

# Brain training exercises more effective at improving cognitive function than crossword puzzles, study says

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A new study shows that doing brain training exercises is more effective at improving cognitive function than performing knowledge games, like crossword puzzles. This is the preliminary analysis of the results from Iowa Healthy and Active Minds Study (IHAMS) presented last week at Gerontological Society of America (GSA) 64th Annual Scientific Meeting in Boston.

The study will be completed in January and its interim results were published this week in BMJ Open. It found that 10 hours of using [brain training](#) software improved cognitive function on several standard neuropsychological tests. This is the case whether used in a supervised clinical setting, or self-administered at home. This study included younger (ages 50-64) and older (ages 65-87) participants, and the brain training software worked equally well for both groups.

IHAMS is a follow up to Advanced Cognitive Training for Independent and Vital Elderly (ACTIVE) study funded by National Institutes of Health (NIH). In past medical journal articles the ACTIVE study showed brain plasticity software improved visual processing speed, among other factors. IHAMS was designed to overcome limitations in the ACTIVE study by including younger participants.

Early results are that participants who used brain training software significantly improved their cognitive capabilities on several standard

[neuropsychological tests](#) of [cognitive functioning](#) than did participants who trained on crossword puzzles. The improvements in cognitive function were the same whether the brain exercises were done in the monitored clinical setting or in the participant's home. These positive changes were observed within 8 weeks, and were sustained over 12 months. The improvements for younger participants were just as large as those for the older participants, indicating benefits to beginning brain training early.

"There's been debate in the scientific community regarding how well brain training works versus other recreational mental activities, such as learning a new language or doing [crossword puzzles](#)," said Dr. Fred Wolinsky, John W. Colloton Chair in Health Management and Policy, University of Iowa. "This study clearly demonstrates that specially constructed exercises for brain fitness – such as the speed-of-processing core of DriveSharp and InSight – work, and are more effective at improving cognitive function than games or recreational activities."

The Road Tour brain training exercise used in IHAMS is one of five exercises in Posit Science InSight brain fitness software, and part of DriveSharp, a shorter cognitive training program focused around driving safety.

**More information:** Paper online:  
[bmjopen.bmj.com/content/1/2/e000225.full](https://bmjopen.bmj.com/content/1/2/e000225.full)

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