

# Artificial sweeteners and other sugar substitutes

**Learn about the pros and cons of sugar substitutes, also called artificial sweeteners.**

[By Mayo Clinic Staff](#)

Almost everyone likes a sugary snack. But if you often have foods and drinks with lots of added sugar, the empty calories can add up. Added sugar can play a part in weight gain. It also may raise your risk of serious health problems, such as diabetes and heart disease.

You might try to stay away from table sugar by using less processed sweeteners such as honey and molasses. But these also are forms of added sugar. They add calories to your diet.

Some people use products called sugar substitutes, also known as artificial sweeteners. They taste sweet like sugar but have fewer calories. Some have no calories.

## Uses for sugar substitutes

Many sugar substitutes taste sweeter than sugar. So very little is needed to sweeten foods and drinks. Other sugar substitutes called sugar alcohols are not as sweet as sugar.

Sugar substitutes are in many kinds of foods and drinks labeled sugar-free or diet. That includes soft drinks, candy and baked goods.

Some sugar substitutes also are sold on their own in packets or other containers. These can be added to foods or drinks at home.

## Safety of sugar substitutes

Government health agencies oversee ingredients that product-makers add to food. These agencies check ingredients, such as sugar substitutes, before foods or drinks that contain them can go on sale. In the United States, the Food and Drug Administration (FDA) allows the following sugar substitutes to be used:

- Acesulfame potassium (Sweet One, Sunett).
- Advantame.
- Aspartame (NutraSweet, Equal).
- Neotame (Newtame).
- Saccharin (Sweet'N Low).
- Sucralose (Splenda).
- Luo han guo (Monk Fruit in the Raw).
- Purified stevia leaf extracts (Truvia, PureVia, others).

Other countries, such as those in the European Union, have more sugar substitute options than does the United States.

The FDA allows product-makers to use sugar alcohols, such as sorbitol and xylitol, too. The agency doesn't consider sugar alcohols to be food additives.

The FDA and food safety agencies in other countries also suggest how much of a sugar substitute you can safely have each day. This amount is called the acceptable daily intake

(ADI). It varies by a person's weight and the type of sugar substitute used. Acceptable daily intakes aren't the same everywhere. They're different in the United States and Europe, for example.

In general, artificial sweeteners are safe in limited amounts for healthy people, including pregnant people. But limit or cut out sugar substitutes:

- If you're living with a rare genetic disease called phenylketonuria. Foods and drinks with aspartame can lead to serious health problems.
- If you have a bowel disease. Using sugar substitutes might make your symptoms flare up.

Dietary guidelines for Americans say adults shouldn't give sugar substitutes to children under 2 years old. In general, experts need to do more studies to learn what long-term health effects sugar substitutes might have on children. Most studies have looked at the effects in adults.

## **Health benefits linked to sugar substitutes**

If you replace added sugar with sugar substitutes, it could lower your risk of getting tooth decay and cavities.

Sugar substitutes also don't raise the level of sugar in the blood.

For adults and children with overweight or obesity, sugar substitutes also might help manage weight in the short term. That's because sugar substitutes often are low in calories or have no calories. But it's not clear whether sugar substitutes can help people manage their weight over the long term.

Over time, it's most important to eat a healthy diet and get exercise.

## **Health concerns linked to sugar substitutes**

Health agencies have clarified that sugar substitutes do not cause serious health problems.

Sugar substitutes also are not linked to a higher risk of cancer in people. Studies dating back to the 1970s linked the artificial sweetener saccharin to bladder cancer in rats. Since then, research has shown that those findings don't apply to people.

Some research on long-term, daily use of artificial sweeteners suggests a link to a higher risk of stroke, heart disease and death overall. But other things people do, or healthy habits that people don't do, may be the cause of the higher risk.

Other research is looking at long-term use of sugar substitutes and the gut. Many focus on how the gut and brain communicate. Researchers are checking to see if sugar substitutes affect cravings for sweets, the way people feel hunger and how the body manages blood sugar.

Sugar alcohols, stevia and luo han guo can cause bloating, gas and diarrhea. The amount of sugar alcohol that causes these symptoms varies from person to person.

In general, it is safest to take in small amounts of sugar substitutes. And it's best to use sugar substitutes for a short time, or just every once in a while. So try to cut back if you use them a few times a day.

## **The bottom line**

Artificial sweeteners can be a short-term way to help some people lessen their use of sugar and lose or manage weight. In general, sugar substitutes are safe for healthy adults.

But be aware of how sugar substitutes affect your food and drink choices. These ingredients may get your tastebuds used to sweetness. And that can make drinking enough water a challenge.

Products made with sugar substitutes also may give you the wrong message about processed foods. A snack labeled low sugar or no sugar may not be the most nutritious choice. Whole foods, such as fruits and vegetables, usually have the best mix of nutrients for the body.

But artificial sweeteners can help some people enjoy sweetness without excess calories. And if used in moderation, artificial sweeteners can be part of a healthy diet.

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