

Higher salt intake may increase risk of CVD among patients with chronic kidney disease

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In a study appearing in the May 24/31 issue of *JAMA*, Jiang He, M.D., Ph.D., of the Tulane University School of Public Health and Tropical Medicine, New Orleans, and colleagues evaluated more than 3,500 participants with chronic kidney disease (CKD), examining the association between urinary sodium excretion and clinical cardiovascular disease (CVD) events. The study is being released to coincide with its presentation at the 53rd European Renal Association - European Dialysis and Transplant Association (ERA-EDTA) Congress.

Chronic kidney disease affects approximately 11 percent of the U.S. population and is associated with increased risk of CVD and all-cause mortality. Greater than 1 in 3 U.S. adults has CVD, and it is the leading cause of death in the United States. A positive association between [sodium intake](#) and blood pressure is well established. However, the association between sodium intake and clinical CVD remains less clear, and this relationship has not been investigated in patients with CKD.

This study included 3,757 patients with CKD from 7 locations in the U.S. enrolled in the Chronic Renal Insufficiency Cohort (CRIC) Study and were followed up from May 2003 to March 2013. Participants were requested to provide urine specimens at study entry and the first 2 annual follow-up visits. Among the participants (average age, 58 years; 45 percent women), 804 composite CVD events (congestive heart failure, stroke, or heart attack) occurred during a median 6.8 years of follow-up. The researchers found a significantly increased risk of CVD in individuals with the highest [urinary sodium excretion](#) independent of

several important CVD risk factors, including use of antihypertensive medications and history of CVD. The cumulative incidence of CVD events in the highest quartile of calibrated sodium excretion compared with the lowest was 23.2 percent vs 13.3 percent for heart failure, 10.9 percent vs 7.8 percent for heart attack, and 6.4 percent vs 2.7 percent for stroke at median follow-up.

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," the authors write.

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