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Consensus statement questions science behind brain-training claims

DETROIT – The American population is aging. With advanced age comes concern about declining cognitive function. Can anything be done to slow or stop this decline?

Vendors of so-called “brain-training” software claim their products can, but internationally renowned experts on the brain and cognitive aging disagree. According to a [statement](#) issued on Oct. 21 by the Stanford Center on Longevity in Palo Alto, California, and the Max Planck Institute for Human Development in Berlin, and signed by 70 scientists from the world’s leading centers devoted to studying the aging brain, there is no evidence brain games prevent or alleviate dementia.

According to the statement, which was based on multiple empirical studies, brain games may indeed significantly improve performance on a specific task in persons of all ages, but there is no consistent indication that the improvement on a particular skill extends into the realm of broad abilities such as reasoning and problem solving. There is even less evidence of improvement relevant to real-world functioning. Should scientists and older adults stop trying to mitigate the effects of aging on the brain and cognition?

Naftali Raz, professor of psychology and director of Lifespan Cognitive Neuroscience Program at the Institute of Gerontology at Wayne State University, does not think so. “The purpose of the statement is not to close the book on cognitive training research,” said Raz, a signatory on the current consensus statement as well as a similar one issued in 2008. “On the contrary, we are in the midst of a painstaking search for effective intervention strategies aimed at mitigating age-related declines in cognitive functioning. Some of the colleagues who signed the statement actively participate in various ventures aimed at developing effective cognitive training programs for older adults. However, we are still far from producing results that would merit definitive recommendations to the public.”

For those who enjoy playing brain games, Raz has this advice. “Make a list of activities on which you would like to spend your spare time, energy and financial resources. If playing brain games winds up at the top of the list, by all means go for it. But be aware that this activity is unlikely to slow or undo age-related changes in real-life cognitive functioning. If you think your time is better spent reading, playing with your grandchildren or learning a foreign language, give brain games a pass.”

Will anything benefit an older adult who hopes to delay cognitive declines? “There is no magic bullet,” Raz said. “We do know that people who maintain healthy levels of blood sugar and normal blood pressure, make moderate exercise part of their life, are socially engaged, and do not experience high levels of stress and depression are less likely to develop significant cognitive difficulties as they age. “

Unfortunately, Raz said, it’s easier to harm the brain’s function than improve it. “Cardiovascular disease, diabetes, lack of physical activity and obesity are among established risk factors for cognitive decline, and reducing any one of them is a very good idea” Raz said. “But adding brain games is unlikely to buy extra protection.”

The Institute of Gerontology researches the aging process, educates students in gerontology, and presents programs on aging issues relevant to professionals, caregivers and older adults in the community (iog.wayne.edu). The Institute is part of the Division of Research at Wayne State University, one of the nation’s preeminent public research institutions in an urban setting. For more information about research at Wayne State University, visit research.wayne.edu.