

Research reveals roles for exercise and diet in aging, depression

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New studies released today underscore the potential impact of healthy lifestyle choices in treating depression, the effects of aging, and learning. The research focused on the effects of mind/body awareness, exercise, and diet, and was presented at Neuroscience 2013, the annual meeting of the Society for Neuroscience and the world's largest source of emerging news about brain science and health.

The experiences and choices people make throughout life actively impact the brain. As humans live longer, these choices also affect aging and quality of life. Lifestyle changes to diet and exercise will be important to aging populations as non-drug, easy-to-follow interventions with few side effects, make ideal potential therapies.

Today's new findings show that:

- As few as 12 consecutive days of exercise in aging rats helps preserve and improve movement function, an effect possibly caused by changes in dopamine. The results suggest that exercise could stave off or reverse the slowed movements that are hallmarks of [age](#) (Jennifer Arnold, abstract 334.02, see attached summary).
- Practices like yoga or meditation that increase mind/body awareness help people learn a brain-computer interface quicker. This finding may have implications for those who need brain-computer interfaces to function, such as people with paralysis (Bin He, PhD, abstract 16.06, see attached summary).

- Long-term exercise in aging rats improves memory function, as well as increases the number of blood vessels in the white matter of their brains—the tracts that carry information between different areas of the brain. Increased blood flow may explain why exercise can help preserve memory (Yong Tang, MD, PhD, abstract 236.09, see attached summary).
- Regular, [supervised exercise](#) helped young adults with depression overcome their symptoms in a pilot study. The results suggest that exercise could be an important treatment for depression in adolescents (Robin Callister, PhD, abstract 13.02, see attached summary).
- A [low calorie diet](#) starting in middle-age onward protected rats against the effects of aging on movement. The results suggest that dietary interventions can help preserve movement function in a manner similar to exercise (Michael Salvatore, PhD, abstract 334.17, see attached summary).

"We all know that keeping fit is critically important to a [healthy lifestyle](#), from combating the effects of aging to boosting our mood," said press conference moderator Teresa Liu-Ambrose of the University of British Columbia, who is an expert on exercise and its role in [healthy aging](#). "Today's results begin to show us not only how different types of [exercise](#) interventions can improve our lives, but how other types of lifestyle behaviors, from diet to meditative practice, can help us achieve wellness in our body and our brain as we age."

Provided by Society for Neuroscience

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