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- Business
- Sports
- Politics
- Law
- Technology
- Science & Space
- Health**
- Entertainment
- Travel
- Education
- Special Reports

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Juggling good for the brain, study shows

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LONDON, England (Reuters) -- It's a great party trick and useful for circus performers but scientists said this week that learning to juggle can cause changes in areas of the adult brain.

Mastering the skill increases the amount of grey matter in areas of the brain that process and store visual information, proving what was not thought possible – that new stimuli can alter the brain's structure.

A comparison of brain-imaging scans of non-jugglers and other volunteers before they learned to juggle and three months later, revealed an increase in grey matter in certain areas of the newly trained jugglers' brains.

"Our results challenge our view of the human central nervous system. Human brains probably must be viewed as dynamic, changing with development and normal learning," said Arne May, of the University of Regensburg in Germany, who headed the research team.

Grey matter refers to parts of the brain and spinal cord that are comprised of the tightly packed nuclei of nerve cells. In the brain it is mainly found in the outer layers of the cerebrum which is responsible for advanced mental functions.

In a report in the science journal Nature, May and his colleagues said brain scans done three months after the new jugglers had stopped juggling showed the increase in grey matter had been reduced.

"I believe the challenge we face is...to be able to adapt and modulate this knowledge into disease management," May added in an e-mail interview.

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