

## How to Improve Your Memory

Tips and Exercises to Sharpen Your Mind and Boost Brainpower



A strong memory depends on the health and vitality of your brain. Whether you're a student studying for final exams, a working professional interested in doing all you can to stay mentally sharp, or a senior looking to preserve and enhance your grey matter as you age, there are lots of things you can do to improve your memory and mental performance.

### Improving your memory: 9 tips for boosting brain power at any age

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They say that you can't teach an old dog new tricks, but when it comes to the brain, scientists have discovered that this old adage simply isn't true. The human brain has an astonishing ability to adapt and change—even into old age. This ability is known as *neuroplasticity*. With the right stimulation, your brain can form new neural pathways, alter existing connections, and adapt and react in ever-changing ways.

The brain's incredible ability to reshape itself holds true when it comes to learning and memory. You can harness the natural power of neuroplasticity to increase your cognitive abilities, enhance your ability to learn new information, and improve your memory at any age. These 9 tips can show you how:

1. Give your brain a workout
2. Don't skip the physical exercise
3. Get your Zs

4. Make time for friends
5. Keep stress in check
6. Have a laugh
7. Eat a brain-boosting diet
8. Identify and treat health problems
9. Take practical steps to support learning and memory

## Tip 1: Give your brain a workout

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By the time you've reached adulthood, your brain has developed millions of neural pathways that help you process and recall information quickly, solve familiar problems, and execute familiar tasks with a minimum of mental effort. But if you always stick to these well-worn paths, you aren't giving your brain the stimulation it needs to keep growing and developing. You have to shake things up from time to time!

Memory, like muscular strength, requires you to "use it or lose it." The more you work out your brain, the better you'll be able to process and remember information. But not all activities are equal. The best brain exercises break your routine and challenge you to use and develop new brain pathways.

### Four key elements of a good brain-boosting activity

1. **It teaches you something new.** No matter how intellectually demanding the activity, if it's something you're already good at, it's not a good brain exercise. The activity needs to be something that's unfamiliar and out of your comfort zone. To strengthen the brain, you need to keep learning and developing new skills.
2. **It's challenging.** The best brain-boosting activities demand your full and close attention. It's not enough that you found the activity challenging at one point. It must still be something that requires mental effort. For example, learning to play a challenging new piece of music counts. Playing a difficult piece you've already memorized does not.
3. **It's a skill you can build on.** Look for activities that allow you to start at an easy level and work your way up as your skills improve —always pushing the envelope so you continue to stretch your capabilities. When a previously difficult level starts to feel comfortable, that means it's time to tackle the next level of performance.
4. **It's rewarding.** Rewards support the brain's learning process. The more interested and engaged you are in the activity, the more likely you'll be to continue doing it and the greater the benefits you'll experience. So choose activities that, while

challenging, are still enjoyable and satisfying.

Think of something new you've always wanted to try, like learning how to play the guitar, make pottery, juggle, play chess, speak French, dance the tango, or master your golf swing. Any of these activities can help you improve your memory, so long as they keep you challenged and engaged.

### What about brain-training programs?

There are countless brain-training apps and online programs that promise to boost memory, problem-solving, attention, and even IQ with daily practice. But do they really work? Increasingly, the evidence says no. While these brain-training programs may lead to short-term improvements in whatever task or specific game you've been practicing, they don't appear to do anything to strengthen or improve overall intelligence, memory, or other cognitive abilities.

## Tip 2: Don't skip the physical exercise

While mental exercise is important for brain health, that doesn't mean you never need to break a sweat. [Physical exercise](/articles/healthy-living/how-to-start-exercising-and-stick-to-it.htm) (/articles/healthy-living/how-to-start-exercising-and-stick-to-it.htm) helps your brain stay sharp. It increases oxygen to your brain and reduces the risk for disorders that lead to memory loss, such as diabetes and cardiovascular disease. Exercise also enhances the effects of helpful brain chemicals and reduces stress hormones. Perhaps most importantly, exercise plays an important role in neuroplasticity by boosting growth factors and stimulating new neuronal connections.

### Brain-boosting exercise tips

- ▶ Aerobic exercise is particularly good for the brain, so choose activities that keep your blood pumping. In general, anything that is good for your heart is great for your brain.
- ▶ Does it take you long time to clear out the sleep fog when you wake up? If so, you may find that exercising in the morning before you start your day makes a big difference. In addition to clearing out the cobwebs, it also primes you for learning throughout the day.
- ▶ Physical activities that require hand-eye coordination or complex motor skills are particularly beneficial for brain building.
- ▶ Exercise breaks can help you get past mental fatigue and afternoon slumps. Even a

- ▶ short walk or a few jumping jacks can be enough to reboot your brain.

If you are experiencing traumatic stress or find yourself stuck in repetitive, unhealthy behavior...

