

Study finds subclinical cardiovascular disease associated with higher fall risk

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Each year, one out of three U.S. adults aged 65 years or older falls—and the number of deaths from falls is rising. Falls cost the U.S. health system more than \$23 billion in emergency room visits each year.

Worse, they frequently contribute to serious injury in older adults, often resulting in persistent disability and premature death.

A study published today in the *Journal of the American Geriatrics Society* identifies new factors that contribute to falls, which points towards interventions that may help prevent them. Researchers led by Stephen Juraschek, MD, Ph.D., a [primary care physician](#) at Beth Israel Deaconess Medical Center (BIDMC) found that [subclinical myocardial damage](#) and cardiac wall strain are associated with a [higher risk](#) of falling in older adults without known cardiovascular disease (CVD). These findings suggest that optimizing cardiovascular health even in older adults without a CVD diagnosis might represent a strategy for preventing falls among seniors.

"Given that falls can often be fatal for older adults, greater knowledge of the factors that contribute to falls represents a significant public health priority," said Juraschek. "For the first time, our study shows that subclinical CVD is itself a fall risk factor. This raises the important question of whether treatment of subclinical CVD could help prevent falls among older adults."

Juraschek and colleagues followed nearly 4,000 older adults (average age of 75 years) for four and a half years. During this time, participants were asked to report any hospitalization; and their [medical records](#) as well as claims data from the Centers of Medicare and Medicaid Services (CMS) were linked with their study information. Falls were identified from hospital discharge ICD-9 codes or CMS claims.

In this older-aged community dwelling population without known CVD, stroke or [heart failure](#), the researchers found that markers of subclinical myocardial damage and cardiac wall strain were strongly and independently associated with new falls. These findings suggest that biomarkers of cardiac damage and wall strain could be important risk

factors for falls and may shed light on novel, independent pathways linking CVD to falls among older adults free of a history of clinical CVD.

"Our findings are informative for clinical discussions pertaining to both the primary prevention of CVD and fall interventions in older adults," said Juraschek. "Whether treatment of subclinical CVD could help prevent falls among older adults is beyond the scope of the present study, but represents an important subject of subsequent fall prevention research. Such research has the potential to inform practitioners considering the risk and benefits of primary prevention treatments in [older adults](#) at risk for falls."

More information: Stephen P. Juraschek et al, Subclinical Cardiovascular Disease and Fall Risk in Older Adults: Results From the Atherosclerosis Risk in Communities Study, *Journal of the American Geriatrics Society* (2019). [DOI: 10.1111/jgs.16041](https://doi.org/10.1111/jgs.16041)

Provided by Beth Israel Deaconess Medical Center

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