

Sugar-sweetened beverage pattern linked to higher kidney disease risk

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How do beverage patterns influence risk of incident kidney disease?





Conclusions Higher consumption of sugar-sweetened beverages was associated with a higher risk of subsequent CKD in this community-based cohort of Blacks.

Casey Rebholz, Bessie Young, Ronit Katz, Katherine Tucker, Teresa Carithers, Arnita Norwood, and Adolfo Correa. *Patterns of Beverages Consumed and Risk of Incident Kidney Disease*. CJASN doi: 10.2215/CJN.06380518. Visual Abstract by Michelle Lim, MBChB

Credit: Rebholz

Higher collective consumption of sweetened fruit drinks, soda, and water was associated with a higher likelihood of developing chronic kidney disease (CKD) in a community-based study of African-American adults in Mississippi. The findings, which appear in an upcoming issue of the *Clinical Journal of the American Society of Nephrology (CJASN)*, contribute to the growing body of evidence pointing to the negative



health consequences of consuming sugar-sweetened beverages.

Certain beverages may affect kidney <u>health</u>, but study results have been inconsistent. To provide more clarity, Casey Rebholz Ph.D., MS, MNSP, MPH (Johns Hopkins Bloomberg School of Public Health) and her colleagues prospectively studied 3003 African-American men and women with normal kidney function who were enrolled in the Jackson Heart Study.

"There is a lack of comprehensive information on the health implications of the wide range of beverage options that are available in the <u>food supply</u>," said Dr. Rebholz. "In particular, there is <u>limited</u> <u>information</u> on which types of beverages and patterns of beverages are associated with kidney disease risk in particular."

For their study, the investigators assessed beverage intake through a food frequency questionnaire administered at the start of the study in 2000-04, and they followed participants until 2009-13.

Among the 3003 participants, 185 (6%) developed CKD over a median follow-up of 8 years. After adjustment for confounding factors, consuming a beverage pattern consisting of soda, sweetened fruit drinks, and water was associated with a higher risk of developing CKD. Participants in the top tertile for <u>consumption</u> of this beverage pattern were 61% more likely to develop CKD than those in the bottom tertile.

The researchers were surprised to see that water was a component of this beverage pattern that was linked with a higher risk of CKD. They noted that study participants may have reported their consumption of a wide variety of types of water, including flavored and sweetened water. Unfortunately, the investigators did not collect information about specific brands or types of bottled <u>water</u> in the Jackson Heart Study.



In an accompanying editorial, Holly Kramer, MD, MPH and David Shoham, Ph.D. (Loyola University Chicago) noted that the findings hold strong public health implications. "While a few select U.S. cities have successfully reduced SSB [sugar sweetened beverage] consumption via taxation, all other municipalities have resisted public health efforts to lower SSB consumption," they wrote. "This cultural resistance to reducing SSB consumption can be compared to the cultural resistance to smoking cessation during the 1960s after the Surgeon General report was released. During the 1960s, tobacco use was viewed as a social choice and not a medical or social public health problem."

In an accompanying Patient Voice editorial, Duane Sunwold explained that he is a patient with CKD who changed his eating and drinking patterns to put his disease in remission. As a chef, he offers a number of recommendations to fellow patients trying to decrease their consumption of sugar-sweetened drinks.

More information: "Patterns of Beverages Consumed and Risk of Incident Kidney Disease," *Clinical Journal of the American Society of Nephrology* (2018). DOI: 10.2215/CJN.06380518

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