

Older U.S. Adults Who Started Exercising After a Fall Were Less Likely to Experience Another Fall in the Following Two Years

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INTRODUCTION

More than 25% of adults age 65 and over fall every year in the United States. Among older adults who fall, approximately 40% experience two or more falls in the same year. These falls negatively impact older adults' mobility, function and independent living. Falls are also the leading cause of injury deaths among U.S. older adults. In 2018 alone, falls and related injuries among older adults resulted in an estimated 3 million emergency department visits, more than 950,000 hospitalizations, and approximately 32,000 deaths.

Falls often result from a combination of risk factors. These include *physical or functional risk factors*, such as impaired balance and gait, pain, overall frailty; *medical risk factors*, such as multiple chronic health conditions, taking multiple medications, especially psychotropic medications; and *psychological risk factors*, such as depression, anxiety, and fear of falling. Other factors include sensory and cognitive risk factors and environmental circumstances (for example, trip hazards in the home).

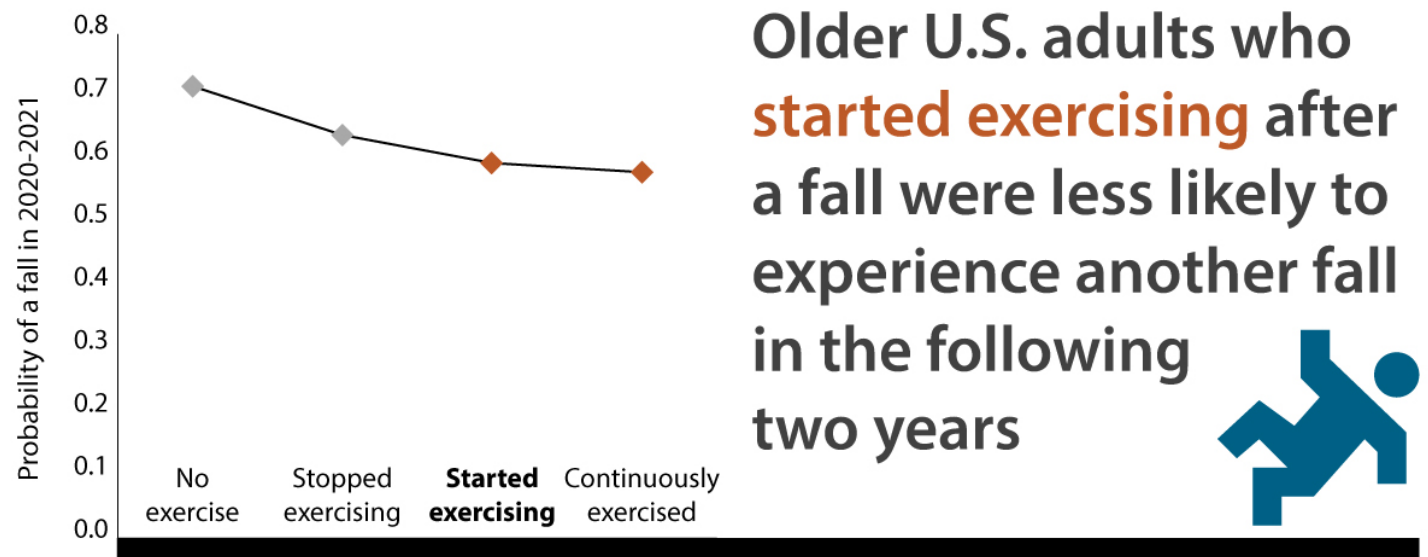
In recurrent falls – that is, two or more falls in a year or over a given timeframe – previous falls are the most significant risk factor, in addition to the combination of risk factors described above. Moreover, recurrent falls generally have greater negative impact on older adults' health and functioning compared to a single fall. This is because repeated falls increase the risk of injury, fracture, associated pain, fear of falls, disability, and death.

