

Exercise Might Beat Puzzles For Protecting the Aging Brain

By JENNIFER CORBETT DOOREN | October 22, 2012 | Wall Street Journal

To help stave off the cognitive decline of aging, you might want to drop the crossword puzzle and head out for a brisk walk or a bike ride.

In a study published in the journal *Neurology* of almost 700 people born in 1936, researchers found physically active people showed fewer signs of brain shrinkage and other deterioration than those who got less exercise.

At the same time, social and intellectual activities such as visiting family and friends, reading, playing intellectually stimulating games or learning a new language did nearly nothing to ward off the symptoms of an aging brain, the study said.

"People who exercise more have better brain health," said Alan Gow, one of the study's researchers and a senior research fellow at the University of Edinburgh in Scotland.

The researchers noted, however, that "the direction of causation is unclear," meaning they couldn't tell if a healthier brain was a result of physical activity, or if people showing signs of cognitive decline weren't able to exercise. Other studies have also suggested exercise can improve brain health. Exercise increases circulation in the body and helps bring more oxygen, glucose and other needed substances to the brain.

This research is just the latest looking at cognitive function in the so-called Lothian Birth Cohort, which involves a group of people born in 1936. In 1947, almost all 11-year-old children attending school in Scotland were given intelligence and mental-health tests.

Researchers at the University of Edinburgh then recruited people from that age group who underwent those intelligence tests when they were about age 70. Participants filled out questionnaires about the types and frequency of leisure and physical activities they participated in. Physical activity was rated on a six-point scale with the lowest being "moving only in connection with necessary household chores," to heavy exercise or a competitive sport several times a week. Then at about age 73, 700 study participants were given a magnetic resonance imaging (MRI) brain scan. Brains normally shrink with age.

"What we want to do is understand more about how people age better with respect to cognitive function," Dr. Gow said.

Researchers found that higher levels of physical activity were associated with less brain atrophy, or shrinkage, and less brain damage. They found no link between brain health and leisure activities.

"We are coming to appreciate the fact that people who remain physically active are less likely to show cognitive decline," said Stephen Rao, the director of the Cleveland Clinic Schey Center for Cognitive Neuroimaging. Dr. Rao, who wasn't involved in the Scottish study, noted, however, that it looked at exercise and other activities at one point in time rather than over a lifetime. Dr. Rao is completing his own study comparing exercise and cognitive training in a different group of people.

Dr. Gow said previous research with the Lothian group suggested people who participated in more social and intellectual activities at age 70 and had better cognitive abilities were the ones who scored higher on mental ability tests at age 11.

Study participants are currently in the process of undergoing a second MRI scan now that they are age 76. Researchers said they plan to compare the two scans to see if links between exercise and better brain health hold up.