

Exercises for the brain help delay mental slide

Study suggests benefits extend to five years later

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Ten sessions of exercises to boost reasoning skills, memory and mental-processing speed staved off mental decline in middle-aged and elderly people in the first definitive study to show that honing intellectual skills can bolster the mind in the same way that physical exercise protects and strengthens the body.

Researchers also showed that the benefits of the brain exercises extended well beyond the specific skills volunteers learned. Older adults who did the basic exercises followed by later refresher sessions were three times faster than those who got only the initial sessions when it came to activities of daily living, such as reacting to a road sign, looking up a number in a telephone book or checking the ingredients on a medicine bottle – abilities that can spell the difference between living independently and needing constant help.

Experts said the federally funded study is a call to action for anyone who has ever worried about developing Alzheimer's disease, dementia and similar disorders. Americans spend billions of dollars each year on their physical well-being, but there are no comparable efforts to keep people mentally agile and strong.

If anything, the study suggested there is a bigger payoff to mental exercise, because the brief training sessions seemed to confer enormous benefits as much as five years later. That would be as if someone went to the gym Monday through Friday for the first two weeks of the new year, did no exercise after that for five years, and still saw significant physical benefits in 2012.

Researchers divided volunteers into four groups, including a control group that got no training. Participants in a second group were trained in reasoning skills – being asked to spot the pattern in a sequence of letters “a, c, e, g, i” for example (every other letter of the alphabet). A third group was taught memory skills that involved remembering word lists and using visualization and association as memory aids. A fourth group was given exercises to speed up mental processing – being asked to identify an object flashed briefly on a computer screen while fighting off distractions.

Each of the groups being trained had 10 sessions of between an hour and 75 minutes each, and each session presented progressively more challenging problems. Compared with the control group, those who got memory training did 75 percent better on memory tasks five years later, those who got the reasoning training did 40 percent better on reasoning tasks, and those who got the speed training did a whopping 300 percent better.

The study, which is published in today's edition of the *Journal of the American Medical Association*, tracked 2,802 healthy adults from diverse backgrounds who were, on average, 73 years old. While it did not examine the effects of mental exercise on people who have already begun to show signs of Alzheimer's or other brain disorders, previous studies have pointed toward the conclusion that anyone can benefit.

“People think education is for people who are already educated,” said Michael Marsiske, one of the researchers. “This kind of training works no matter where you are in society.”

While participants in the study ranged from age 65 to early 90s, Marsiske said the findings apply to people in their 50s and younger. Mental skills acquired earlier in life persist well into old age, he said.

