

FROM THE EXPERTS

How to Keep Your Brain Limber

From Massachusetts General Hospital's Mind, Mood & Memory.

HERE'S SOME GOOD NEWS FOR older adults! A new study suggests that regular mental workouts can do for your gray cells what heart-pounding exercise routines do for your body: increase fitness and restore the vigor of youth.

To determine whether engaging in activities that make demands on the brain can help preserve cognitive vitality, scientists recruited a group of older adults and randomly assigned them to one of two groups. One group engaged in mentally stimulating, high-challenge activities, spending 15 hours per week for 14 weeks learning quilting or digital photography. The other group spent an equal amount of time engaged in low-challenge pursuits, such as playing simple games, watching movies or listening to music. All participants underwent cognitive testing and brain scans to measure brain activity at the beginning and end of the study, and a smaller number of participants were tested again a year later.

According to a paper published October 20, 2015, in *Restorative Neurology and Neuroscience*, the high-challenge group showed improved brain performance after participating in the study and upon retesting a year later, scoring higher on measures of memory and increasing in efficiency in brain regions responsible for attention and language processing.

The ability of this group to modulate brain activity in response to demand was similar



■ **PLAYING PING-PONG CAN IMPROVE YOUR MOTOR AND VISUOSPATIAL SKILLS.**

to levels seen in youthful brains. The brain functioning of the low-challenge group did not change.

"This study reinforces what we are seeing in our clinical practice," says Louisa Sylvia, PhD, associate director of psychology at MGH's Bipolar Clinic and Research Program and an assistant professor at Harvard Medical School. "Older individuals who remain mentally active and who take advantage of opportunities to learn new information seem to be significantly less likely to show signs of mental decline. For this reason, we advise our patients to find a range of mentally challenging activities that they enjoy and to make them an important part of their daily routines."

BRAIN-BOOSTING EXERCISES

The following activities are designed to target five of the brain's major cognitive functions.

Focus and attention. Because aging brains are more easily dis-

tracted than younger brains, strengthening the ability to pay attention is important. Some ideas: Change your routine to put your brain on notice by, for example, taking an unfamiliar route to the mall or your doctor's office. Study a photograph of a city scene or a group of people. Now put the photo away, jot down as many details from the photo as you can recall, and then check to see how well you did. Read a complex newspaper article while watching television. List important details from the article and check to see how accurate you were.

Memory. Exercising your ability to recall information will help strengthen your memory. Some ideas: Memorize information, such as recipes, birthdays and anniversaries, addresses and telephone numbers, instead of relying on written reminders. See how much information you retain after a week of effort. Learn one poem by heart every week, the longer the better.

Verbal skills. Having trouble finding the right word? Language exercises can help. Some ideas: Pick two vowels and try to think of words that use both. Rearrange words in a sentence to form another sentence. Choose a letter from the alphabet and try to think of as many words from a particular category, such as fruits or animals, as you can. To increase the pressure, give yourself a time limit.

Motor and visuospatial skills. Developing new physical abilities that require your brain to quickly process information about your surroundings and react to it, as well as plan and execute specific movements, is terrific exercise for the brain. Some ideas: Learn to juggle. Take up ballroom dancing or Ping-Pong. Join a volleyball team or other sports group and practice regularly.

Executive functioning. Planning, decision-making and problem-solving are aspects of executive functioning that are essential to a healthy brain. Some ideas: Play strategy games such as chess, Scrabble or bridge. Write or tell a story. The more elaborate, the harder your brain has to work. Design and plan a project, such as laying out a garden. Exercise your body. Exercise promotes the growth of new brain cells in the pre-frontal regions of the brain responsible for executive functions.

For more information about Massachusetts General Hospital's Mind, Mood & Memory, visit www.universityhealthnews.com/mmmsub-kip.