

Americans love fake sugar — 180 million Americans use low-calorie and sugar-free foods and beverages according to a 2004 Calorie Control Council survey. But just how safe are these artificial sweeteners and low-calorie sugar substitutes? The U.S. Food and Drug Administration (FDA) has approved five artificial sweeteners. How do they compare to sugar? Find out more here.

1. Aspartame

Sold under the brand names **NutraSweet** and **Equal**, this sweetener is about 180-220 times sweeter than sugar and has an acceptable daily intake (ADI) at 3,500 milligram/person/day (mg/p/d) or 18 to 19 cans of diet soda, as set by the FDA. Aspartame is not recommended for people with phenylketonuria (PKU) since they cannot metabolize it. It can not be used in baking. Continue reading to learn about more FDA-approved artificial sweeteners.

2. Saccharin

Sold as **Sweet N Low** and **Sugar Twin**, this sweetener is about 300 times sweeter than sugar, has an ADI of 5mg or nine to 12 packets of sweetener, and is heat stable so it can be used in baking.

3. Sulacrose

This sweetener you'll recognize under the brand name **Splenda** is about 600 times sweeter than sugar, has an ADI of 350 mg/p/d or about 6 cans of diet soda and can be used a general-purpose sweetener for all foods.

4. Acesulfame K

Sweet One and **Sunett** are the brand names for the sugar substitute that is about 200 times sweeter than sugar, has an ADI of 1050 mg/p/d or 30 to 32 cans of diet soda, and is suitable for baking and cooking.

5. Neotame

This sweetener is about 8,000 times sweeter than sugar, has an ADI of 1,260 mg/p/d and can be used for baking.

Next: discover the positive and negative effects artificial sweeteners



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can have on your diet and health.

Help Reduce Daily Calories

The American Diabetes Association refers to these substances as “free foods” because they make food taste sweet, are essentially zero-calorie substances and do not raise blood sugar levels. Can they help shed pounds? By subbing the sugary or calorie-containing version of your favorite snacks and drinks for diet or calorie-free versions, you can shave hundreds of calories from your meals.

Altered Metabolism

New findings indicate that swapping sugar (calories) for fake sugar (no calories) may not be the best diet trick. Eating artificially sweetened foods may actually make you eat more than you would have had you eaten the regular version. Experiments conducted at Purdue University Investigative Behavior Research Center found that a group of rats fed saccharin-sweetened yogurt ate more calories, gained more weight and put on more body fat than a group fed yogurt sweetened with sugar. The study's authors explain that artificial sweeteners may affect the body's ability to regulate calorie intake and metabolism.

Aid Safe Weight Loss

Chewing sugar-free gum may help you burn calories and lose weight, according to a Mayo Clinic study conducted in 1999. The results found that chewing sugar-free gum at 100 chews per minute can raise a person's metabolic rate by approximately 20 percent, and someone chewing gum all day could be burning at a rate of 11 pounds a year.

May Take Weight Loss Too Far

Chewing too much sugar-free gum with the artificial sweetener sorbitol can cause chronic diarrhea, which has led to extreme weight loss in two cases reported in the British Medical Journal. Fortunately, in the U.S. most sugar-free gum is made with aspartame which does not have this side effect. In one of the cases, the person was consuming up to 200 grams of sweetener a day — 150 grams more than the amount that the FDA says is associated with danger of diarrhea.

Protect Oral Health

Replacing sugary foods with sugar-free substitutes can potentially prevent cavities, says the American Dietetic Association

(ADA). Plus, clinical studies have found that chewing sugarless gum for 20 minutes following meals can help prevent tooth decay, says the ADA. This activity can help neutralize and dilute tooth-decaying effects of acids from soda, energy drinks, tart candies, citrus fruits and foods containing vinegar. Chewing sugary gum can also stimulate saliva production but in turn, plaque bacteria use the sugar to make more decay-causing acids!

Help Diabetics Maintain Blood Sugar Levels

People with diabetes may use these because they add a sweet taste without raising blood sugar levels. Artificial sweeteners can be a supplement to a meal plan instead of substituted, says the American Diabetic Association. Sugar alcohols like sorbitol, maltitol and xylitol are reduced-calorie sweeteners that have about half the calories of sugars and other carbs. These don't raise blood glucose as much as the equivalent amount of other carbs but diabetics still must keep track of their intake.

Are Not Always Part of Low-Calorie Foods

Just because a package says sugar-free doesn't automatically make it a "healthy food." Sugar-free cookies and candies can still be loaded with calories or fat grams. Some sugar-free versions of foods have more of both of these than in their regular counterparts because they usually still contain carbs (which diabetics should be aware of) and dairy products.

Can Reduce Risk of Disease

Sugar intake has been linked to a variety of health concerns. So what affect does swapping sugar with an artificial substitute? As with limiting problems with tooth decay and diabetes, sugar substitutes seems to be associated with reduce risk of gout in men, according to a recent study published in the 'British Medical Journal.' The study found risk of gout increased with a higher consumption of sugary sodas, while men who drank diet soft drinks were not associated with any gout risk.

Are No Longer Associated with Cancer Risk

Of the FDA approved artificial sweeten-

ers, saccharin and aspartame were the only associated with cancer risk. In the 1970s studies linked saccharin to bladder cancer in rats and questions of causing cancer in humans were raised. No clear evidence of a risk for human bladder was found, according the National Cancer Institute (NCI). After FDA approval, later studies suggested an increase rate in brain tumors in humans, and lymphomas and leukemias in rats might be associated with the aspartame consumption. No evidence supports these claims, however, says the NCI. Acesulfame K, Sulacrose and Neotame were all approved by the FDA after more than 100 safety studies were conducted on each sweetener.