

Improving Your Memory: Tips and Techniques for Memory Enhancement

If you think you have a poor memory, you may just have some less-than-effective habits when it comes to taking in and processing information. Barring disease, disorder, or injury, you can improve your ability to learn and retain information.

General Guidelines for Improving Memory

Pay attention.	You can't remember something if you never learned it, and you can't learn something—that is, encode it into your brain—if you don't pay enough attention to it. It takes about 8 seconds of intent focus to process a piece of information through your hippocampus and into the appropriate memory center. So, no multitasking when you need to concentrate. If you distract easily, try to receive information in a quiet place where you won't be interrupted.
Tailor information acquisition to your learning style.	Most people are visual learners; they learn best by reading or otherwise seeing what it is they have to know. But some are auditory learners who learn better by listening. They might benefit by recording information they need and listening to it until they remember it.
Involve as many senses as possible.	Even if you're a visual learner, read out loud what you want to remember. If you can recite it rhythmically; even better. Try to relate information to colors, textures, smells, and tastes. The physical act of rewriting information can help imprint it onto your brain.
Relate information to what you already know.	Connect new data to information you already remember, whether it's new material that builds on previous knowledge or an address of someone who lives on a street where you already know someone.
Organize information.	Write things down in address books and datebooks and on calendars; take notes on more complex material and reorganize the notes into categories later. Use both words and pictures in learning information.
Understand and be able to interpret complex material.	For more complex material, focus on understanding basic ideas rather than memorizing isolated details. Be able to explain it to someone else in your own words.
Rehearse information frequently and "overlearn."	Review what you've learned the same day you learn it, and review it at intervals thereafter. What researchers call "spaced rehearsal" is more effective than "cramming." If you're able to overlearn information so that recalling it becomes second nature, so much the better.
Be motivated and keep a positive attitude.	Tell yourself that you want to learn what you need to remember and you can learn and remember it. Telling yourself you have a bad memory actually hampers the ability of your brain to remember, while positive mental feedback sets up an expectation of success.

Mnemonic Devices

Mnemonics (the initial "m" is silent) are clues of any kind that help to remember something, usually by causing people to associate the information they want to remember with a visual image, a sentence, or a word.

Common types of mnemonic devices include

- **Visual Images:** Use a microphone to remember the name "Mike," a rose for "Rosie." Use positive, pleasant images, because the brain often blocks out unpleasant ones, and make them vivid, colorful, and three-dimensional—they'll be easier to remember.
- **Sentences** in which the first letter of each word is part of or represents the initial of what you want to remember. Millions of musicians, for example, first memorized the lines of the treble staff with the sentence "Every good boy does fine" (or

"deserves favor"), representing the notes E, G, B, D, and F. Medical students often learn groups of nerves, bones, and other anatomical features using nonsense sentences.

- **Acronyms:** Try initials that create pronounceable words. The spaces between the lines on the treble staff, for example, are F, A, C, and E: FACE.
- **Rhymes and Alliteration:** remember learning "30 days hath September, April, June, and November"? A hefty guy named Robert can be remembered as "Big Bob" and a smiley coworker as "Perky Pat" (though it might be best to keep such names to yourself).
- **Jokes** or even off-color associations using facts, figures, and names you need to recall, because funny or peculiar things are easier to remember than mundane images.
- **"Chunking" information** is arranging a long list in smaller units or categories that are easier to remember. If you can reel off your Social Security number without looking at it, that's probably because it's arranged in groups of 3, 2, and 4 digits, not a string of 9.
- **"Method of Loci":** This is an ancient and effective way of remembering a lot of material, such as a speech. You associate each part of what you have to remember with a landmark in a route you know well, such as your commute to work.

Brain Exercise

Memory, like muscular strength, is a "use it or lose it" proposition. The more you work out your brain, the better you'll be able to process and remember information.

Novelty and sensory stimulation are the foundation of brain exercise. If you break your routine in a challenging way, you're using brain pathways you weren't using before. This can involve something as simple as brushing your teeth with your nondominant hand, which activates little-used connections on the nondominant side of your brain. Or try a "neurobic" exercise that forces you to use your faculties in unusual ways, like showering and getting dressed with your eyes closed. Take a course in a subject you don't know much about, learn a new game of strategy, or cook up some recipes in an unfamiliar cuisine. That's the most effective way to keep your synapses firing.

How can healthy habits help my memory?

Treating your body well can enhance your ability to process and recall information.

Increases oxygen to your brain

Regular Exercise Reduces the risk for disorders that lead to memory loss, such as diabetes and cardiovascular disease

May enhance the effects of helpful brain chemicals and protect brain cells

Cortisol, the stress hormone, can damage the hippocampus if the stress is unrelieved.

Managing Stress

Stress makes it difficult to concentrate.

Good Sleep Habits

Sleep is necessary for memory consolidation.

Sleep disorders like insomnia and sleep apnea leave you tired and unable to concentrate during the day.

Not Smoking

Smoking heightens the risk of vascular disorders that can cause stroke and constrict arteries that deliver oxygen to the brain.

You probably know already that a diet based on fruits, vegetables, whole grains, and "healthy" fats will provide lots of health benefits, but such a diet can also improve memory. Research indicates that the following nutrients nurture and stimulate brain function:

- B Vitamins, Especially B6, B12, and Folic Acid**

B vitamins protect neurons by breaking down homocysteine, an amino acid that is toxic to nerve cells. They're also involved in making red blood cells, which carry oxygen.

Best sources: spinach and other dark leafy greens, broccoli, asparagus, strawberries, melons, black beans and other legumes, citrus fruits, soybeans
- Antioxidants: Vitamins C and E, Beta Carotene**

Antioxidants fight free radicals, which are atoms formed when oxygen interacts with certain molecules. Free radicals are highly reactive and can damage cells, but antioxidants can interact with them safely and neutralize them. Antioxidants also improve the flow of oxygen through the body and brain.

Best sources: blueberries and other berries, sweet potatoes, red tomatoes, spinach, broccoli, green tea, nuts and seeds, citrus fruits, liver
- Omega-3 Fatty Acids**

Omega-3 fatty acids are concentrated in the brain and are associated with cognitive function. They count as "healthy" fats, as opposed to saturated fats and trans fats, protecting against inflammation and high cholesterol.

Best sources: cold-water fish such as salmon, herring, tuna, halibut, and mackerel, walnuts and walnut oil, flaxseed and flaxseed oil

Because older adults are more prone to B12 and folic acid deficiencies, a supplement may be a good idea for seniors; ditto an omega-3 supplement (at any age) if you don't like eating fish. But nutrients work best when they're consumed in foods, so try your best to eat a broad spectrum of colorful plant foods and choose fats that will help clear, not clog, your arteries. Your brain will thank you!

Does memory naturally decline with age? If so, why?

Several factors cause aging brains to experience changes in the ability to retain and retrieve memories:

- The hippocampus is especially vulnerable to age-related deterioration, and that can affect how well you retain information.
- There's a relative loss of neurons with age, which can affect the activity of brain chemicals called neurotransmitters and their receptors.
- An older person often experiences decreased blood flow to the brain and processes nutrients that enhance brain activity less efficiently than a younger person.

However, in healthy older adults, these changes represent more of a slowing in the ability to absorb, store, and retrieve new information, not a loss. The factual information you've accumulated over the years remains largely intact, as does procedural memory. You can make and recall new long-term memories; the process just takes a little longer.

Of course, some older adults do develop more significant problems with memory that are the result of diseases such as Alzheimer's or stroke, injury, poor nutrition, other physiological issues, or emotional problems.