
HIGH FRUCTOSE CORN SYRUP

WHAT IS HIGH FRUCTOSE CORN SYRUP?

High fructose corn syrup (HFCS)(called glucose-fructose in Canada), is corn syrup that has undergone enzymatic processing to convert some of the glucose to fructose so that the final product is a mixture glucose molecules, fructose molecules and a small amount of glucose polymers.

The ratio of glucose to fructose varies; however, the most common would be 42% glucose, 55% fructose and 3% glucose polymers. This ratio is similar to the ratio of glucose to fructose in sucrose (50:50) and honey (43:49). However, it differs from sucrose in that it is a mixture of two monosaccharides whereas sucrose is a disaccharide (molecules are bound together). If the level of fructose is greater than 60% then the ingredient is labelled fructose syrup.

Why is it an issue?

In 2004, an article by Bray et al., hypothesized a connections between HFCS intake and obesity. This has been exploited by media for a number of reasons:

- the use of HFCS increased at the same time that obesity rates increased in the US leading some to speculate the relationship
- the absorption and metabolism between fructose and glucose differ

A number of studies have shown no metabolic or health differences between the intake of HFCS and sucrose. In isocaloric trials to date, no type of added sugars behaves differently than other forms of carbohydrate; excess calories lead to weight gain, not the type of added sugars.

Where is glucose-fructose used in Canada?

The most common foods that may contain HFCS as an ingredient include:

- Soft drinks, sweetened fruit drinks
- Sauces and salad dressings
- Breads and baked goods
- Fruits and vegetables (e.g., canned fruits, baked beans, pickles)
- Processed snacks
- Breakfast cereals
- Condiments (e.g., ketchup, jams, jellies)