

Regular exercise may cure brain fatigue

September 23 2011

OK, couch potatoes. As if the promise of a healthy heart and a trim waistline weren't enough to get you moving, researchers at the University of South Carolina Arnold School of Public Health have found another reason to hit the gym: an energized brain.

That's right: A little exercise may be just the thing to get those [brain](#) cells firing again, according to a study led by Dr. Mark Davis, professor in the Arnold School's department of exercise science.

Researchers have known for years that regular exercise increases the number of organelles, called mitochondria, in muscle cells, Davis said. Mitochondria generate energy, so an increase is believed to underlie many of the positive physical effects of exercise, such as increased strength or endurance.

Exercise also has positive mental effects, such as relieving depression and improving memory. However, the mechanism behind this occurrence has been unclear until now.

The Arnold School study found that [regular exercise](#), defined as 20- to 30 minutes of moderate activity daily, increases the number of mitochondria in brain cells, leading researchers to believe that, just as in muscles, increased mitochondria is linked to improved mental health.

The results of the study appear in the Articles in Press section of the *Journal of Applied Physiology*, both of which are published by the American Physiological Society.

“These findings suggest that exercise training increases the amount of mitochondria in the brain, much like it increases mitochondria in muscles,” said Davis, director of the exercise biochemistry laboratory at the Arnold School.

The increase in brain [mitochondria](#) not only may boost exercise endurance by making the brain more resistant to fatigue, but it also may have implications for the treatment of mental disorders, making exercise a potential treatment for psychiatric disorders and neurodegenerative diseases, Davis said.

“These findings could lead to the enhancement of athletic performance through reduced mental and physical fatigue, as well as to the expanded use of [exercise](#) as a therapeutic option to attenuate the negative effects of aging, and the treatment and/or prevention of neurological diseases,” Davis said.

Provided by University of South Carolina

Citation: Regular exercise may cure brain fatigue (2011, September 23) retrieved 3 May 2024 from <https://medicalxpress.com/news/2011-09-regular-brain-fatigue.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
