

Physical frailty may be linked to Alzheimer's disease

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Physical frailty, which is common in older persons, may be related to Alzheimer's disease pathology, according to a study published in the August 12, 2008, issue of *Neurology*, the medical journal of the American Academy of Neurology.

For the study, researchers examined the brains of 165 people who had been participants in a larger community study of chronic diseases of aging. While participants were alive, physical frailty measurements were taken yearly including grip strength, time to walk eight feet, body composition and tiredness. After death, the brains of these participants were checked for the plaques and tangles that are signs of Alzheimer's disease pathology.

Of the participants in the study, 36 percent of the group had dementia, or showed signs of memory loss. "Interestingly, Alzheimer's disease pathology was associated with physical frailty in older persons both with and without dementia," said study author Aron S. Buchman, MD, with Rush University Alzheimer's Disease Center in Chicago and member of the American Academy of Neurology.

"The level of frailty was approximately two times higher in a person with a high level of AD pathology compared with a person with a low level of AD pathology," said Buchman. The results remained the same regardless of whether a person had a history of other diseases and regardless of their level of physical activity.

A previous study of the same group of participants while they were alive suggested that older people who are physically frail with no cognitive impairment appear to be at higher risk of developing Alzheimer's disease as compared to those who were less frail. "Together both of these studies suggest that frailty can be an early indicator of Alzheimer's disease pathology and may appear before memory loss."

"These findings raise the possibility that Alzheimer's disease may contribute to frailty or that frailty and Alzheimer's disease share a common cause. We theorize that the accumulation of these plaques and tangles in the brain could affect the areas of the brain responsible for motor skills and simple movements years before the development of dementia," Buchman said.

Studies show that about seven percent of people over age 65 are considered frail; that number jumps to 45 percent after age 85.

Source: American Academy of Neurology

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