

The Low Down on High Fructose Corn Syrup and Fructose **Gerizatcoff, M.S.Ed., M.S., C.N.S**

Fructose consumption has gone up due to increased intake of soft drinks, breakfast cereals, baked goods, desserts and condiments high in fructose and sucrose. It is estimated that the average adolescent eats 40 grams of fructose a day.

The Journal of Nutrition reported in 1998 that long-term fructose consumption induced adverse effects on aging. Not a good thing for us baby-boomers who are striving to retain our youthful health and vibrancy way beyond middle age.

There is a lowered insulin response when fructose is ingested compared with sugar. The American Journal of Nutrition reported in 2002 that this is not necessarily a good thing and may in fact, with the increased consumption in the US, be part of the reason for our increased rates of obesity.

When fructose intake is high, it is metabolized differently than other sugars and it becomes a rich source of acetyl groups which are turned into triglycerides in the liver. Excess fructose, unlike glucose, can serve as a relatively unregulated source of acetyl groups which is why it so potently raises triglycerides.

Fructose is more lipogenic (fat producing) than glucose, an effect that might be exacerbated in those with existing hyperlipidemia (high blood fats) or type II diabetes. Fructose does not stimulate the production of two key hormones, insulin and leptin, which are involved in energy balance. These hormones stimulate the production of serotonin which makes you feel full. Because of this, fructose may have deleterious effects on energy intake and body fat.

As mentioned previously, there is a lowered insulin response to fructose. Insulin affects the Central Nervous System and food intake. Insulin signaling in the Central Nervous System lowers food intake. Energy or food intake, body weight, and body fat all increase in animals and humans consuming high fructose diets.

Fructose increases a process called glycation that damages proteins. For example, age spots are actually collagen that has been damaged by glycation. While age spots are typically innocuous, on a larger scale, altered proteins may increase autoimmune reactions to our damaged tissues. Therefore, long-term excess fructose consumption is not encouraged.

Fructose Guidelines:

- No sodas or foods with HFCS (high fructose corn syrup)
- Eliminate “health” products sweetened with fructose
- Consume only fructose as found in natural foods, i.e. whole fruits
- Limit fruit juice, but pureed fruit is okay
- Zero fruit or fruit juice for people with insulin resistance.