

# Millions of Americans in early stages of kidney disease need stroke monitoring

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Millions of Americans in the early stages of chronic kidney disease (CKD) are at an increased risk of having atrial fibrillation (AF) - a major risk factor for stroke - according to new research by investigators at Wake Forest University Baptist Medical Center.

While it is known in the medical community that patients with end-stage renal failure have high rates of AF, new findings show that patients in early stages of CKD experience similar rates of AF, highlighting millions of Americans who were previously thought to be at low risk, but who need close monitoring for the condition.

The findings from the Chronic Renal Insufficiency Cohort (CRIC), a national study sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), were recently published in the *American Heart Journal*.

[Atrial fibrillation](#) is the most common sustained arrhythmia in the general population, and is one of the strongest [risk factors](#) for stroke. While AF prevalence in the general population ranges from 1 to 8 percent, the estimated prevalence of AF among patients with end-stage renal disease has been reported to be between 13 and 23 percent.

The epidemiology of AF has mainly been investigated in patients with end-stage kidney disease who are on dialysis, with limited data in less advanced CKD stages, explained Elsayed Z. Soliman, M.D., M.Sc., M.S., director of the Epidemiological Cardiology Research Center

(EPICARE) at Wake Forest Baptist and lead author on the study. Soliman and colleagues studied the prevalence and associations of AF in patients with "early stages" of CKD - those not yet on dialysis - who were enrolled in the CRIC study.

"More than 25 million U.S. adults have [chronic kidney disease](#) and most of them are not on dialysis," Soliman said. "Understanding the prevalence and risk factors of AF in this group of patients has important public health, epidemiologic and clinical implications."

The study showed that nearly one in five study participants with early stages of CKD had evidence of AF, a rate similar to that reported among patients with end-stage CKD and two to three times of that reported in the general population using the same AF detection methods.

The researchers also found that risk factors for AF in this CKD population are not the same as those seen in the general population, meaning that research is needed to develop a separate set of AF predictors specifically for patients with CKD.

The high rate of atrial fibrillation seen in patients with early stages of CKD suggests that the processes that influence the development of AF may occur early in the course of CKD development, Soliman said. This greater prevalence also emphasizes the importance of more closely monitoring the health conditions of this set of patients, he added.

"People in the United States are living longer and getting older," Soliman said. "AF and CKD are common diseases in older populations, so for a growing number of people, the likelihood of developing AF is increasing. Essentially, more and more people are falling into the high risk category and we need to do everything we can to minimize this risk."

Provided by Wake Forest University Baptist Medical Center

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