

Minds in motion



There are plenty of reasons to be physically active. Maybe you want to lower your blood pressure, prevent depression, or lose weight. Exercise is traditionally thought to mainly benefit the heart and lungs, as well as promote an overall healthy lifestyle. However, new research is finding the benefits of aerobic exercise extend a little farther north—to the brain.

Exercise was found to be a simple way for people to decrease their risk for Alzheimer's disease—even for those who are genetically predisposed. One study found that out of 93 adults who had at least one parent with Alzheimer's—or one gene linked to Alzheimer's—moderate physical activity for 68 minutes a day led to better glucose metabolism. Glucose metabolism levels are measured by PET scans and signal a healthy brain by revealing neuron health and activity. For people with Alzheimer's disease, the affected regions tend to have lowered glucose metabolism.

Beyond disease prevention, exercising can increase brain volume. A 2017 Australian study examined the brain scans of over 700 people ranging from healthy adults, to people with mild cognitive impairment such as Alzheimer's, and those with a clinical diagnosis of mental illness. The researchers examined the effects of exercise such as cycling, walking, and treadmill running ranging from three to 24 months. It was consistently found that exercise significantly increased the size of the left hippocampus—the part of the brain largely responsible for consolidating semantic or long-term memory. Moreover, exercise causes the body to produce a protein called brain-derived neurotrophic factor (BDNF) which may help to prevent age-related decline and deterioration of the brain.

The benefits of exercise also come through direct means such as its ability to reduce insulin resistance, inflammation, and stimulate the release of growth factors. Growth factors are chemicals in the brain that influence the health of brain cells, the growth of new blood vessels in the brain, and the number and survival of new brain cells. A deficiency of growth factors can cause a reduction in white matter in the brain. This is important in the context of memory care because white matter affects learning and brain function by regulating action potentials, which in turn act to communicate between different regions of the brain.

Overall, it's likely that moderate to intense levels of physical exercise are best at promoting brain health. Whether it's swimming, walking, biking, running, or dancing, getting out and being active for around 120 minutes a week is suggested. Commit to establishing exercise as a habit and your body and brain will thank you.



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