

Hey Sugar, What's all the Nonsense about Nonnutritive Sweeteners?

Who doesn't occasionally crave a sweet treat? Whether it's a morning mocha latté or afternoon soda, regardless of your favorite desserts or sugary drinks, we are born with a sweet tooth. Recognizing our desire for sweet flavors, the food and beverage industry has developed sugar free alternatives designed to satisfy our cravings. These products are called nonnutritive sweeteners.



So, do nonnutritive sweeteners help with weight loss and managing blood sugar levels in conditions such as diabetes? Or do they increase appetite and weight, as some have claimed? It is important to take a closer look at the different types of nonnutritive sweeteners and their ability to help us manage our weight and other medical conditions.

Nonnutritive sweeteners have sparked much controversy and debate. Some have claimed that they negatively affect behavior, mood, and could even be considered “toxic” while others claim that they are a solution to obesity and diabetes. We will take a closer look at the publicity surrounding nonnutritive sweeteners, to give you the facts on the safety and benefits of using them as part of a healthy diet.

Are Nonnutritive Sweeteners Safe?

Nonnutritive sweeteners are regulated by the U.S. Food and Drug Administration (FDA), the agency that regulates our food safety. Testing involves determining whether an ingredient is toxic, causes increased risk for cancer, and whether it would harm a developing fetus. Most studies prove that nonnutritive sweeteners are safe, even when they are eaten in large amounts. All nonnutritive sweeteners that are found in the grocery store and in different food products have been approved by the FDA.

What are the Benefits of Nonnutritive Sweeteners?

Most of the studies comparing effects of nonnutritive sweeteners on weight have shown that they help you reduce calories and may even help you shed a few pounds. Using nonnutritive sweeteners in place of sugary foods and beverages may also help to prevent unwanted weight gain. Many people believe that nonnutritive sweeteners increase appetite, which would make losing weight more difficult for the dieters using them. Although there are a few reports of increased hunger, the majority of research in adults shows that nonnutritive sweeteners do not increase appetite, sensation of hunger, or food intake.

Some people worry that increased use of foods and beverages with nonnutritive sweeteners may end up replacing the healthy food groups; therefore, these people are not getting enough nutrients. For example, regularly drinking diet soda instead of milk may cause one to consume less calcium than recommended. This is a possibility, but anyone using nonnutritive sweeteners, should make a conscious effort to eat a balanced and healthy diet.

Get Familiar with Nonnutritive Sweeteners

- **Acesulfame Potassium**
 - SweetOne®
 - Approved in 1998 by the FDA
 - Does not break down in heat so it can be used in cooking or baking
 - 200 times sweeter than table sugar

- **Aspartame**
 - Equal® or NutraSweet®
 - Discovered in 1965
 - Approved by the FDA as a dry ingredient in foods in 1981
 - 220 times sweeter than table sugar

- **Saccharin**
 - Sweet'N Low®
 - Discovered in the late 1800s by a John's Hopkins University scientist working on coal-tar derivative
 - Initially sold in a New York City for use by doctors to treat headaches, nausea, and overweight
 - 300 times sweeter than table sugar

- **Sucralose**
 - Splenda®
 - Discovered in 1976
 - Approved by FDA in 1999
 - Its structure prevents it from being absorbed by the body so that it is eliminated through the urine and feces
 - It is stable in high temperature making it good for cooking and baking
 - Retains its sweetness for a long shelf life
 - 600 times sweeter than table sugar

- **Stevia**
 - Truvia®, PureVia®, Stevia in the Raw®
 - A natural sweetener that comes from the leaves of the Stevia Rebaudiana Bertoni bush native to Central and South America
 - 200-300 times sweeter than table sugar

Nutrition Tips

- One teaspoon of table sugar equals about 16 calories. Nonnutritive sweeteners have no calories, and many will not affect your blood sugar.
- Because nonnutritive sweeteners are much sweeter than sugar, use them in small amounts to avoid an overly sweet taste or unpleasant aftertaste.
- If you want to cook or bake with a nonnutritive sweetener, use acesulfame potassium or sucralose for the best result.



The Bottom Line

Studies show that nonnutritive sweeteners do not increase appetite or food intake in adults, adolescents, or children. Although there is limited research using humans to test the safety of nonnutritive sweeteners, most of studies did not result in any harmful effects, even when consumed large amounts. Nonnutritive sweeteners can be a helpful tool for weight management, but should be used along with a balanced diet and exercise to maintain a healthy lifestyle. For more information on general dietary guidelines, visit www.choosemyplate.gov.

References

- How Much Is Too Much? "The Truth about Artificial Sweeteners or Sugar Substitutes." *ADA Evidence Analysis Library* (2011).
- Mattes, Richard D., and Barry M. Popkin. "Nonnutritive sweetener consumption in humans: effects on appetite and food intake and their putative mechanisms." *The American journal of clinical nutrition* 89.1 (2009): 1-14.

Want to talk to a Dietitian?

Registered Dietitians are here to help you with your nutrition questions. To make an appointment call (412) 692-4497 (Oakland location) or (412) 623-2421 (Shadyside location).