# Article information:

The artificial sweetener erythritol and cardiovascular event risk | Nature Medicine
<https://www.nature.com.remotexs.ntu.edu.sg/articles/s41591-023-02223-9>

# Article summary:

1. Artificial sweeteners, including erythritol, have been widely introduced into the food chain to reduce sugar and calorie intake, but little is known about their long-term health effects.

2. A study found that higher plasma levels of erythritol were associated with an increased risk of major adverse cardiovascular events (MACE), including death, myocardial infarction, and stroke.

3. The study suggests that more research is needed to understand the potential cardiovascular risks of consuming artificial sweeteners like erythritol.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article discusses the potential cardiovascular risks associated with the artificial sweetener erythritol. While the use of artificial sweeteners has become increasingly common in processed foods and beverages, little is known about their long-term health effects. The article highlights growing epidemiological evidence linking the consumption of artificial sweeteners to adverse cardiometabolic phenotypes, including weight gain, insulin resistance, type 2 diabetes, and cardiovascular disease.

The article presents findings from untargeted metabolomics studies that suggest circulating levels of multiple polyols, especially erythritol, are associated with incident risk for major adverse cardiovascular events (MACE). The authors then quantitatively examined the relationship between plasma levels of erythritol and incident MACE in distinct US and European validation cohorts. They found that higher levels of erythritol were associated with a substantially increased incident event risk in both validation cohorts.

While the article provides valuable insights into the potential risks associated with erythritol consumption, it is important to note some limitations and biases. Firstly, the study only examines one specific artificial sweetener and does not provide a comprehensive analysis of all commonly used sweeteners. Secondly, while the study suggests an association between erythritol consumption and cardiovascular risk, it does not establish causality or provide a clear mechanism for how erythritol may contribute to adverse cardiometabolic outcomes.

Additionally, the article does not explore potential benefits or alternative uses for erythritol beyond its role as an artificial sweetener. For example, early studies have suggested potential antioxidant properties in animal models of diabetes and improvement in endothelial function after ingestion of an erythritol-containing drink in patients with diabetes.

Overall, while the article raises important concerns about potential risks associated with erythritol consumption, it is important to consider these findings within a broader context of available evidence on artificial sweeteners' safety and efficacy. Further research is needed to fully understand the long-term health effects of these widely used food additives.

# Topics for further research:

* Potential health benefits of erythritol beyond its role as an artificial sweetener
* Comparison of the safety and efficacy of different artificial sweeteners
* Mechanisms by which artificial sweeteners may contribute to adverse cardiometabolic outcomes
* Long-term health effects of consuming processed foods and beverages containing artificial sweeteners
* Role of erythritol in the development of insulin resistance and type 2 diabetes
* Antioxidant properties of erythritol and their potential therapeutic applications

# Report location:

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