

Exercise as a treatment for Parkinson's and Alzheimer's?

Researchers have long recognized that exercise sharpens certain cognitive skills. Indeed, [researcher Hiroshi] Maejima and his colleagues have found that regular physical activity improves mice's ability to distinguish new objects from ones they've seen before. Over the past 20 years, researchers have begun to get at the root of these benefits, with studies pointing to increases in the volume of the hippocampus, development of new neurons, and infiltration of blood vessels into the brain. Now, Maejima and others are starting to home in on the epigenetic mechanisms that drive the neurological changes brought on by physical activity.

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With a wealth of data on the benefits of working out emerging from animal and human studies, clinicians have begun prescribing exercise to patients with neurodegenerative diseases such as Parkinson's and Alzheimer's, as well as to people with other brain disorders, from epilepsy to anxiety. Many clinical trials of exercise interventions for neurodegenerative diseases, depression, and even aging are underway. Promising results could bolster the use of exercise as a neurotherapy.

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"An active lifestyle is not going to turn a 70-year-old brain into a 30-year-old brain," says [neuroscientist Giselle] Petzinger. "But studying exercise's effect on the nervous system could help researchers identify the best and most efficient strategy—whether it's activity alone or activity paired with drugs—to maintain brain health as we age."

Read full, original post: [How Exercise Reprograms the Brain](#)