

High-Fructose Corn Syrup and Sweetened Beverages

Topping the ingredient list of many processed foods and sweetened beverages, high-fructose corn syrup (HFCS) has garnered much attention for contributing to America's obesity problem. Over the past several years, researchers have pointed to a parallel rise in HFCS consumption and obesity rates in the United States. Some people even avoid HFCS because they think it's "evil."

But are these worries really justified, or are they all hype? Jennie McCary, MS, RD, LD, wellness manager for the Albuquerque Public School District and IDEA contributing editor, reviews what the latest science says about HFCS.

What Is HFCS?

HFCS is a caloric sweetener derived from corn syrup. It differs from the sucrose found in table sugar or honey, because it is created in a chemical process that converts some of the glucose found in corn syrup into fructose. Approved by the U.S. Food and Drug Administration (FDA), HFCS is widely used by food manufacturers because of its stability, texture, color, consistency, cheap cost and ability to enhance flavor.

Despite what its name implies, HFCS actually contains no more fructose than common table sugar. Like table sugar and honey, HFCS is roughly half fruc-

tose and half glucose and provides the same amount of calories (4 per gram). However, because HFCS is derived from corn syrup via a chemical process, the way that fructose and glucose exist in the sweetener differs from the way these compounds are naturally present in sugar and honey. This difference—and the way the body may react to this difference—is what led to concerns that HFCS doesn't satisfy hunger urges and can lead to more fat storage.

Blood Lipids, Appetite & Satiety

When it comes to how the body metabolizes sweeteners, there is little difference among HFCS, table sugar and honey, as they all contain similar proportions of fructose and glucose. Actually, HFCS, sugar and honey all have the same effect on appetite ratings and hormonal responses (Melanson et al. 2008; Melanson et al. 2007; Akhavan & Anderson 2007).

The bottom line: *All* caloric sweeteners produce the same kinds of responses when it comes to appetite and satiety.

References

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The 2005 *Dietary Guidelines for Americans* recommend consuming no more than 8 teaspoons of added sugars per day while on a 2,000-calorie diet (USDHHS & USDA 2005). In real terms, the Beverage Guidance Panel recommends drinking no more than 8 ounces a day of beverages sweetened with HFCS or other caloric sweeteners (Popkin et al. 2006).

The take-home message: Reduce all sources of added caloric sweeteners and empty calories, rather than demonize any one sugar-laden product over another. Here are some strategies to consider:

- Eat a piece of fruit instead of drinking a glass of juice.
- Drink water, seltzer or nutrient-rich (low-fat) milk instead of soft drinks.
- If you do choose to drink fruit juice, dilute it with water.
- Avoid sports drinks unless you are in training or competing.
- Skip beverages like punch, "fruity" drinks or sweetened cocktails.
- When reading product labels, watch out for ingredients like high-fructose corn syrup, fructose, sucrose, fruit juice concentrates and any other added sugars. ■

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