

The downside of your sweet and salty addiction could be rapid-onset high blood pressure

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Consumption of fructose, a fruit-derived sugar present in many sweetened beverages and processed foods, has been associated with epidemic levels of diabetes, obesity, metabolic syndrome and hypertension in the U.S. and around the world. New research presented today at the Experimental Biology 2016 meeting in San Diego further supports this link, finding that high levels of fructose similar to amounts consumed within the American diet may predispose individuals to fast-onset, salt-sensitive hypertension.

"A majority of American adults consume 10 percent or more of total calories from added sugars with a subset taking in more than 25 percent of total calories from added sugars," said lead author Kevin Gordish, PhD. Because beverages are the most common source of added sugars in the American [diet](#), the research team gave rats drinking water with 20 percent [fructose](#)—to simulate excessive human soft-drink consumption—and compared them with rats who received plain water in addition to their food for two weeks. During the second week, the rats receiving 20 percent fructose were also given additional [salt](#) in their diets.

"The specific combination of fructose and high salt introduced in the second week rapidly increased blood pressure, resulting in [hypertension](#). Fructose-linked hypertension was associated with increased sodium retention, decreased sodium excretion and diminished factors that help

rid the body of excess salt. This observation of fructose-linked hypertension was only seen a diet with fructose and high salt and not a normal salt diet," Gordish said. "Fructose intake, similar to amounts consumed within the American diet, predisposed normal rats to a rapid onset of salt-sensitive hypertension. Fructose-linked hypertension was unambiguously due to fructose (and not glucose). Further, fructose had distinct deleterious effects in the kidney not seen with the same amount of glucose."

The results have implications for the U.S. in general and certain ethnic groups such as African Americans, who have a high rate of incidence of salt-sensitive hypertension, in particular. Overall, these findings raise concern about the amount of fructose and salt found in the American diet.

Provided by American Physiological Society

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