

High-salt diet may raise cardiovascular disease risk for kidney disease patients

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Keith Brannon kbrannon@tulane.edu

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High salt consumption is associated with a higher risk for cardiovascular disease (CVD) in patients with chronic kidney disease (CKD), according to a new Tulane University study appearing in the Journal of the American Medical Association ([JAMA](#)) this week.

Researchers followed more than 3,500 patients with CKD for almost a decade and examined the association between urinary sodium excretion — a marker for salt intake — and incidents of clinical cardiovascular disease.

“The study is the first to investigate the association between sodium excretion and CVD incidence in a population with CKD,” said [Dr. Jiang He](#), senior author and professor at Tulane University School of Public Health and Tropical Medicine who holds the Joseph S. Copes Chair in Epidemiology.

In all, the study tracked more than 800 CVD incidents such as heart attacks, strokes or heart failure among participants and discovered a significant association with higher urinary sodium excretion levels. The increased risk was independent of several important CVD risk factors, including use of antihypertensive medications, kidney function and history of CVD.

After adjustment for age, sex, race, clinic site, important cardiovascular risk factors and kidney function, sodium excretion was significantly associated with composite cardiovascular disease, heart failure and stroke. For example, the highest quartile of sodium excretion was significantly associated with a 36 percent higher risk in composite cardiovascular disease, 34 percent higher risk in heart failure, and 81

percent higher risk in stroke, compared to the lowest quartile.

Findings were consistent across subgroups and independent of further adjustment for total caloric intake and systolic blood pressure.

“These findings, if confirmed by clinical trials, suggest that moderate sodium reduction among patients with CKD and high sodium intake may lower CVD risk,” He said. “Future randomized controlled trials should recommend testing the effect of sodium reduction on risk of cardiovascular disease.”

The first author of this paper is Dr. Katherine Mills, an assistant professor of epidemiology. Other authors include Drs. Jing Chen and Arnold Alper from Tulane University School of Medicine.

The study is available online at

<http://jama.jamanetwork.com/article.aspx?doi=10.1001/jama.2016.4447>