

Q&A: Is erythritol a safe and healthy sugar substitute?

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Question: A friend has a family history of diabetes and obesity. She is diligent about eating healthfully and enjoys sharing new recipes and information about food. Recently she mentioned a sugar substitute called

erythritol. I'm not familiar with this product. Can you explain what it is and if it is healthy?

Answer: Sugar is one of those ingredients that always seems to be in the news.

Eating and drinking too much sugar can negatively affect one's health. Sugar found naturally in food, such as whole fruits, is not associated with increased [health issues](#). But added sugar has been shown to contribute to dental cavities and is associated with multiple [chronic diseases](#) such as heart disease, obesity, fatty liver disease and type 2 diabetes.

Sugar has many forms. Most people are familiar with sucrose, the white granulated sugar found most often in kitchens, and raw sugar, also called turbinado sugar, which is crystalized and light brown. Other examples of sugar include [high-fructose corn syrup](#) and other sweeteners, which are often added to drinks and baked goods.

Because of the known health risks associated with added sugars, the [food industry](#) has produced numerous sugar substitutes with the intention of feeding our collective sweet tooth while minimizing the negative consequences of sugar.

Saccharin was the first commercially produced sugar substitute. Over the years, saccharin has fallen out of favor as it was found to negatively affect the [good bacteria](#) in our small intestines and gut, putting people at increased risk for type 2 diabetes and obesity. But dozens of other sugar substitutes have been developed.

One class of sugar substitutes that seemed promising is a group called "sugar alcohols," of which erythritol is a member. Sugar alcohols are sweet but are neither sugar nor alcohol. Sugar alcohols are derived from sugar, usually created by hydrogenating sugar or by fermenting it.

Examples of sugar alcohols include xylitol, sorbitol and mannitol. Often, we find these in processed foods, such as gum or candy.

Erythritol occurs naturally with the fermentation of fructose (fruit sugar) and is found in extremely low levels in various fruits such as melon, pears, grapes and in fermented foods, including dairy cheese and soy sauce. Our [red blood cells](#) also naturally make very low levels of erythritol.

When used as a food additive, erythritol is used at concentrations at least 1,000 times the natural levels found in food or our bodies.

While your friend may hope to lessen her risk for chronic illness by avoiding added sugar, it is important to note that sugar substitutes are not without risk. In recent decades, some concerning research has been published about possible adverse health effects of erythritol.

An American study from 2001 found that people who used erythritol as a sweetener had a three-year increased risk of major adverse cardiac events—defined as non-fatal heart attack or stroke. While this was an incidental finding—meaning that the erythritol did not necessarily cause or contribute to their cardiac issues—it highlighted the need for more research to determine whether using a sugar substitute predisposes a person to higher heart attack or stroke rates.

A 2021 study examined people who consumed erythritol or a similar sugar alcohol, xylitol. The results found that ingesting erythritol as a sugar substitute caused a spike in [blood levels](#) and increased the stickiness of the volunteers' platelets. Platelets help the blood to clot if we cut ourselves, but if they are sticky, the risk of blood clots in the body increases, raising our risk of heart attack, stroke or other vascular issues.

While the findings still do not definitely prove that erythritol directly increases the risk for cardiovascular issues, the results indicate it may be best to avoid it until we have more evidence to suggest that it is or is not safe.

Rather than chasing the perfect sugar substitute, it is best to minimize added sugars in our diet and reprogram a sweet tooth through other means.

If you are craving a sweet treat, grab a piece of whole fruit, such as an apple, pear, peach or plum. Fruit is a much healthier investment than foods sweetened with added sugar or sugar substitutes. Besides, research shows that a whole-food, plant-based diet prevents chronic diseases.

There are no shortcuts to healthy eating. The American Heart Association recommends that adults limit their daily [sugar](#) intake to 24 grams (six teaspoons) for women and 36 grams (nine teaspoons) for men. If you feel you need more guidance or want more information about how to make positive changes in your diet, consider making an appointment with a nutritionist or dietitian.

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