

Exercise the body, build the brain

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Researchers have, for the first time, isolated exercise as the key factor in triggering the production of functional new cells in the learning and memory centre of the brain.

Leading international neuroscientist, Dr Henriette van Praag, detailed her findings at the [Brain Sciences](#) University of New South Wales symposium today. Her research has demonstrated a causal link between exercise and brain regeneration, or neurogenesis, in the brains of mice.

Dr van Praag, from the US National Institute on Aging, says the results raise crucial questions about the potential of exercise to maximise cognitive function in humans throughout life and to build a brain “buffer” to hold off neurodegenerative diseases such as Alzheimer’s and Parkinson’s.

“What is most exciting is that a cheap, simple, lifestyle intervention like exercise can influence the production and integrity of new nerve cells in the brain, which suggests our behavioural choices have influence over the functionality of our brains.

“Exercising mice added the most new [brain](#) cells when they were young, so it would seem that being young and active is a very good thing for cognitive development,” she says.

This is especially important as the sedentary use of media devices and rising rates of obesity in children and young people have been identified as general health risks. However, as neurogenesis continues throughout

life, up until about the age of 70, these findings suggest significant cognitive benefits from exercise across all age groups.

Although Dr van Praag's findings are in mice, previous research on mice in the field of neuroscience has led to comparable findings in humans.

Dr van Praag's work investigated different environmental stimuli, including toys, socialisation and [exercise](#), and found that it was running in a wheel that triggered [neurogenesis](#) in the hippocampus of mice, with measureable improvements in memory and learning.

Provided by University of New South Wales

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