

# Brain training may help keep seniors on the road

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Credit: Public Domain

Older adults who participate in training designed to improve cognitive ability are more likely to continue driving over the next 10 years than those who do not, according to health researchers.

"Driving cessation has huge ramifications for seniors," said Lesley A. Ross, Penn State assistant professor of human development and family

studies. "It signals an end to freedom, acting as a concrete acknowledgement that you're declining."

Ross and colleagues studied the effects of three different [cognitive training](#) programs—reasoning, memory and divided attention—on driving cessation in [older adults](#).

The researchers found that the participants who completed either the reasoning or divided-attention training were between 49 and 55 percent more likely to still be drivers 10 years after the study began than those who did not receive training. Randomly selected participants who received additional divided-attention training were 70 percent more likely to report still driving after 10 years. The researchers report their results in the current issue of *The Gerontologist*.

Over 2,000 adults aged 65 or older were randomly assigned to one of four groups—reasoning, memory, divided attention training or no training. All of the participants were drivers at the start of the program and were in good health. The participants were evaluated seven times over the course of 10 years.

Participants randomized to one of the three types of interventions each received 10 hours of cognitive training. Following the 10 hours of training, participants were randomly selected to receive additional "booster" training.

Both the reasoning and the memory training used pencil and paper activities, while the divided-attention training used a computer program. The reasoning exercise included brain teasers and taught the participants problem-solving strategies, while the memory training involved categorization of lists of words to help with everyday life, such as a list of errands or a grocery list.

The divided-attention, or speed of processing, training used perceptual exercises where participants were shown several objects on a screen at once for a very brief period of time and then asked questions about what they had seen. This program was adaptive, becoming more difficult after the first five exercises were completed.

Ross and colleagues plan to continue to study the effect of cognitive training, including the introduction of Xbox Kinect, a computer gaming platform, into future research.

Sara A. Freed, graduate student, [human development](#) and family studies, and Christine B. Phillips, postdoctoral fellow, Center for Healthy Aging, both at Penn State; Jerri D. Edwards, associate professor, School of Aging Studies, University of South Florida; and Karlene Ball, professor, psychology, University of Alabama at Birmingham also contributed to this research.

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