

March 6, 2023

You may have recently read a media report about erythritol and cardiovascular disease. My team and I take these reports incredibly seriously.

The study had some serious flaws that are important to highlight. Below, I've provided an in-depth rebuttal to that study, including its limitations and how the news distorted the information.

I'm hardly alone with these conclusions. One of my esteemed colleagues, Mike Mutzel, also addressed this issue in his podcast, which you can listen to [here](#).

As science changes, so do we. We consistently monitor the latest research and adjust our products accordingly to meet those findings. Based on our review, we've concluded that the small amount of erythritol in our products is perfectly safe and healthy.

As always, we put your health and well-being front and center, and would never do anything to compromise that.

Love,
JJ

WHAT THE STUDY LOOKED AT

The recent *Nature* study investigated the relationship between erythritol and cardiovascular events. Researchers concluded that people with higher levels of erythritol in their blood had more heart problems than people with lower levels.

WHAT THE HEADLINES MISSED

The *Nature* study had some important limitations we want to highlight:

- The initial study where researchers found a possible connection between erythritol and heart health did not look at how much erythritol people were actually eating, which is a big problem. The study only measured levels of erythritol in people's blood, so it's unclear how much of the blood erythritol came from endogenous production (because your body can make erythritol) or dietary intake.
- To confirm their findings, researchers gave a very small cohort (eight participants) 30 grams of erythritol to consume to measure its effects. This is an extremely small sample of people, and they were given up to 10x the amount that you would consume, for example, in our bars (which contain between 2 and 6 grams of erythritol).

JJ VIRGIN

- The study found a correlation between high levels of blood erythritol and cardiovascular events, but it is well known that correlation does not always equal causation. In other words, when two variables are found together (in this case, erythritol consumption and cardiovascular disease), it does not automatically mean one caused the other. The authors state this clearly in the study.

What we see is that headline news picked up the wording from the correlation results and turned it into “Erythritol sweetener may increase your risk of heart attacks and stroke.” **This alarming conclusion is unfortunately very misleading and sensational.**

HOW ERYTHRITOL WORKS IN THE BODY

Unfortunately, this study failed to see the bigger picture that most people are eating too much sugar. The average person consumes about 17 teaspoons of added sugar per day. Research shows this excessive sugar intake contributes to cardiovascular disease and other health issues.

"The effects of added sugar intake—higher blood pressure, inflammation, weight gain, diabetes, and fatty liver disease—are all linked to an increased risk for heart attack and stroke," says Dr. Frank Hu, professor of nutrition at the Harvard T.H. Chan School of Public Health.

Your body converts the glucose, fructose, and starch you consume into erythritol. Erythritol that you eat is different from the erythritol that is produced in the body from this conversion.

Blood erythritol is a marker of a high-sugar diet, which is known to lead to cardiovascular disease. Oxidative stress may also cause elevated erythritol.

It's important to note that other studies have found potential benefits of erythritol, such as being non-caloric, non-glycemic, antioxidant, and beneficial for oral health (including preventing cavities).

OUR SCIENCE-BACKED FORMULATIONS

We take the safety of our products seriously and will continue to monitor the latest research to ensure we provide you with the best possible products. Our products contain very low, safe amounts of erythritol in the context of a healthy, whole-food-based diet.

Thank you for your trust and support. If you have any further questions or concerns, please don't hesitate to contact us at info@jjvirgin.com.

REFERENCES

Ortiz, S. R., & Field, M. S. (2020). Mammalian metabolism of erythritol: a predictive biomarker of metabolic dysfunction. *Current opinion in clinical nutrition and metabolic care*, 23(5), 296–301. <https://doi.org/10.1097/MCO.0000000000000665>

Harvard Medical School. (2022, January 6). *The sweet danger of sugar*. Harvard Health Publishing. Retrieved March 2, 2023, from <https://www.health.harvard.edu/heart-health/the-sweet-danger-of-sugar>

Hootman, K. C., Trezzi, J.-P., Kraemer, L., Burwell, L. S., Dong, X., Guertin, K. A., Jaeger, C., Stover, P. J., Hiller, K., & Cassano, P. A. (2017). Erythritol is a pentose-phosphate pathway metabolite and associated with adiposity gain in young adults. *Proceedings of the National Academy of Sciences*, 114(21). <https://doi.org/10.1073/pnas.1620079114>

Mazi, T. A., & Stanhope, K. L. (2023). Erythritol: An In-Depth Discussion of Its Potential to Be a Beneficial Dietary Component. *Nutrients*, 15(1), 204. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/nu15010204>

Ortiz, S. R., Heinz, A., Hiller, K., & Field, M. S. (2022). Erythritol synthesis is elevated in response to oxidative stress and regulated by the non-oxidative pentose phosphate pathway in A549 cells. *Frontiers in nutrition*, 9, 953056. <https://doi.org/10.3389/fnut.2022.953056>

de Cock P. (2018). Erythritol Functional Roles in Oral-Systemic Health. *Advances in dental research*, 29(1), 104–109. <https://doi.org/10.1177/0022034517736499>

Jin, M., Wei, Y., Yu, H., Ma, X., Yan, S., Zhao, L., Ding, L., Cheng, J., & Feng, H. (2021). Erythritol Improves Nonalcoholic Fatty Liver Disease by Activating Nrf2 Antioxidant Capacity. *Journal of agricultural and food chemistry*, 69(44), 13080–13092. <https://doi.org/10.1021/acs.jafc.1c05213>