

Women who drink lots of soda at higher risk for early kidney disease

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Women who drink two or more cans of soda pop per day are nearly twice as likely to show early signs of kidney disease, a recent study has found.

However, researchers did not find an elevated risk for men, or for people who drink diet soda, said lead researcher David Shoham of Loyola University Health System.

The study was published in *PLoS ONE*, a peer-reviewed journal of science and medical research published by the Public Library of Science.

Researchers examined data from a representative sample of 9,358 U.S. adults in the National Health and Nutrition Examination Survey. The NHANES survey included urine samples and a questionnaire about dietary habits.

Women who reported drinking two or more sodas in the previous 24 hours were 1.86 times more likely to have albuminuria, a sensitive marker for early kidney damage. Albuminuria is an excess amount of a protein called albumin in the urine. Since healthy kidneys filter out large molecules such as albumin, an excess amount can be a sign of damage to the kidneys.

About 11 percent of the population has albuminuria. Among those who drink two or more cans of soda per day, 17 percent have this early

marker of kidney disease, the study found. It's unclear why drinking soda increased the risk only in women, Shoham said. There may be an unknown underlying cause that is linked to both soda consumption and kidney damage, he said. Shoham is an assistant professor in the Department of Preventive Medicine and Epidemiology.

In recent years, diabetes, obesity and kidney disease have been increasing, along with consumption of high fructose corn syrup, the sweetener used in most sodas.

But what's most important is the amount of sugar, not the type, Shoham said. "I don't think there is anything demonic about high fructose corn syrup per se," Shoham said. "People are consuming too much sugar. The problem with high fructose corn syrup is that it contributes to over consumption. It's cheap, it has a long shelf life and it allows you to buy a case of soda for less than \$10."

Shoham and colleagues concluded that additional studies are needed to determine whether the elevated risk of kidney disease is due to high fructose corn syrup itself, an overall excess intake of sugar, unmeasured lifestyle factors or other causes.

A recent pilot study by other researchers, reported in the journal *Environmental Health*, found that nine of 20 commercial samples of high fructose corn syrup from three manufacturers contained detectable levels of mercury. "This adds the intriguing possibility that it is not just the sugar itself in high fructose corn syrup that is harmful, because mercury is harmful to kidneys as well," Shoham said.

About 26 million American adults have chronic kidney disease, according to the National Kidney Foundation. Advanced kidney disease causes such symptoms as fatigue, poor appetite, trouble sleeping and concentrating and swollen feet. Kidney disease can lead to high blood

pressure, anemia, nerve damage, weak bones and cardiovascular disease.

Source: Loyola University Health System

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