...Try exercising the muscles connected to fight-or-flight with attention. Exercises that use both your arms and legs—and are done in a focused way with mindful awareness of your physical and emotional experience—are especially good at reducing [traumatic stress](/articles/ptsd-trauma/traumatic-stress.htm) (/articles/ptsd-trauma/traumatic-stress.htm). Exercises like walking, running, swimming, or rock-climbing, activate your senses and make you more aware of yourself and others when they are done with focused attention.

### Tip 3: Get your Zs

There is a big difference between the amount of sleep you can get by on and the amount you need to function at your best. The truth is that over 95% of adults need between 7.5 to 9 hours of sleep every night in order to avoid sleep deprivation. Even skimping on a few hours makes a difference! Memory, creativity, problem-solving abilities, and critical thinking skills are all compromised.

But sleep is critical to learning and memory in an even more fundamental way. Research shows that [sleep](/articles/sleep/getting-better-sleep.htm) (/articles/sleep/getting-better-sleep.htm) is necessary for memory consolidation, with the key memory-enhancing activity occurring during the deepest stages of sleep.

**Get on a regular sleep schedule.** Go to bed at the same time every night and get up at the same time each morning. Try not to break your routine, even on weekends and holidays.

**Avoid all screens for at least an hour before bed.** The blue light emitted by TVs, tablets, phones, and computers trigger wakefulness and suppress hormones such as melatonin that make you sleepy.



(/articles/sleep/getting-better-sleep.htm)

[How to Sleep Better](#): (/articles/sleep/getting-better-sleep.htm) Seven Tips

**Cut back on caffeine.** Caffeine affects people differently. Some people are highly sensitive, and even morning coffee may interfere with sleep at night. Try reducing your intake or cutting it out entirely if you suspect it's keeping you up.

## Tip 4: Make time for friends

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When you think of ways to improve memory, do you think of “serious” activities such as wrestling with the *New York Times* crossword puzzle or mastering chess strategy, or do more lighthearted pastimes—hanging out with friends or enjoying a funny movie—come to mind? If you're like most of us, it's probably the former. But countless studies show that a life [full of friends](#) (/articles/relationships-communication/making-good-friends.htm) and fun comes with cognitive benefits.

### Healthy relationships: the ultimate brain booster

Humans are highly social animals. We're not meant to survive, let alone thrive, in isolation. Relationships stimulate our brains—in fact, interacting with others may be the best kind of brain exercise.

Research shows that having meaningful friendships and a strong support system are vital not only to emotional health, but also to brain health. In one recent study from the Harvard School of Public Health, for example, researchers found that people with the most active social lives had the slowest rate of memory decline.

There are many ways to start taking advantage of the brain and memory-boosting benefits of socializing. [Volunteer](#) (/articles/healthy-living/volunteering-and-its-surprising-benefits.htm), join a club, make it a point to see friends more often, or reach out over the phone. And if a human isn't handy, don't overlook the [value of a pet](#) (/articles/mental-health/mood-boosting-power-of-dogs.htm)—especially the highly-social dog.

## Tip 5: Keep stress in check

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Stress is one of the brain's worst enemies. Over time, [chronic stress](#) (/articles/stress/stress-symptoms-signs-and-causes.htm) destroys brain cells and damages the hippocampus, the region of the brain involved in the formation of new memories and the retrieval of old ones. Studies have also linked stress to memory loss.

### Tips for managing stress

- ▶ Set realistic expectations (and be willing to say no!)

- ▶ Take breaks throughout the day
- ▶ Express your feelings instead of bottling them up
- ▶ Set a healthy balance between work and leisure time
- ▶ Focus on one task at a time, rather than trying to multi-task

### The stress-busting, memory-boosting benefits of meditation

The scientific evidence for the mental health benefits of meditation continues to pile up. Studies show that meditation helps improve many different types of conditions, including depression, anxiety, chronic pain, diabetes, and high blood pressure. Meditation also can improve focus, concentration, creativity, memory, and learning and reasoning skills.

Meditation works its “magic” by changing the actual brain. Brain images show that regular meditators have more activity in the left prefrontal cortex, an area of the brain associated with feelings of joy and equanimity. Meditation also increases the thickness of the cerebral cortex and encourages more connections between brain cells—all of which increases mental sharpness and memory ability.

### Tip 6: Have a laugh

You’ve heard that [laughter is the best medicine](/articles/mental-health/laughter-is-the-best-medicine.htm) (/articles/mental-health/laughter-is-the-best-medicine.htm), and that holds true for the brain and the memory, as well as the body. Unlike emotional responses, which are limited to specific areas of the brain, laughter engages multiple regions across the whole brain.

Furthermore, listening to jokes and working out punch lines activates areas of the brain vital to learning and creativity. As psychologist Daniel Goleman notes in his book *Emotional Intelligence*, “laughter... seems to help people think more broadly and associate more freely.”

