

# Effect of Sugar Substitutes on Cardiovascular System

Diet sodas, and other products that contain zero Calorie artificial sweeteners are popular, especially among people trying to lose weight. Recently, the safety of these sugar substitutes were questioned. The evidence that drinking artificial sweetener beverages helps people to lose weight is mixed.

Several small studies have hinted at potential health problems, including higher risk of cancer, kidney disease, and heart disease. Now a large study involving more than 100,000 people found a potential link between Artificial sweetners and increased risk of strokes, heart attacks, and related cardiovascular problems.

Erythritol and Xylitol are widely used sugar substitutes, and the studies recently showed they may not be as safe as previously thought. Consuming 30 g of erythritol, the amount often found in sugar-free beverages and other erythritol- sweetened products, lower the threshold for platelet activation, making blood more likely to clot. (Platelets are the cells in the blood that promote clotting).

Within 10 to 15 minutes of consuming these, blood levels of the sweetener increased 1000 fold and stayed elevated for several days . This study closely follows the results of a 2023 study that showed that Erythritol increased the risk of blood clots. Similar study done in June 2024, drinking a beverage containing 30 g of xylitol increase the platelet response in healthy volunteers.

Blood levels of xylitol soured higher than those of Erithritol, but dropped within six hours. Another study done in the United States and Europe have shown that elevated blood levels of either Erithritol or Xylitol are associated with increased risk of heart attack, stroke and death during three years follow up.

This does not mean you will develop a clot if you consume Erythritol or Xylitol, but it does mean you have an elevated risk of forming a clot with the potential to cause a heart attack or a stroke. This should worry anyone diagnosed with cardiovascular disease. But if you don't have cardiovascular disease, you're not off the hook.

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Remember, a first heart attack frequently occur in people who don't think they have cardiovascular disease What are these sweetness? Erythritol and Xylitol are sugar alcohols, or polyols. Both sweetners occur naturally in small amounts in some fruits, a few vegetables and certain fermented foods.

Both sweetness are manufactured from fermented corn cobs, and, in the case of Xylitol, birch bark, as well. Sugar alcohols are used in many products. In addition to sugar-free candy and baked goods, measurable amount of one or the other can be found in salad dressings, jelly, yogurt, ice cream, peanut butter, Jell-O, catch up, energy drinks, protein bars, diet soda , and on and on.

Erythritol is 70% as sweet as sugar, whereas many artificial sweeteners are hundred to 1000 times sweeter. Truvia, for example, contains erythritol, as do some products made with Splenda and Stevia. But their packages may not reveal this fact. If the manufacturer doesn't claim that the product is low in sugar and calories, they do not have to tell anyone it contains a sugar alcohol.

Artificial sweeteners that appear to be the most problematic are Aspartame ( NutraSweet, Equal )- which was linked to higher risk of Stroke,acesulfame potassium ( Sunnett, Sweet One) and Sucralose ( Splenda) are associated with higher coronary artery disease risk. Some experts think that artificial sweeteners may trigger inflammation and alter normal metabolism.

What about sugar? Chronically high blood glucose levels are known to cause inflammation, which may aggravate coronary artery disease. While many of the artificial sweetners are known to cause platelet to clot more easily,sugar had no effect on platelets at all. High level of glucose.-driven inflammation are serious, but only in individuals with diabetes.

It is well known that erythritol and and xylitol cause an immediate rise in the risk of blood clot formation, apparently in everyone.

Therefore, it is better to avoid artificial sweeteners and better to use fruit, table sugar, or honey as a sweetener. Just use them in moderation

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Sorry, I am trying to take away another thing from you all, but it is all for your safety and benefits

Keshava Aithal

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## **Dr Keshava Aithal**

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