Extensive research demonstrates fructose does not increase food intake or impact weight

EurekAlert

A new comprehensive review, recently published in *Critical Reviews in Food Science and Nutrition*, concludes that fructose does not increase food intake or impact body weight or blood triglycerides in overweight or obese individuals.

The review examined data regarding the normal consumption of fructose and any subsequent development of alterations in lipid or and/or glucose metabolism or weight gain in overweight people. Researchers were unable to find any relationship between fructose and hyperlipidemia or increased weight. These findings support the results of a similar review that analyzed the role of fructose on blood lipids, glucose, insulin and obesity among the healthy, normal weight population.

Dr. Laurie Dolan, lead author of both studies concluded that "there is no evidence that ingestion of normal amounts of fructose is associated with an increase in food intake or body weight (compared to other carbohydrates), when it is not consumed in caloric excess. This is true for both normal weight people and people that are overweight or obese."

Fructose is a natural simple sugar found in fruits, vegetables and their juices, as well as honey. In its pure form, fructose has been used as a sweetener since the mid-1850s and has advantages for certain groups, including people with diabetes and those trying to control their weight. Fructose in crystalline form has been widely used for the past 20 years as a nutritive sweetener in foods and beverages.

Although many consumers have confused crystalline fructose with high fructose syrups [also known as high fructose corn syrup (HFCS) and isoglucose], they are not the same. Like sucrose, high fructose syrups contain nearly equal amounts of glucose and fructose. This change in composition is chemically significant and leads to differences in food applications and specific physiological responses.

Both of the recent fructose reviews utilized an evidence-based approach employed by the U.S. Food and Drug Administration when evaluating potential health claims for foods, beverages and food ingredients. The conclusion drawn from the two studies was that consumption of fructose does not increase triglycerides, body weight, or food intake in either normal weight or overweight/obese people. Researchers limited their analysis to the 95th percentile level of intake and below, which is considered the high end of dietary ingredient consumption.

After studying all of the research, the reviews' authors concluded that there was "no evidence to suggest that ingestion of fructose" had an adverse effect on body weight or serum triglycerides.

Overall, the vast majority of scientific literature confirms the safety and benefits of fructose use. Fructose has a low glycemic index and, unlike table sugar or HFCS, it does not cause a rapid rise and subsequent large fall in blood glucose levels.

Research released last year by Dr. Bernadette Marriott, Senior Scientist and Principal Associate for Abt Associates, found that although dietary fructose consumption has increased in recent decades, relative consumption of fructose compared to other sugars has remained constant.

A 2008 meta-analysis by Geoffrey Livesey and Richard Taylor found that moderate fructose consumption (50 grams or less per day) had no negative effect on the body and may even be beneficial, while high doses of pure fructose (100 grams/day or less) had no effect on body weight. Marriott also found that average fructose consumption across all age groups is approximately 49 grams per day, which is well below the 100 gram threshold found by Livesey and Taylor and is at a level they report may provide benefits.

Health professionals say the recent reviews demonstrate that fructose could be a useful tool in the battle against obesity.

"Fructose is sweeter than sugar and so less can be used to sweeten foods and beverages," said Beth Hubrich, a registered dietitian with the Calorie Control Council, an international non-profit trade association. "This helps to reduce calories in foods and drinks when used in appropriate product formulations."

SOURCE [1]

Links:
[1] http://www.eurekalert.org/pub_releases/2011-02/kc-erd021011.php