Long-Term Memory and Working Memory can be Improved by Cognitive Training

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Abstract: Previous research showed improved working memory through cognitive training. However, comparatively little is known about whether long-term memory can be improved by training. Several cognitive processes, including working memory and executive function, subsume long-term memory functioning. Thus, if the cognitive processes that subserve long-term memory could be improved via training, we predicted that it should lead to broad improvements in long-term memory. The current study examined whether training using three different cognitive training conditions would improve performance in tasks measuring executive functions and long-term memory. Participants were assigned one of three possible training conditions (working memory training, mindfulness training, and retrieval practice) over 20 days. Results suggested that retrieval practice and mindfulness led to changes that improve participants' ability to store and retrieve new episodic information formed while reading text passages. Other benefits include improvements in working memory and executive functions. Limitations and directions for future research will be discussed.