

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Peter Hobson & Dr. Yaron Robinstein

Have You Done Your Brain Exercises Today?

You know that physical exercise is essential for physical health, but are you also aware that mental exercise is key to brain health? According to exciting new research, activities that “exercise” the brain keep the mind sharp, and prevent cognitive decline such as Alzheimer’s disease and other forms of dementia.



As a holistic health-care practitioner, your doctor at Hinterland Chiropractic is concerned about all aspects of patients’ well-being. Your doctor at Hinterland Chiropractic understands that the mind, body and spirit work in synergy, rather than in isolation. That’s why your doctor at Hinterland Chiropractic teaches patients to focus on

prevention of physical, emotional and cognitive ailments. That includes encouraging patients to engage in daily exercise for both the body and the mind.

Research on Brain Exercise and Dementia

According to a study published in *Neurology*, the medical journal of the American Academy of Neurology, people who engage in activities that exercise the brain may delay the rapid memory decline that occurs with dementia, including Alzheimer’s disease (*Neurology* 2009;73:356-61).

The analysis, which was supported by the National Institute on Aging, followed 488 people age 75 to 85 who did not have dementia at the start of the study. They were followed for an average of five years; during that time 101 of the people developed dementia.

At the beginning of the experiment, the seniors reported how often they participated in six leisure activities that engage the brain: reading, writing, doing crossword puzzles, playing board or card games, having group discussions and playing music.

For each activity, daily participation was rated at seven points; several days a week was rated at four points; and weekly participation was rated at one point.

The average was seven points total for those who later developed dementia, meaning they took part in one of the six activities each day, on average. Ten people reported no activities, and 11 reported only one activity per week.

The researchers then looked at the point when memory loss started accelerating rapidly for the participants. They found that for every additional activity a person participated in, the onset of rapid memory loss was delayed by 0.18 years (*Neurology* 2009;73:356-61).



Top Brain Exercises

- Reading
- Writing
- Playing music
- Crossword puzzles
- Sudoku
- Complex riddles
- “Brain-teaser” books
- Trivia games
- Card games
- Board games
- Group discussion

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“The point of accelerated decline was delayed by 1.29 years for the person who participated in 11 activities per week compared to the person who participated in only four activities per week,” explains study co-author Charles B. Hall, PhD, of Albert Einstein College of Medicine in Bronx, NY.

The results remained valid after researchers factored in the education level of the participants, which is a factor known to influence risk of dementia. “The effect of these activities in late life appears to be independent of education,” notes Dr. Hall. “These activities might help maintain brain vitality.”

Another published report in the *Journal of Geriatric Psychiatry and Neurology* looked at a specific type of dementia known as “vascular cognitive impairment.” This type of dementia is triggered by cardiovascular problems, such as high blood pressure and stroke. The 21-year analysis of 401 participants determined that participating in cognitive leisure activities significantly lowers the risk of the condition (*J Geriatr Psychiatry Neurol* 2009;22:110-18).

And, another study of 303 seniors in Japan concluded that “frequency of engagement in nonphysical hobbies was significantly associated with all cognitive domains examined.” (*J Gerontology Ser* 2008;63:1193-1200.)

More Research

Previously conducted research also ties brain exercise to a lowered risk of dementia — specifically Alzheimer’s disease. Perhaps the most groundbreaking study on the subject was published in the *Journal of the American Medical Association*.

The investigation followed “a total of 801 older Catholic nuns, priests, and brothers without dementia at enrollment, recruited from 40 groups across the United States. At baseline, they rated frequency of participation in common cognitive activities (e.g., reading a newspaper), from which a

previously validated composite measure of cognitive activity frequency was derived.” (*JAMA* 2002;287:742.)

After controlling for factors which influence dementia risks, the study authors calculated that a moderate increase in cognitive activity was linked with a significantly lower risk of developing Alzheimer’s disease. Specifically, brain exercise was associated with reduced decline in global cognition by 47 percent, working memory by 60 percent, and perceptual speed by 30 percent.

Super-charge Your Brain Exercise

To get the most out of your brain exercise, incorporate it into volunteer work or social activity. Consider volunteering to read books to sick children, playing card games with residence of a local nursing home, or hosting discussion groups on a challenge facing your community.

Previous research shows that both volunteering and social activity ward off cognitive decline. And, a new study in the *Archives of Internal Medicine* reveals that these activities also prevent decline of motor function, or the ability to move around (*Arch Intern Med* 2009;169:1139-46).

As part of the analysis, 906 older individuals completed a survey indicating their level of participation in a variety of activities involving social interactions, such as doing volunteer work, visiting friends or relatives, or attending church or sporting events.

Frequency of participation in these activities was measured using a five-point scale, with one indicating participation in a particular activity once a year or less; two, several times a year; three, several times a month; four, several times a week; and five, every day or almost every day.

The researchers then annually assessed the participants’ basic motor function, including muscle strength in the arms and legs, and motor performance, including walking and balance. Participants were followed for an av-

erage of five years.

Findings showed that motor decline was more rapid in those who less frequently participated in social activities, with each one-point decrease in a participant’s social activity associated with an approximate 33 percent more rapid rate of decline.

“Statistically, that amount of change translates into a more than 40% increased risk of death and a more than 65% increased risk of developing disability,” comments study author Dr. Aron Buchman.

TV Doesn’t Count

Watching television — including “educational” programs — does not count as brain exercise, say scientists.

One five-year analysis followed 5,437 people aged 55 years and older without dementia at the beginning of the study. They found that reading and playing board games was linked with a reduced risk of cognitive impairment, “while watching television was associated with an increased risk of cognitive impairment.” (*Neurology* 2006;66:911-13.)

What about computer games that challenge intellect? There is insufficient evidence to determine if they may be considered brain exercise. Experts suggest that people looking to boost their brain power choose non-electronic forms of brain exercise.

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