

Kidney disease linked to increased risk of falling

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Kidney disease causes middle-aged people to be as susceptible to falling as older adults, say researchers from Ball State University.

"Epidemiology of falls and fall-related injuries among middle-aged adults with [kidney](#) disease" recently published by the journal International Urology and Nephrology, found that people with [chronic kidney disease](#) (CKD) were at increased risk of falls and related injuries even after adjusting for differences in demographic characteristics, health conditions, and lifestyle factors.

Brandon Kistler, a Ball State nutrition professor, led the multi-university team. Researchers conducted an analysis of 186,208 adults between the ages of 45 and 64, including about 5,600 with kidney disease, surveyed in the Behavioral Risk Factor Surveillance System by the Centers for Disease Control and Prevention (CDC).

The study found that no matter the age, adults can take a tumble once kidney disease takes hold, Kistler said.

"Numerous physiological changes associated with chronic kidney failure, such as muscle wasting and weakness, may explain the increased risk of falling," he said "Changes in bone and mineral metabolism causing weak, brittle bones may lead to an increased propensity for fall-related injuries in people with kidney disease, especially those with end-stage kidney disease."

More than a quarter of all study participants (27%) reported suffering a fall within the past 12 months and more than a 10th (11%) also suffered an injury. Prevalence of falls was significantly higher in females (28%), men and women with CKD (45%), and females with CKD (49%) compared to their counterparts. Similarly, prevalence of [fall-related injuries](#) was significantly higher in females (13%), men and women with CKD (24%), and females with CKD (27%) compared to their counterparts

People with kidney disease may significantly reduce spills by

incorporating exercise into their daily routines. Also, aggressive treatment of other conditions such as depression and arthritis can help reduce falling, said study co-author Jagdish Khubchandani, a Ball State health science professor.

Kistler and Khubchandani are faculty members of the College of Health.

"Physical function and exercise are potentially modifiable, cost effective, and evidence-based strategies to enhance mobility," Kistler said. "Our study suggests that as in other populations, exercise programs that target strength and balance may be an effective strategy for preventing falls and injuries among people with CKD, but prospective trials are needed."

The researchers noted the results of this study have broader implications for clinical practice and public health.

"Clinicians first should consider adopting a multifactorial approach to screening for the risk of falling in middle-aged adults," Khubchandani said. "They should also consider preventive and therapeutic action among high-risk individuals with kidney disease."

"Not all the variables that we included in our analyses are modifiable. Clinicians should focus on modifiable factors to prevent falls—such as home safety, medication monitoring, and depression treatment—as opposed to non-modifiable risk factors, including age, gender, and history of falls. Education of individuals with [kidney disease](#) about the risk of falls and explanation of various components of fall prevention practice should improve compliance, which in turn should lead to better overall health outcomes for middle-aged adults with the disease."

More information: Brandon M. Kistler et al. Epidemiology of falls and fall-related injuries among middle-aged adults with kidney disease,

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