

Lowdown on Low-Calorie Sweeteners

Sweet tastes usually come from one of two types of sweeteners: sugars, which provide 16 calories per teaspoon, and low-calorie sweeteners, which provide few or no calories.

Aspartame

Aspartame is one of the most thoroughly studied food ingredients, with more than 200 scientific studies confirming its safety.

In 1983, the FDA approved aspartame for use in carbonated beverages. In addition to the FDA, regulatory agencies in more than 100 countries have found it to be safe. Aspartame does contain the amino acid phenylalanine and therefore should not be consumed by people with phenylketonuria (PKU). PKU is a rare genetic condition for which infants are tested at birth in every state in the U.S.

Aspartame is the sweetener found in Equal®.



Sucralose

Sucralose is a non-caloric sweetener that is structurally similar to sugar but is 600 times sweeter.

Discovered in 1967, sucralose was granted approval by the FDA in April 1998 for use in 15 food and beverage categories in the U.S. The FDA expanded the uses for sucralose in 1999, approving it as a “general purpose” sweetener. Sucralose has also been approved for use in foods and beverages in more than 40 countries including the U.S., Canada, Australia and Mexico.

Sucralose is the sweetener found in Splenda®.

Saccharin

Saccharin has been used as a calorie-free sweetener for foods and beverages for more than a century. It has been approved for use in more than 100 countries around the world. Although the totality of the available research confirms the safety of saccharin, there has been controversy over its safety. The basis for the controversy rested primarily on findings of bladder tumors in some male rats fed high doses of sodium saccharin. Over the past 20 years, however, extensive research on human populations has overwhelmingly demonstrated that there is no association between saccharin and bladder cancer in humans. In December 2000, the President signed federal legislation to remove the saccharin warning label that had been required on saccharin-sweetened foods and beverages in the U.S. since 1977.

Saccharin is the sweetener found in Sweet’N Low®.

Acesulfame Potassium (Ace-K)

Ace-K has been used in Europe since 1983 and in the U.S. since 1988. It is currently used in thousands of foods, beverages, and pharmaceutical products in about 90 countries. Among these are tabletop sweeteners, desserts, puddings, baked goods, soft drinks, candies and canned foods.

More than 90 studies have confirmed the safety of ace-K, and the FDA has approved its use in the U.S. Numerous scientific and regulatory bodies throughout the world have reviewed the available research on ace-K and concluded that it is safe for use in foods and beverages.

Ace-K is usually blended with other sweeteners to obtain a certain taste or sweetness balance.



*The Beverage Institute
For Health & Wellness*

The Beverage Institute for Health & Wellness is a scientific organization, within The Coca-Cola Company, that supports scientific research, education and outreach to better understand the role that beverages play in nutrition and health around the world.

For more information, visit www.beverageinstitute.org

Lowdown on Low-Calorie Sweeteners

“My patients often forget that beverages play a very important role in managing body weight. Lower- and no-calorie beverages are a good way to conveniently lower calorie intake without feeling deprived. A balanced diet, including portion control, beverage awareness and exercise are the best ways to help you keep a healthy body and healthy weight.”

— Dr. John Foreyt, Director, Behavioral Medicine Research Center, Baylor College of Medicine, Houston

In 2004, the American Dietetic Association (ADA) concluded that low-calorie sugar alternatives can help make your diet healthier by improving the flavor of foods and beverages that are low in calories. They can also improve the taste of nutritious foods and beverages that might otherwise be consumed in lesser amounts.

In addition to concluding that low-calorie sweeteners can help reduce calorie intake, the ADA stated that “nonnutritive sweeteners have the potential to promote weight loss in overweight and obese individuals....Replacing intake of added sugars with nonnutritive sweeteners could result in a deficit of 380 calories per day, or 1 pound of weight loss in 9 to 10 days, if intake was 95g (24 tsp.) daily. The energy [i.e., calorie] savings could be substantial for those individuals who consume higher levels of total energy [i.e., calories] from added sugars.”

Reducing calories as part of an overall diet and exercise plan is a great reason to look for light, low-calorie and no-calorie versions of your favorite foods and beverages. All low-cal and no-cal sweeteners found in American foods and beverages have been extensively tested and approved as safe by the Food and Drug Administration (FDA). And that means they are safe for consumption by adults and kids alike. Not only are non-caloric and low-caloric sweeteners safe for children, but, says Steven A. Abrams, M.D., professor of pediatrics, Baylor College of Medicine, Houston, “As a pediatrician, I consider the use of non-nutritive sweeteners to be a way that children can help control their calorie intake and maintain a healthy body weight.”

Thirst-Quenching Ideas

Enliven your taste buds and reduce calories by mixing and matching these suggestions for a new twist on refreshing beverages.

Instead of	Try	Approximate Calories Saved*
1 cup of fruit drink	1/2 cup of fruit drink + 1/2 cup of club soda	65
1 cup of bottled coffee drink	1 cup of black coffee + 1/4 cup of vanilla soymilk	100
1 cup apple juice	1/2 cup of apple juice + 1/2 cup of water	60
1 cup of sweet tea	1/2 cup of unsweetened tea + 1/2 cup of light lemonade	35
1 cup of orange juice	1 cup of light orange juice beverage	60
12 oz can of regular soda	12 oz can of diet soda	140

* Calories are approximations and may vary by brand.

Additional Resources:

American Dietetic Association Position Paper: Use of nutritive and non-nutritive sweeteners
www.eatright.org

FDA Consumer: Sugar Substitutes: Americans Opt for Sweetness and Lite
www.fda.gov/fdac/features/1999/699_sugar.html

International Food Information Council:
www.ific.org

Calorie Control Council:
www.caloriecontrol.org



For more information about low-calorie sweeteners and the role of beverages in weight management, visit www.beverageinstitute.org

To learn what sweeteners are used in different Coca-Cola products, visit www.beverageinstitute.org/beverage_science_and_innovation