

One year of aerobic exercise improved brain vascular health in older adults

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A year of aerobic exercise training reduced impedance (effective resistance to blood flow) in the brain blood vessels of older adults, according to a new study from the University of Texas Southwestern

Medical Center and Texas Health Presbyterian Hospital in Dallas. The findings are published ahead of print in the *Journal of Applied Physiology*.

Older adults have higher cerebrovascular impedance than [younger people](#), which might contribute to chronic reduction of blood flow in the brain. A lifestyle with little to no exercise can lead to many [adverse health effects](#), according to the National Library of Medicine, among them:

- Obesity
- Heart diseases
- Diabetes

Researchers examined 73 [older adults](#) randomly split into two groups for this study. The volunteers, ages 60 to 80, engaged in brisk walking and jogging to measure the impact of exercise on brain blood flow. The intensity of the exercise program was based on each participant's fitness and progressively increased from three exercise sessions per week for 25 to 30 minutes to four to five sessions per week by week 26, as participants adapted to previous workloads.

The findings of this study suggest prolonged aerobic exercise training may prevent or reduce age-related increases in cerebrovascular impedance. "These findings demonstrate the benefits of aerobic exercise on brain vascular health, which is essential to maintain [brain function](#) in old age," said Rong Zhang, Ph.D., senior study author and professor at Texas Health Presbyterian Hospital in Dallas.

More information: Jun Sugawara et al, Aerobic exercise training reduces cerebrovascular impedance in older adults: a 1-year randomized controlled trial, *Journal of Applied Physiology* (2022). [DOI: 10.1152/jappphysiol.00241.2022](#)

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