KEY FINDINGS

- ▶ **Rates of falling were high among adults age 70 and older during the 3-year study period (2019-2021).**
 - ▶ 57% experienced at least 1 fall
 - ▶ 34% experienced 2+ falls; showing that 60% of those who fell had recurrent falls
- ▶ **Older adults who started exercising after a fall in 2019 were less likely to experience a recurrent fall in the following 2 years.** Those who exercised in both 2019 and 2020 were the least likely to experience a subsequent fall (see *figure*).
 - ▶ Exercise included walking and other activities such as swimming, running or biking
- ▶ **Older adults with recurrent falls had worse physical or functional health and more psychological health problems in 2019 compared to older adults who did not fall.**
 - ▶ But, there were no significant health differences between older adults with a single fall and those with no falls.
- ▶ **Both a single fall and recurrent falls over the 3 years were associated with a higher risk of hospitalization in 2021, after taking other risk factors into account.**
- ▶ **Racial and ethnic differences in the risk of single and recurrent falls were found.**
 - ▶ Black older adults had a lower risk of any fall over 3 years, compared to their White, non-Hispanic peers
 - ▶ However, among those who fell in 2019, Black older adults and White older adults had similar risks of a recurrent fall in the following 2 years.
 - ▶ In contrast, Hispanic older adults who fell in 2019 had a higher risk of a recurrent fall in the following 2 years, compared to their White peers

INTRODUCTION, CONT.

This brief summarizes findings from a recent study [1] that used longitudinal data from a nationally representative sample of U.S. adults age 70 and older. The authors examined whether health characteristics (physical or functional, psychological, and cognitive) and exercise patterns were associated with a single fall and recurrent falls over 3 years. They also calculated the risk of hospitalization based on how many falls an older adult had. Finally, they examined who was more likely to have one or more falls in 2020-2021 among those who had no fall and those who had one or more falls in 2019.



This figure shows the probability of falling in 2020 and 2021 for adults age 70 and over who experienced a fall in 2019, based on their exercise pattern in 2019 and 2020. No exercise=did not exercise in either 2019 or 2020; stopped exercising=exercised in 2019 but not in 2020; started exercising = did not exercise in 2019 but exercised in 2020; and continuously exercised=exercised in both 2019 and 2020. This figure also shows that older adults who continuously exercised had the lowest risk of a subsequent fall. See Figure 1 in original publication for confidence intervals.

POLICY IMPLICATIONS

This study’s findings underscore the importance of identifying physical and psychological risk factors for falls among at-risk older adults and then quickly connecting them with proven interventions to prevent repeated falls. Older adults with balance or coordination problems and a prior history of falls need access to evidence-based fall prevention programs, with a special emphasis on exercise. Older adults with depression or anxiety would also benefit from fall prevention programs that include an evaluation of medications and the role they could play in falls. Indeed, there is strong empirical evidence that psychotropic medications (antidepressants and benzodiazepines, in particular) combined with pain relievers and other medications for chronic health conditions contribute to falls.

POLICY IMPLICATIONS, CONT.

The Centers for Disease Control and Prevention's fall prevention program, STEADI (Stopping Elderly Accidents, Deaths & Injuries), is one such proven fall prevention program. The [STEADI algorithm](#) encourages health providers to assess for gait, strength and balance and recommends evidence-based exercise or fall prevention programs (e.g., Tai Chi) and home safety improvement options. The algorithm also encourages health providers to identify medications that increase fall risk and recommends interventions to optimize medications by stopping, switching, or reducing dosage of those medications.

This study's findings on recurrent falls among Black and Hispanic older adults underscore the importance of making fall prevention programs accessible and available to all older adults. These findings also point to the need to identify cultural or behavioral factors across racial and ethnic groups to create fall prevention programs that respond to the needs of diverse groups.

Implementing fall prevention assessments in primary care settings is an effective way to identify at-risk older adults. Integrating fall prevention programs in agencies that provide services for older adults will expand their reach. Providing community-wide fall prevention education and training for older adults' informal caregivers will also help to reduce falls among older adults.

DATA AND METHODS

The authors used data from the 2019–2021 U.S. National Health and Aging Trend Study (NHATS). NHATS collects data annually from a nationally representative panel of Medicare beneficiaries. The initial people sampled, who were age 65 and over, were first interviewed in 2011. An additional sample was added in 2015 to replenish those who were lost to follow up. This study included 3,063 people who represent approximately 28.3 million Medicare beneficiaries age 70 and over who were living in their own homes or residential care communities (but not in nursing homes) in all three years and reported answers themselves.

REFERENCE

[1] Choi, N.G., Marti, C.N., Choi, B.Y., & Kunik, M.M. (2023). Recurrent falls over three years among older adults age 70+: Associations with physical and mental health status, exercise, and hospital stay. *Journal of Applied Gerontology* 42(5):1089-1100. <https://doi.org/10.1177/07334648221150884>

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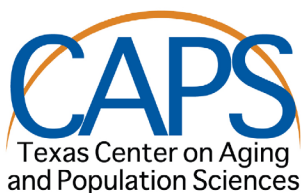
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