

# Out of shape? Your memory may suffer

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The more out of shape we are, the worse we are at retaining information, suggests a study co-authored by Michigan State University cognitive neuroscientist Kimberly Fenn. Credit: Michigan State University

Here's another reason to drop that doughnut and hit the treadmill: A new study suggests aerobic fitness affects long-term memory.

Michigan State University researchers tested 75 college students during a two-day period and found those who were less fit had a harder time retaining information.

"The findings show that lower-fit individuals lose more memory across time," said Kimberly Fenn, study co-author and assistant professor of psychology.

The study, which appears online in the research journal *Cognitive, Affective & Behavioral Neuroscience*, is one of the first to investigate young, supposedly healthy adults. Previous research on fitness and memory has focused largely on children, whose brains are still developing, and the elderly, whose memories are declining.

Participants studied related word pairs such as

"camp" and "trail." The next day, they were tested on the word pairs to evaluate [long-term memory](#) retention. Long-term memory is anything remembered more than about 30 seconds ago.

Aerobic fitness was gauged by oxygen consumption derived from a [treadmill](#) test and factored with the participants' weight, percent body fat, age and sex.

The findings speak to the increasingly sedentary lifestyles found in the United States and other Western cultures. A surprising number of the college students in the study were significantly out of shape and did much worse at retaining information than those who were extremely fit, Fenn said.

Provided by Michigan State University

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