

## Mental gyms reap younger minds

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(Medical Xpress) -- A daily mental 'work-out' has given a group of over 50s the brain performance of people several years younger, a Swinburne University of Technology clinical trial has shown.

The independent study is one of the first to examine brain training and shed light on its effects on mental processing speed.

The 34 Australians aged 53 to 75 achieved significant increases in mental processing speed - which underpins efficient daily decision-making and learning - after completing a popular US online brain-training program, Swinburne Professor of Cognitive Neuroscience Con Stough said.

"We found an improvement in simple reaction time of about 10 per cent compared to the control group, which is quite a lot. The intervention improved speed of processing which translates to younger brain performance," he said.

While the initial results were promising, Professor Stough cautioned that the study size was small and the findings needed to be replicated by other researchers on a larger scale.

"However if the research can be replicated it could suggest that speed of processing is improved so much that the training group might have ameliorated several years of cognitive ageing," Professor Stough said.

The results stand in contrast to the normal age-related deficits in

cognitive abilities that have been consistently reported across a range of cognitive areas including processing speed, attention, episodic memory, spatial ability and executive function.

Professor Stough said if the results can be replicated, they could have important implications for both the longevity of older workers and enjoyment by retirees.

"A major societal health issue for an ageing population is not only the greater incidence of neurodegenerative disorders such as Alzheimer's disease, but also the impact of normal age-related cognitive decline. Up to 50 per cent of adults aged 64 and over have reported difficulties with their memory," he said.

Economic pressures meant people were staying in the workforce longer, and it made no sense for them to be leaving the workplace because of cognitive impairment unless it was necessary.

"We want them to be as active as possible as they get older and continue to enjoy the world and continue to engage in our community. So people are looking at these brain training programs - which are growing in number - but which have been subject to little research."

In the current independent study, the 34 individuals played [www.mybraintrainer.com](http://www.mybraintrainer.com) - which describes itself as the world's first and best mental gymnasium - for a minimum of 20 minutes a day over 21 days, and were compared to a control group that played Solitaire.

The computerised training consisted of reaction time, inspection time, short term memory for words, executive function, visual spatial acuity, arithmetic, visual spatial memory, visual scanning/discrimination and working memory, with tasks becoming increasingly more challenging.

Participants were tested at baseline, post-training and at a three-week follow-up using a battery of neuropsychological outcome measures. The results of the study have been accepted for publication in the journal *Educational Gerontology*.

Provided by Swinburne University of Technology

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