Weightlifting could improve cognition, according to new study

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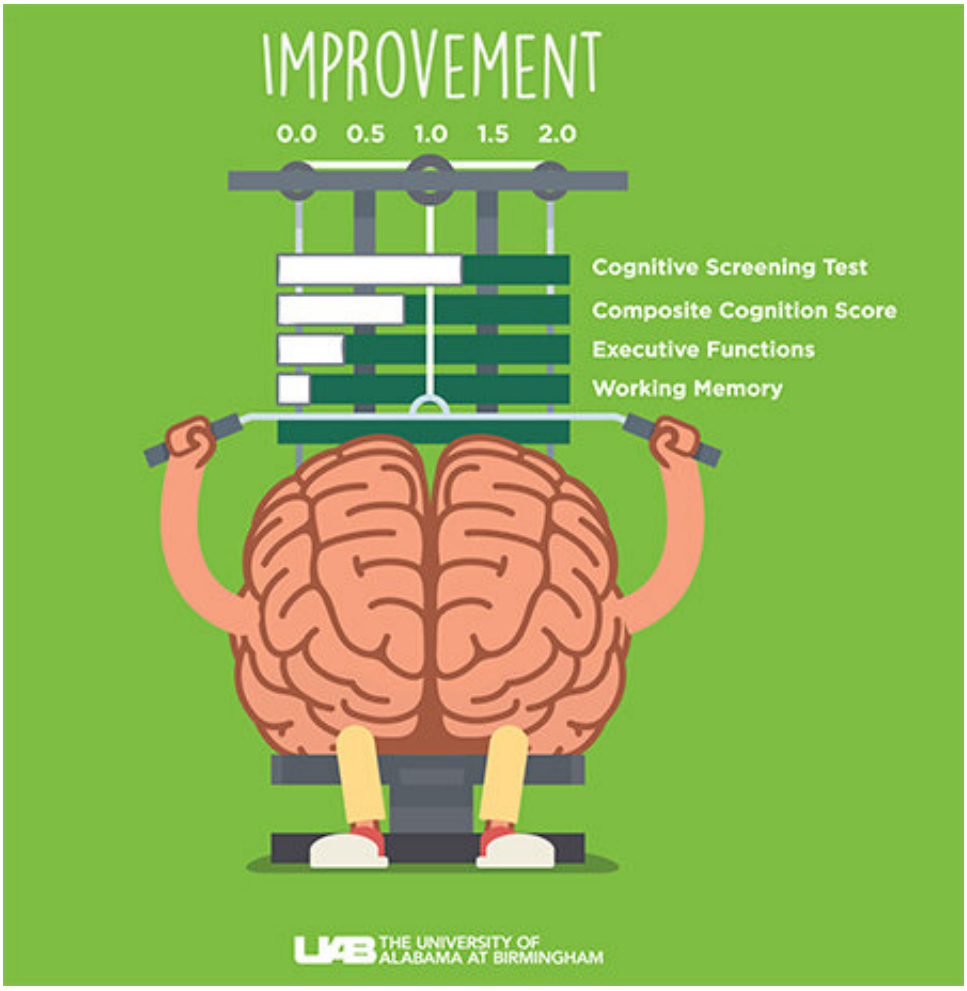

Credit: University of Alabama at Birmingham

Resistance exercise, such as weightlifting, benefits cognitive abilities

like attention, reasoning and memory, according to a new study from the University of Alabama at Birmingham.

"This study is an important step in understanding the relationship between physical health and cognitive and mental health," said Daniel Mirman, Ph.D., associate professor in the UAB College of Arts and Sciences' Department of Psychology. "The health and physical benefits of exercise are well-established. Millions of people choose weightlifting as a means of exercise, especially those with cardiorespiratory and physical limitations. We want to know more about how this type of exercise affects emotions and cognition."

The study, published in *Psychological Research*, was a meta-analysis. The results were integrated from more than 20 published papers to assess the big-picture evidence that resistance exercise programs improve cognitive health as well as physical health. Four primary analyses were carried out to assess the effects of resistance exercise on cognitive outcomes, including composite cognitive scores, screening measures of cognitive impairment, measures of executive function and measures of working memory.

The results showed a positive effect of resistance training on composite cognitive scores, cognitive screening measures and measures of executive function, but no effect on measures of working memory. This may be due to the cognitive demands of resistance training, which requires planning and focusing on the details of lifting weights and body positioning. This form of attention training may explain why overall cognition and executive function are improved while working memory, which does not play an important role in resistance training, is not improved.

The meta-analysis also showed that the effects of resistance exercise on cognition are highly variable, which is an important question for future

studies. The role of exercise duration, frequency and intensity will be a key topic to address.

Provided by University of Alabama at Birmingham