Looking for ways to bring more laughter in your life? Start with these basics:

**Laugh at yourself.** Share your embarrassing moments. The best way to take ourselves less seriously is to talk about the times when we took ourselves too seriously.

**When you hear laughter, move toward it.** Most of the time, people are very happy to share something funny because it gives them an opportunity to laugh again and feed off the humor you find in it. When you hear laughter, seek it out and try to join in.

**Spend time with fun, playful people.** These are people who laugh easily—both at themselves and at life’s absurdities—and who routinely find the humor in everyday events. Their playful point of view and laughter are contagious.

**Surround yourself with reminders to lighten up.** Keep a toy on your desk or in your car. Put up a funny poster in your office. Choose a computer screensaver that makes you laugh. Frame photos of you and your loved ones having fun.



(/articles/mental-health/laughter-is-the-best-medicine.htm)

[Laughter is the Best Medicine: \(/articles/mental-health/laughter-is-the-best-medicine.htm\)](/articles/mental-health/laughter-is-the-best-medicine.htm) Health Benefits of Humor and Laughter

**Pay attention to children and emulate them.** They are the experts on playing, taking life lightly, and laughing.

## Tip 7: Eat a brain-boosting diet

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Just as the body needs fuel, so does the brain. You probably already know that a diet based on fruits, vegetables, whole grains, “[healthy” fats](/articles/healthy-eating/choosing-healthy-fats.htm) (such as olive oil, nuts, fish) and [lean protein](/articles/healthy-eating/choosing-healthy-protein.htm) will provide lots of health benefits, but such a diet can also improve memory. For brain health, though, it’s not just what you eat—it’s also what you *don’t* eat. The following nutritional tips will help boost your brainpower and reduce your risk of dementia:

**Get your omega-3s.** Research shows that omega-3 fatty acids are particularly beneficial for brain health. Fish is a particularly rich source of omega-3, especially cold water “fatty fish” such as salmon, tuna, halibut, trout, mackerel, sardines, and herring.

**If you’re not a fan of seafood, consider non-fish sources of omega-3s such as** seaweed, walnuts, ground flaxseed, flaxseed oil, winter squash, kidney and pinto beans, spinach, broccoli, pumpkin seeds, and soybeans.



**Limit calories and saturated fat.** Research shows that diets high in saturated fat (from sources such as red meat, whole milk, butter, cheese, cream, and ice cream) increase your risk of dementia and impair concentration and memory.

**Eat more fruit and vegetables.** Produce is packed with antioxidants, substances that protect your brain cells from damage. Colorful fruits and vegetables are particularly good antioxidant "superfood" sources.

**Drink green tea.** Green tea contains polyphenols, powerful antioxidants that protect against free radicals that can damage brain cells. Among many other benefits, regular consumption of green tea may enhance memory and mental alertness and slow brain aging.

**Drink wine (or grape juice) in moderation.** Keeping your alcohol consumption in check is key, since alcohol kills brain cells. But in moderation (around 1 glass a day for women; 2 for men), alcohol may actually improve memory and cognition. Red wine appears to be the best option, as it is rich in resveratrol, a flavonoid that boosts blood flow in the brain and reduces the risk of Alzheimer's disease. Other resveratrol-packed options include grape juice, cranberry juice, fresh grapes and berries, and peanuts.

## Tip 8: Identify and treat health problems

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Do you feel that your memory has taken an unexplainable dip? If so, there may be a health or lifestyle problem to blame.

It's not just dementia or Alzheimer's disease that causes [memory loss](/harvard/whats-causing-your-memory-loss.htm) (/harvard/whats-causing-your-memory-loss.htm). There are many diseases, mental health disorders, and medications that can interfere with memory:

**Heart disease and its risk factors.** Cardiovascular disease and its risk factors, including high cholesterol and high blood pressure, have been linked to mild cognitive impairment.

**Diabetes.** Studies show that people with diabetes experience far greater cognitive decline than those who don't suffer from the disease.

**Hormone imbalance.** Women going through menopause often experience memory problems when their estrogen dips. In men, low testosterone can cause issues. Thyroid imbalances can also cause forgetfulness, sluggish thinking, or confusion.

**Medications.** Many prescription and over-the-counter medications can get in the way of memory and clear thinking. Common culprits include cold and allergy medications, sleep aids, and antidepressants. Talk to your doctor or pharmacist about possible side effects.



## Is it depression?

Emotional difficulties can take just as heavy a toll on the brain as physical problems. In fact, mental sluggishness, difficulty concentrating, and forgetfulness are common symptoms of depression. The memory issues can be particularly bad in older people who are depressed—so much so that it is sometimes mistaken for dementia. The good news is that when the [depression is treated](/articles/depression/coping-with-depression.htm) (/articles/depression/coping-with-depression.htm), memory should return to normal.



