

Walking helps keep body and brain young

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By Dorene Internicola

NEW YORK (Reuters Life!) - Everyone knows that walking limbers the aging body, but did you know it keeps the mind supple as well?

Research shows that walking can actually boost the connectivity within brain circuits, which tends to diminish as the grey hairs multiply.

"Patterns of connectivity decrease as we get older," said Dr. Arthur F. Kramer, who led the study team at the University of Illinois at Urbana-Champaign.

"Networks aren't as well connected to support the things we do, such as driving," he said. "But we found as a function of aerobic fitness, the networks became more coherent."

Kramer's walking study, which was published in the journal *Frontiers in Aging Neuroscience*, tracked 70 adults from 60 to 80 years old over the course of a year. A toning, stretching, strengthening group served as a control against which to evaluate the previously sedentary walkers.

"Individuals in the walking group, the aerobics training group, got by far the largest benefits," he said, and not just physically.

"We also measured brain function," said Kramer, whose team used functional magnetic resonance imaging (fMRI) to examine brain networks. A group of 20-to-30-year olds were tested for comparison.

"The aerobic group also improved in memory, attention and a variety of other cognitive processes," Kramer said. "As the older people in the walking group became more fit, the coherence among different regions in the networks increased and became similar to those of the 20-yr olds," Kramer explained.

But the results did not happen overnight. Effects in the walking group were observed only after they trained for 12 months. Six-month tests yielded no significant trends.

The findings come as no surprise to Dr. Lynn Millar, an expert with the American College of Sports Medicine. She said while walking might seem like a simple activity, the brain is actually working to integrate information from many different sources.

"When we walk we integrate visual input, auditory input, as well as input that's coming from joints and muscles regarding where the foot is, how much force, and things like that " said Millar, a professor of Physical Therapy at Andrews University, in Berrien Springs, Michigan.

"It's that old concept: if you don't use it you lose it," she said. "In order for something to be beneficial we need to do it repetitively, and walking is a repetitive activity."

Millar, author of "Action Plan for Arthritis," said while some changes are inevitable with age, they don't have to happen as quickly as they do in some people.

"We know reaction time gets slower as we age, but activity is a big modifier," she said, "so if we do trip we'll be able to get that leg out and catch ourselves."

Kramer, who also works with the military and people with disabilities, continues to work on mediating the negative effects of ageing with lifestyle choices.

"We're interested in understanding brain plasticity but we're also interested in doing something about it," he said. "We can wait for that wonder drug or we can do something today."

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