

# The Memory Practice

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Newsletter

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In this issue Dr. Michelon tells you about ... *the effects of physical exercise on the brain.*

At The Memory Practice we develop brain exercises to help adults boost their memory and keep their brain fit.

Our brain exercises are scientifically developed, stimulating and fun.

**Discover our Home Program:**

- **Brain exercises sent directly at home** (no computer needed)
- **Regular feedback from Dr. Michelon**

Contact us: (314) 726-5105

[thememorypractice@yahoo.com](mailto:thememorypractice@yahoo.com)

## Physical exercise and brain fitness

**Fitness training increases cognitive performance in healthy adults** between the ages of 55 and 80 (Colcombe & Kramer, 2003).

Similar beneficial effects of fitness training have been reported for people over 65 years old who had cognitive impairment or dementia (Heyn and colleagues, 2004).

### How does it work?

Research with animals has shown that in mice, increased aerobic fitness (running) can increase the number of new cells formed in the hippocampus (the hippocampus is crucial for learning and memory).

Increased exercise also has a beneficial effect on mice's vascular system.

In 2006, Colcombe and colleagues assigned 59 older adults to either a cardiovascular exercise group, or a non-aerobic exercise control group (stretching and toning exercise). Participants exercised 3h per week for 6 months. Colcombe et al. scanned the participants' brains before and after the training period.

After 6 months, **the brain volume of the aerobic exercising group increased in several areas** compared to the other group. Volume increase occurred principally in frontal and temporal areas of the brain involved in executive control and memory processes.

Based on animal research, Colcombe and colleagues sus-

pect that volume changes may be due to an increased number of blood vessels and an increased number of connections between neurons.

### Physical and mental exercise

To my knowledge only one study has compared the effects of physical and mental exercises on cognitive performance (Fabre et al., 1999).

Results suggest that the combination of physical and mental exercise yield more benefits than each in isolation. However very few participants were involved in that study. More research is needed.

In the meantime let's play it safe and combine fitness and cognitive training for better brain health...!