Editorial

Beverages – May raise the Blood Pressure and Contributors to Cardiovascular Diseases – A Study

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New research suggests that drinking sodas and other sugar-sweetened beverages every day may raise blood pressure, but a beverage industry trade group calls the study significantly flawed.

Sugar-sweetened beverages are the No.1 source of added sugars in the American diet, and the research is among the first to link them to higher blood pressure. The study found that the more sugary sodas and other sugar sweetened beverages people drank, the higher their blood pressures tended to be.

Every extra sugar-sweetened beverages drank per day was associated with a 1.6 point rise in systolic blood pressure and a 1 point rise in diastolic pressure. The highest blood pressures were seen in study participants who drank the most sugar sweetened beverages and also had the most added salt in their diets, study co-author J. Brown, PhD, tells WebMD.

"We know that salt is a risk factor for high blood pressure," Brown says, " But our findings suggest that sugar and salt together may be worse than salt alone."

Brown says this finding needs to be confirmed, adding that the research does not prove sugary sodas and other sources of added sugar in the diet to have a direct impact on blood pressure.

That's because the study was observational, meaning the participants were asked to recall what they drank instead of directly comparing participants given a specific amount of sugar sweetened beverages to participants who were not given sugar sweetened beverages.

People who reported drinking the most non-diet sodas and other sugar-sweetened drinks also had the highest overall intake of calories and salt and were the most likely to be obese. Maureen Storey, PhD, of the soda industry group American Beverage Association, agrees the study does not prove a link between sugar-sweetened beverages and elevated blood pressure.

"Finding a very weak association between two things does not establish a cause and effect," she said.

"This study has significant flaws. In fact, the blood pressure changes noted by the authors are inconsequential and well within standard measurement error."

In an interview with Web MD, Storey said there is little evidence that sugar sweetened beverages are unique contributors to cardio-vascular disease. "A calorie is a calorie, and what the data clearly show is that we are eating too much and taking in too many calories, period." She says, adding that Americans are consuming fewer sugar sweetened beverages than they were a decade ago.

The research included close to 2,700 middle aged people in the U.S. and U.K. who were enrolled in a larger health study. The participants reported what they ate and drank for four days, during which time their blood pressures were taken eight time. They also completed a detailed questionnaire examining lifestyle, medical and social issues.

Peoples who reported drinking more than one serving per day of sugar sweetened drinks took in an average of about 400 calories more each day than people who drank no sugar sweetened beverages.

The American Heart Association recommends that women limit added sugars in their diets to no more than 100 calories a day and men limit added sugars to 150 calories.

A typical 12-ounce can of sugar-sweetened soda has about 140 calories and just about all the calories come from added sweeteners "(non-diet) sodas are basically sugar water with or without caffeine." AHA spokesperson Rachel K. Johnson, PhD, tells WebMD. They are the No.1 source of added sugars in a population where the majority of people are overweight."

She concedes that a direct link between soda consumption and obesity and cardiovascular disease would be difficult to prove, but adds that she does not think the science linking sugar sweetened beverages to these health issues has been over played.

Johnson is a professor of nutrition at the University of Vermont.

"I don't think anyone would say that limiting sugar sweetened drinks is the only solution," she says. " But to me, it is an important step in the right direction."

A Soda a day? That's not so bad. A 150 calories blip, burned off with a brisk half-hour walk. But it's not only your waistline that's at stake.

A study released in the journal Diabetes Care found that people with a daily habit of just one or two sugar

sweetened beverages anything from sodas and energy drinks to sweetened teas and vitamin water were more than 25 percent likelier to develop type 2 diabetes than were similar individuals who had no more than one sugary drink per month. Since the overall rate of diabetes is roughly 1 in 10, an increase of 25 percent raises the risk to about 1 in 8. One a day guzzlers in the study also had a 20 percent higher rate of metabolic syndrome, a collection of indicators such as high triglyceride levels suggesting that diabetes is not far off.

"Previous studies have shown that sugar sweetened beverages are strongly associated with weight gain," says lead author Vasanti Malik, a research fellow in the Harvard School of Public Health Department of Nutrition, who says the decision to examine the relationship between sugar sweetened beverages and risk of diabetes was the logical next step."

The researchers conducted a study of studies a meta analysis to reach their conclusion. They identified eight studies with enough data to let them check for a link between sugary drinks and type 2 diabetes and three similar studies of metabolic syndrome. The largest diabetes study, which followed more than 91,000 American women ages 24 to 44 for eight years, made the strongest case for a relationship, and it wasn't just because higher consumption of sweetened drinks added excess calories that turned into pounds. While weight gain is a known diabetes risk factor, the diabetes beverage link persisted even after adjusting for that.

"Other factors independently put you at risk for developing diabetes," says Malik.

The main one is spikes in blood glucose and insulin because sweetened drinks are often consumed quickly and in large quantities and their sugar content is rapidly absorbed. Frequent spiking can lead to insulin resistance, inflammation and hypertension often precursors to diabetes. High-fructose corn syrup, the sugar in many sweetened drinks, is emerging as possibly riskier than other sugars because it seems to produce more belly fat. Fat that accumulates around the middle is closely tied to high blood pressure and other cardiovascular problems.

Americans love sweetened drinks. Consumption climbed to an average of 142 calories a day or nearly one 12-ounce can of soda, in 2006, from 65 in the late 1970s. And many people down far more than that, notes Frank Hu, a senior author of the study and a professor of nutrition and epidemiology at Harvard, which puts them at a much greater risk of diabetes. A report from the Centers for Disease Control and Prevention released earlier this week projects that by 2050, 1 in 3 Americans will develop the disease.

In a study 28 percent of children with hypertension were also reported to have learning difficulties. (Posed by model).

Children who have high blood pressure are four times more likely to have learning disabilities than children with normal readings, according to a study.

U.S researchers said while it was well known that hypertension could increase the risk of heart disease, their study suggested it could also affect mental development in the young. Dr. Heater Adams, of University of Rochester Medical Center, said: "This study found that children with hypertension are more likely to have ADHD (attention deficit hyperactivity disorder).

Although retrospective, this work adds to the growing evidence of an association between hypertension and cognitive function. Around four percent of children in the U.S are now estimated to have high blood pressure. The UK figure is not known because Britain has no standard definition of hypertension in children.

There isn't a defined series of measurements for blood pressure in children. A U.S working group said children with high blood pressure had readings that were higher than 95 percent of their peers who were the same age, height and weight.

The study published in the journal Pediatrics, looked at 201 patients aged between 10 and 18 years old who had been referred to the hypertension clinic at URMC's Children's Hospital. They found 101 had hypertension, or sustained high blood pressure. Of these, 28 per cent had learning disabilities well above the general population's rate of five percent.

Previous studies excluded children with ADHD because medications can increase blood pressure. However, researchers included them this time because it is also possible that the higher rate of ADHD among children with hypertension is a reflection of mental development problems caused by hypertension.