

California study finds drinking sugary drinks daily may be linked to higher risk of CVD in women

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Drinking one or more sugary beverages a day was associated with a nearly 20% greater likelihood of women having a cardiovascular disease compared to women who rarely or never drank sugary beverages, according to new research published today in the *Journal of the American Heart Association*, an open access journal of the American Heart Association.

In the large, ongoing California Teacher's Study, which began in 1995, drinking one or more of any type of sugary beverage daily was associated with a 26% higher likelihood of needing a revascularization procedure, such as angioplasty to open clogged arteries, and a 21% higher likelihood of having a stroke compared to women who rarely or never drank sugary beverages. Sugary beverages in this study were defined as caloric [soft drinks](#), sweetened bottled waters or teas and [sugar](#)-added [fruit drinks](#), not 100% fruit juices.

There were also differences based on the type of beverage women consumed. Drinking one or more sugar-added fruit drinks daily was associated with a 42% greater likelihood of having cardiovascular disease. Drinking soft drinks such as sodas daily was associated with a 23% higher risk of cardiovascular disease overall, compared to those who rarely or never drank [sugary beverages](#).

The study included more than 106,000 women, with an average age of 52, who had not been diagnosed with [heart disease](#), stroke or diabetes when they enrolled in the study.

The women reported how much and what they drank via a food questionnaire. Statewide inpatient hospitalization records were used to determine whether a woman had experienced a heart attack, stroke or surgery to open clogged arteries. Women with the highest sugar-sweetened beverage intake were younger, more likely to be current smokers, obese and less likely to eat healthy foods, among other things.

"Although the study is observational and does not prove cause and effect, we hypothesize that sugar may increase the risk of cardiovascular diseases in several ways. It raises glucose levels and insulin concentrations in the blood, which may increase appetite and lead to obesity, a major risk factor for cardiovascular [disease](#)," said lead study author Cheryl Anderson, Ph.D., M.P.H., M.S., professor and interim chair of Family and Public Health, University of California San Diego, and chair of the American Heart Association's Nutrition Committee.

"In addition, too much sugar in the blood is associated with oxidative stress and inflammation, insulin resistance, unhealthy cholesterol profiles and type 2 diabetes, conditions that are strongly linked to the development of atherosclerosis, the

slow narrowing of the arteries that underlies most [cardiovascular disease](#)," said Anderson.

Strengths of the study included its large sample size, extensive follow-up time and prospective data collection on sugar-sweetened beverages and lifestyle characteristics. In addition, the ability to annually link to statewide hospitalization and procedure records resulted in accurate endpoints.

Limitations of the study included having only one measurement of sugar-sweetened beverage intake. The study was also unable to evaluate consumption of artificially sweetened beverages and/or sweetened hot beverages.

The American Heart Association recommends limiting added sugar to no more than 100 calories a day (6 teaspoons of sugar or 25 grams) for most [women](#), and no more than 150 calories a day (9 teaspoons of sugar or 38 grams) for most men. Sugar-sweetened beverages are the biggest source of added sugars in the American diet; a typical 12-ounce can of regular soda has 130 calories and 8 teaspoons (34 grams) of sugar.

Although diet soda may provide an alternative for some people who are trying to reduce the amount of sugary drinks in their diet, they do include artificial sweeteners such as saccharin, aspartame, sucralose and others. Water remains the most accessible and healthy beverage to drink regularly—water has no sugar, no artificial sweeteners and no calories.

More information: *Journal of the American Heart Association* (2020). [DOI: 10.1161/JAHA.119.014883](#)

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