

Science-Backed Memory Tips

How to Improve Memory and Recall

Memory, the process of maintaining information over time, is an essential part of life as it allows us to store the information we need to interact and adapt to the world around us. Without memory, we wouldn't be able to recall places we've been, the names of friends or family members, how to do our jobs or information we are taught in school. Understanding how memory works can help us protect and enhance the process.

There are three stages of memory: encoding, storage, and retrieval. Memory encoding converts information into a form that the brain can store. Information can be encoded as visual (picture), acoustic (sound), or semantic (meaning). Next, information is stored as either a long-term or short-term memory, impacting how we are able to access the memory later on. The final stage of memory, retrieval, allows us to access stored information.

Since memory is a critical part of life, it's important to protect against memory decline. The best way to do this is by living a healthy lifestyle. Additionally, there are specific techniques individuals can use to memorize and recall information. This piece offers tips for boosting brain health as well as science-backed techniques that can be used for memorizing and recalling information.

Lifestyle Tips for Boosting Brain Health

In addition to actively engaging your mind, such as with brain training games, to improve thinking skills and memory, living a healthy lifestyle can also help promote brain health.

Individuals may be able to protect against memory decline by doing the following:

- **Engaging in regular exercise:** Doing aerobic exercise to get your heart pumping appears to boost the size of the hippocampus, the area of the brain involved in verbal memory and learning. Additionally, exercising regularly can help you maintain a healthy weight, reduce stress, and sleep better, all of which have a relationship to memory.
- **Reducing stress:** Since stress can interfere with memory, actively working to limit stress can be protective. If you are overwhelmed or struggle with negative thinking patterns, there are ways to retrain your brain for positivity and success. For example, engaging in self-care practices such as journaling or yoga can be beneficial for individuals. Meditation in particular has been shown to improve episodic memory, the memory of everyday events.
- **Eating a healthy diet:** Consuming a balanced diet, one that limits red meat and is full of fruits, vegetables, and whole grains, can help promote against memory decline and dementia. Specifically, diets higher in mono- and polyunsaturated fats (opposed to saturated fat) may help to preserve memory.
- **Limiting alcohol:** Most of us are aware that alcohol can impact memory. Alcohol can disrupt the ability to form new long-term memories, and even at low doses alcohol can impair memory.
- **Getting enough sleep:** Since sleep plays a role in the consolidation of memories, it is essential to get enough quality sleep. Researchers hypothesize that slow-wave sleep, which is deep, restorative sleep, plays a significant role in declarative memory, the knowledge of fact-based information, by processing and consolidating newly acquired information. Additionally, if someone is sleep deprived, it will be difficult for them to focus

and learn efficiently.

8 Techniques for Memorizing Information

Not only is memory important in everyday life, but there are also situations that require individuals to be able to memorize and recall specific information. For example, when studying for an exam, preparing a presentation, or getting ready to deliver a speech.

There are a few ways to set yourself up for success when preparing for a situation where you will have to recall specific information. Before preparing, try to get rid of distractions and plan ahead so you are able to avoid cramming and take breaks. Additionally, evidence suggests that it may be beneficial to study before going to sleep, as well as sleeping between learning sessions, can help people consolidate memories and retain information.

When it comes time to begin studying the information you'll need to recall, there are science-backed techniques you can use to help retain information and improve recall. For example, using organizational strategies, such as the chunking method, visual cues, and handwriting notes rather than typing can be beneficial.

Additional strategies, such as using mnemonics, can be useful for storing information as long-term memory. Many of us likely remember the mnemonics we learned in school, for example PEMDAS (parenthesis, exponents, multiplication, division, addition, subtraction) teaches students the order of operations.

The visual below from the University of St. Augustine for Health Sciences outlines 8 science-backed techniques for retaining information and improving recall.

Click on the thumbnail below for the full infographic



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