

Less frequent social activity may be associated with motor function decline in older adults

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Among older adults, less frequent participation in social activity is associated with a more rapid rate of motor function decline, according to a report in the June 22 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals.

"Decline in motor function is a familiar consequence of aging, with older persons displaying a wide spectrum of loss of motor abilities ranging from mild decreased muscle strength and bulk and reduced speed and dexterity to overt motor impairment with concomitant disability," the authors write as background information in the article. Motor function decline in older individuals is associated with negative health outcomes including, disability, dementia and death. Although decline in motor function is becoming a major public health concern, "little is known about risk factors for motor function decline that could translate into potential public health or clinical interventions."

Aron S. Buchman, M.D., and colleagues at Rush University Medical Center, Chicago, examined whether frequency of social activity in late-life was related to motor function decline in 906 [older adults](#) participating in the Rush Memory and Aging Project from 1997 to 2008, with an average follow-up of 4.9 years. Researchers evaluated participants' motor function by measuring their grip and pinch strength and their ability to stand on one leg and then on their toes, to walk in line in a heel-to-toe manner, place pegs on a board in 30 seconds and tap

index fingers for 10 seconds bilaterally. Participants completed a health survey to assess their physical activities and used a five-point rating scale to measure frequency of social activity participation, with one indicating participation in a particular activity once a year or less; two, several times a year; three, several times a month; four, several times a week and five, every day or almost every day. Demographic information, education, weight, height and disabilities were also recorded.

"A lower frequency of participation in social activity was associated with a more rapid rate of motor function decline," with each one-point decrease in a participant's social activity score associated with an approximate 33 percent more rapid rate of decline, the authors note. Additionally, a one-point decrease on the social activity scale was the same as being approximately five years older at baseline. This amount of change is associated with more than a 40 percent increased risk of death and a 65 percent increased risk of developing disability.

"The association of social activity with the rate of global motor decline did not vary along demographic lines and was unchanged after controlling for potential confounders including late-life physical and cognitive activity, disability, global cognition depressive symptoms, body composition and chronic medical conditions," they write.

"These data raise the possibility that social engagement can slow motor function decline and possibly delay adverse health outcomes from such decline. Further work is needed to ensure that this is a causal relationship," the authors conclude. "Additional knowledge of the biological, in particular the neurobiological, mechanisms of motor function decline is needed. Such information would allow for much more refined hypotheses regarding the mechanisms underlying the association that will be important for the design and execution of potential interventions."

More information: Arch Intern Med. 2009;169[12]:1139-1146.

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