(/harvard/whats-causing-your-memory-loss.htm)

[What's Causing Your Memory Loss?](/harvard/whats-causing-your-memory-loss.htm) (/harvard/whats-causing-your-memory-loss.htm)

## Tip 9: Take practical steps to support learning and 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 eight seconds of intense focus to process a piece of information into your memory. If you're easily distracted, pick a quiet place where you won't be interrupted.

**Involve as many senses as possible.** Try to relate information to colors, textures, smells, and tastes. The physical act of rewriting information can help imprint it onto your brain. Even if you're a visual learner, read out loud what you want to remember. If you can recite it rhythmically, even better.

**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 something as simple as an address of someone who lives on a street where you already know someone.

**For more complex material, focus on understanding basic ideas** rather than memorizing isolated details. Practice explaining the ideas to someone else in your own words.

**Rehearse information you've already learned.** Review what you've learned the same day you learn it, and at intervals thereafter. This "spaced rehearsal" is more effective than cramming, especially for retaining what you've learned.

**Use mnemonic devices to make memorization easier.** Mnemonics (the initial “m” is silent) are clues of any kind that help us remember something, usually by helping us associate the information we want to remember with a visual image, a sentence, or a word.

### 6 types of mnemonic device

1. **Visual image** - Associate a visual image with a word or name to help you remember them better. Positive, pleasant images that are vivid, colorful, and three-dimensional will be easier to remember

**Example:** To remember the name Rosa Parks and what she's known for, picture a woman sitting on a park bench surrounded by roses, waiting as her bus pulls up.

2. **Acrostic (or sentence)** - Make up a sentence in which the first letter of each word is part of or represents the initial of what you want to remember.

**Example:** The sentence "Every good boy does fine" to memorize the lines of the treble clef, representing the notes E, G, B, D, and F.

3. **Acronym** - An acronym is a word that is made up by taking the first letters of all the key words or ideas you need to remember and creating a new word out of them.

**Example:** The word "HOMES" to remember the names of the Great Lakes: Huron, Ontario, Michigan, Erie, and Superior.

4. **Rhymes and alliteration** - Rhymes, alliteration (a repeating sound or syllable), and even jokes are memorable way to remember more mundane facts and figures.

**Example:** The rhyme "Thirty days hath September, April, June, and November" to remember the months of the year with only 30 days in them.

5. **Chunking** - Chunking breaks a long list of numbers or other types of information into smaller, more manageable chunks.

**Example:** Remembering a 10-digit phone number by breaking it down into three sets of numbers: 555-867-5309 (as opposed to 5558675309).

6. **Method of loci** - Imagine placing the items you want to remember along a route you know well, or in specific locations in a familiar room or building.

**Example:** For a shopping list, imagine bananas in the entryway to your home, a puddle of milk in the middle of the sofa, eggs going up the stairs, and bread on your bed.

## 5 Simple Tricks to Sharpen Thinking and Memory Skills

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*Using these memory-enhancing techniques can help improve your ability to learn new information and retain it over time.*

### **Repeat**

One of the golden rules of learning and memory is repeat, repeat, repeat. The brain also responds to novelty, so repeating something in a different way or at a different time will make the most of the novelty effect and allow you to build stronger memories. Examples of using repetition include:

- Taking notes
- Repeating a name after you hear it for the first time
- Repeating or paraphrasing what someone says to you

### **Organize**

A day planner or smart phone calendar can help you keep track of appointments and activities and can also serve as a journal in which you write anything that you would like to remember. Writing down and organizing information reinforces learning.

- Try jotting down conversations, thoughts, experiences.
- Review current and previous day's entries at breakfast and dinner.
- If you use a planner and not a smart phone, keep it in the same spot at home and take it with you whenever you leave.

### **Visualize**

Learning faces and names is a particularly hard task for most people. In addition to repeating a person's name, you can also associate the name with an image. Visualization strengthens the association you are making between the face and the name. For example:

- Link the name Sandy with the image of a beach, and imagine Sandy on the beach.

**Cue**

When you are having difficulty recalling a particular word or fact, you can cue yourself by giving related details or “talking around” the word, name, or fact. Other practical ways to cue include:

- Using alarms or a kitchen timer to remind you of tasks or appointments.
- Placing an object associated with the task you must do in a prominent place at home. For example, if you want to order tickets to a play, leave a newspaper ad for the play near your telephone or computer.

**Group**

When you’re trying to remember a long list of items, it can help to group the items in sets of three to five, just as you would to remember a phone number. This strategy capitalizes on organization and building associations, and helps to extend the capacity of our short-term memory by chunking information together instead of trying to remember each piece of information independently. For example:

- If you have a list of 15 things on your grocery list, you can group the items by category, such as dairy, produce, canned goods, and frozen foods.

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