

Study of patients ages 90 and older links poor physical performance, increased odds of dementia

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Poor physical performance on activities including walking was associated with increased odds of dementia in a study of individuals 90 years and older, according to a report published Online First by *Archives of Neurology*.

Individuals 90 years and older are a unique segment of society that has not been well studied. Previous studies have suggested a relationship between poor [physical performance](#) and [cognitive impairment](#) in the younger elderly populations, according to the study background.

The study conducted by Szofia S. Bullain, M.D., and colleagues from the University of California, Irvine, involved 629 participants from the 90+ Study on aging and [dementia](#) performed at the university from January 2003 through November 2009. The average age of participants was 94 years, and most (72.5 percent) were women.

"Our cross-sectional study found a strong dose-dependent association between poor physical performance and dementia in the oldest old, with higher odds of dementia associated with poorer physical performance," the authors note. "The results reveal that even modest declines in physical performance are associated with increased odds of dementia. The strongest association is seen with gait slowing, followed by five chair stands, [grip strength](#) and standing balance."

The odds ratios for every unit decrease in a physical performance score were 2.1 for a four-meter walk, 2.1 for chair stands, 1.9 for standing balance and 1.7 for grip strength, according to the study results.

Participants who were unable to walk (score of 0) "were almost 30 times more likely to have dementia than people with the fastest walking time," the study results indicate. Even minimal slowing in the [walking speed](#) (less than or equal to 1.5 seconds, from score 4 to score 3) was associated with four times greater odds of dementia, according to the results.

"In summary, similar to younger elderly populations, our study found that poor physical performance is associated with increased odds of dementia in the oldest old. The establishment of this association may serve as a major stepping stone to further investigate whether poor physical performance is in the causal pathway and a potentially modifiable risk factor for late-age dementia," the authors conclude.

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