

New study shows exercise can boost brain health

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A fascinating link between regular exercise and better brain health has been revealed, according to an international study that included a team of clinical researchers from Pacific Neuroscience Institute's Brain

Health Center, located at Providence Saint John's Health Center.

The research, detailed in the paper "Exercise-Related Physical Activity Relates to Brain Volumes in 10,125 Individuals," was [published](#) in the *Journal of Alzheimer's Disease* and shows being physically active is related to increased size of brain areas important for memory and learning.

The study looked at MRI brain scans from 10,125 people done at Prenuvo imaging centers, a key collaborator in the research. It found those who regularly engaged in [physical activities](#) such as walking, running or sports had larger brain volumes in key areas. This includes the [gray matter](#), which helps with processing information, and the [white matter](#), which connects different brain regions, as well as the hippocampus, important for memory.

Cyrus A. Raji, M.D., the lead researcher, explained, "Our research supports earlier studies that show being physically active is good for your brain. Exercise not only lowers the risk of dementia but also helps in maintaining [brain size](#), which is crucial as we age."

David Merrill, M.D., study co-author and director of the PBHC noted, "We found that even moderate levels of [physical activity](#), such as taking fewer than 4,000 steps a day, can have a positive effect on brain health. This is much less than the often-suggested 10,000 steps, making it a more achievable goal for many people."

Study co-author Somayeh Meysami, M.D., assistant professor of neurosciences at Saint John's Cancer Institute and the Pacific Brain Health Center noted, "Our research links regular physical activity to larger brain volumes, suggesting neuroprotective benefits. This large sample study furthers our understanding of lifestyle factors in brain health and dementia prevention."

[A Lancet Study in 2020](#) found about a dozen modifiable risk factors increase risk for Alzheimer's disease, including physical activity. This work builds upon [previous work](#) by this group, linking caloric burn from [leisure activities](#) to improved brain structure.

"This study demonstrates the influence of exercise on brain health imaging and when added to other studies on the role of diet, stress reduction and social connection offer the proven benefits of drug-free modifiable factors in substantially reducing Alzheimer's disease," said George Perry, Editor-in-Chief of *Journal of Alzheimer's Disease*.

"With comprehensive imaging scans, our study underscores the interconnected synergy between the body and the brain. It echoes the knowledge of past generations, showcasing that increased physical activity is a predictor of a healthier aging brain," said Dr. Attariwala, senior author of this paper.

This research highlights an easy way to keep our brains healthy: stay active! Whether it's a daily walk or a favorite sport, regular physical activity can have lasting benefits for our [brain](#) health.

More information: Cyrus A. Raji et al, Exercise-Related Physical Activity Relates to Brain Volumes in 10,125 Individuals, *Journal of Alzheimer's Disease* (2023). [DOI: 10.3233/JAD-230740](https://doi.org/10.3233/JAD-230740)

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