

Exercise may help keep seniors moving longer despite old age brain decline

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Credit: Peter Griffin/public domain

Older people who are physically active may be protecting themselves from the effects of small areas of brain damage that can affect their movement abilities, according to a new study published in the March 11, 2015, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

Many older people have small areas of damage in their brains seen on [magnetic resonance imaging](#) (MRI) as white matter hyperintensities. Higher levels of this damage have been linked to more problems with movement, such as difficulty walking. But this new study found that people who were the most physically active did not have a drop-off in their movement abilities, even when they had high levels of brain damage.

"These results underscore the importance of efforts to encourage a more active lifestyle in [older people](#) to prevent movement problems, which is a major public health challenge," said study author Debra A. Fleischman, PhD, of Rush University Medical Center in Chicago. "Physical activity may create a 'reserve' that protects motor abilities against the effects of age-related brain damage."

The study involved 167 people with an average age of 80. The participants wore movement monitors on their wrists for up to 11 days to measure both exercise and non-exercise activity. They also took 11 tests of their movement abilities. MRI scans were used to determine the volume of [white matter hyperintensities](#) in the brain.

Compared to those at the 50th percent in activity level measured using the movement monitors, those in the top 10 percent had activity equal to walking at 2.5 mph for an additional 1.5 hours each day.

For the people in the top 10 percent, having greater amounts of brain damage did not change their scores on the movement tests. But for those at the 50th percent activity level, having greater amounts of brain damage was associated with significantly lower scores on the movement tests. For all the participants, the average score on the movement tests was 1.04. For people at the 50th percent activity level, scores ranged from 1.16 for those with the lowest amount of brain damage to 0.9 for those with the highest amount of [brain damage](#). The detrimental effect

was even stronger for those with the lowest levels of physical activity.

The results remained the same after researchers adjusted for other factors that could affect the relationship, such as body mass index (BMI), depression and vascular disease.

Fleischman noted that the study does not determine whether [physical activity](#) causes people to preserve their movement abilities; it only shows the association.

Provided by American Academy of Neurology

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