

# Study examines the relationship between sugars and heart health

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The impact of sugars on heart health depends on the dose and type of sugar consumed, suggests a new study led by researchers at St. Michael's Hospital.

The team, led by Dr. John Sievenpiper, a staff physician in the Division of Endocrinology and Metabolism and a scientist at the Li Ka Shing Knowledge Institute, examined the relationship between total and added sugars that contain fructose on cardiovascular disease incidence and mortality.

Fructose is a naturally occurring [sugar](#) in many fruits and vegetables and makes up about half of the sugars in added sucrose and [high-fructose corn syrup](#).

"We tend to think that sugars irrespective of the source are all bad, but this isn't always the case," said Dr. Sievenpiper. "Sugars behave differently depending on the type, dose and [food source](#). Different sugars in varying amounts from different sources can have different effects on our health."

Dr. Sievenpiper and his team wanted to find out whether there were harmful associations of fructose-containing sugars with heart health.

To do this, the team conducted a review of previous studies investigating the association between reported intakes of fructose-containing sugars derived from all reported sources and heart disease incidence and mortality.

The team found that different types of sugars showed different associations with cardiovascular disease. Higher intake of total sugars, fructose or added sugars was associated with increased death from cardiovascular disease, whereas higher intake of sucrose was associated with decreased death from cardiovascular disease.

The sugars that were associated with harm also showed thresholds for harm below which increased death from cardiovascular [disease](#) was not observed, ranging from 58 grams for fructose to 133 grams for total

sugars.

Given the limitation that their data is largely observational in nature, Dr. Sievenpiper stressed that the certainty of their evidence is generally low and there is still a long way to go before fully understanding the relationship between sugars and heart health.

Next, the team plans to look at whether the differences seen by the type and dose of sugars can be explained by their food sources.

"We know that there are healthy and less healthy sources of sugar out there, but we want to know if these differences in sugars are driving the differences we're seeing in the association with [cardiovascular disease](#)," said Dr. Sievenpiper. "In other words, does it matter whether sugar comes from a healthier source such as fruit, yogurt, or a high-fibre, whole grain cereal versus a sugar-sweetened beverage."

**More information:** Tauseef A. Khan et al. Relation of Total Sugars, Sucrose, Fructose, and Added Sugars With the Risk of Cardiovascular Disease, *Mayo Clinic Proceedings* (2019). [DOI: 10.1016/j.mayocp.2019.05.034](#)

Provided by St. Michael's Hospital

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