COMMENTARY

Ball et al report effect sizes ranging from small to large. Following the intervention, 26% of the memory group, 74% of the reasoning group and 87% of the speed training group had significant improvements in memory, reasoning and speed of processing, respectively. These improvements were largely maintained 2 years later. It is interesting to note that while most older adults report declines in memory, the memory intervention had the smallest effect.

This study addresses a number of limitations of previous research, including small sample sizes, minimal follow-up periods and lack of adequate control groups. The intervention conditions were used as training exposure and social contact control conditions for each of the other interventions.

The impact of the interventions appeared to be limited to the particular cognitive domain targeted and did not generalise to everyday functioning. The authors suggest that ceiling effects measures of functioning may explain this finding. This is unlikely because all participants were cognitively intact, yet they demonstrated improvements in cognitive functioning. Adherence is another possible explanation for the lack of effect on everyday activities. We know that participants mastered the skills because their cognitive function improved, but we do not know if participants used these techniques in their daily lives. For example, did participants apply the mnemonic techniques they learned to help them remember the people’s names? The outcome measures used may also have affected findings about everyday activities. The tests of everyday functioning were not specific to the cognitive skills that participants were taught. For example, driving habits were included as an outcome, yet this relates little to the skills taught in the intervention. Similarly, tests of everyday speed were largely dependent upon physical speed, yet the intervention focused on improving mental speed. Cognitive interventions need to teach people how to apply the targeted skills to specific everyday life activities.

Assistant Professor Gretchen A Brenes, PhD
Wake Forest University School of Medicine
North Carolina, USA

Author’s response

Participants were not at ceiling levels on the cognitive measures. There was room for improvement. Forty three percent of the participants were at ceiling levels on the daily function measures, however. On page 2279 of our article we suggest: "prior longitudinal research on cognitively demanding measures of everyday functioning indicates that age-related decline occurs later for these tasks than for the more basic abilities that were the focus of training. Reliable age-related decline on everyday problem-solving tasks has been shown not to occur until individuals are in their mid seventies, whereas declines on basic abilities such as reasoning and memory typically occur in their mid sixties."

It is suggested that tests of everyday function were not specific to the cognitive skills people were taught. This may be questionable. At baseline, the driving habits measure
was almost universally at ceiling levels. In several other studies, speed training has improved performance on everyday speed outcome measures. The participants in these other studies were not at ceiling on the measures at the outset, however.

Dr Karlene Ball