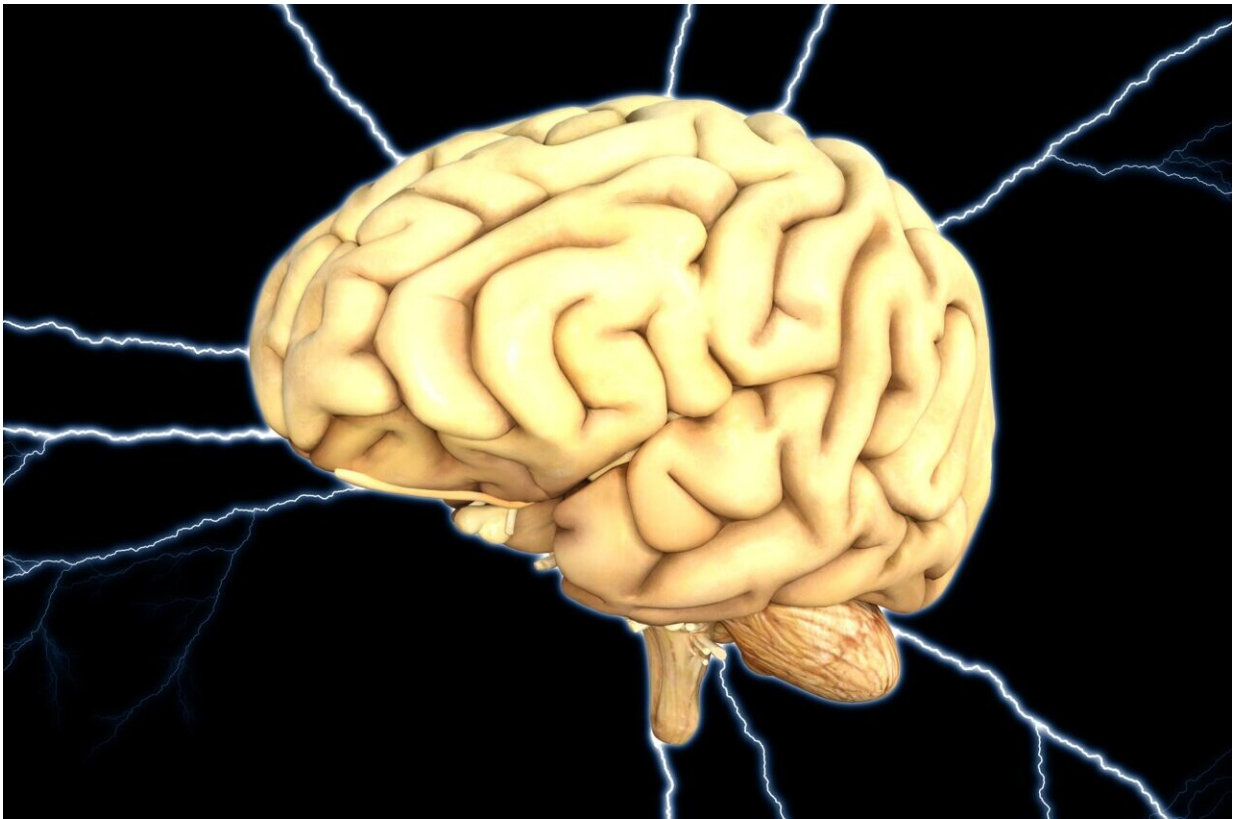


Physical fitness linked to lower risk of Alzheimer's disease

February 28 2022



Credit: Pixabay/Pete Linforth.

People who are more physically fit are less likely to develop Alzheimer's disease than people who are less physically fit, according to a preliminary study released today, February 27, 2022, that will be

presented at the American Academy of Neurology's 74th Annual Meeting being held in person in Seattle, April 2 to 7, 2022 and virtually, April 24 to 26, 2022.

"One exciting finding of this study is that as people's [fitness](#) improved, their risk of Alzheimer's disease decreased—it was not an all-or-nothing proposition," said study author Edward Zamrini, MD, of the Washington VA Medical Center in Washington, D.C., and a member of the American Academy of Neurology. "So people can work toward making incremental changes and improvements in their [physical fitness](#) and hopefully that will be associated with a related decrease in their risk of Alzheimer's years later."

The study involved 649,605 [military veterans](#) in the Veterans Health Administration database with an average age of 61 who were followed for an average of nine years. They did not have Alzheimer's disease at the start of the study.

Researchers determined participants' [cardiorespiratory fitness](#). Cardiorespiratory fitness is a measure of how well your body transports oxygen to your muscles, and how well your muscles are able to absorb oxygen during exercise.

The participants were divided into five groups, from least fit to most fit. Fitness levels were determined by how well participants did on a treadmill test. This test measures exercise capacity, the highest amount of physical exertion a person can sustain. For people who are middle-aged and older, the highest level of fitness can be achieved by walking briskly most days of the week, for two and a half hours or more per week.

The group with the lowest level of fitness developed Alzheimer's at a rate of 9.5 cases per 1,000 person-years, compared to 6.4 cases per

1,000 person-years for the most fit group. Person-years take into account the number of people in a study as well as the amount of time spent in the study. The case rate decreased as the level of fitness increased, with a rate of 8.5 for the second least fit group, 7.4 for the middle group and 7.2 for the second most fit group.

When researchers adjusted for other factors that could affect risk of Alzheimer's disease, they found that the people in the most fit group were 33% less likely to develop Alzheimer's disease than those in the least fit group. The second most fit group was 26% less likely to develop the disease, while the middle group was 20% less likely and those in the second least fit group were 13% less likely to develop the disease than those in the least fit group.

"The idea that you can reduce your risk for Alzheimer's disease by simply increasing your activity is very promising, especially since there are no adequate treatments to prevent or stop the progression of the disease," Zamrini said. "We hope to develop a simple scale that can be individualized so people can see the benefits that even incremental improvements in fitness can deliver."

A limitation of the study was participants were mostly white men so results may not be generalizable to other populations.

Provided by American Academy of Neurology

Citation: Physical fitness linked to lower risk of Alzheimer's disease (2022, February 28) retrieved 26 April 2024 from

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