances flavors of fruit fillings.

In yogurt, high fructose corn syrup provides fermentable sugars, enhances fruit and spice flavors, controls moisture to prevent separation, and regulates tartness.

In spaghetti sauces, ketchup and condiments, high fructose corn syrup enhances flavor and balance (It replaces the "pinch of table sugar grandma added" to enhance spice flavors.), and balances the variable tartness of tomatoes.

In canned and frozen fruits, high fructose corn syrup protects the firm texture of canned fruits and reduces freezer burn in frozen fruits.

In beverages, high fructose corn syrup provides greater stability in acidic carbonated sodas than sucrose, so flavors remain consistent and stable over the entire shelf-life of the product.

