How to Improve Your Memory

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How to Improve Your Memory Overview

With age comes wisdom, and you can use your acquired wisdom to help combat memory problems in new and creative ways.

You can improve your memory. You can make the decision today to get better at remembering things, whether it's the name of that new business associate or where you parked your car. Whether you only occasionally forget a name or you can't seem to stop forgetting your keys, your purse, or your meeting notes, you can do something about it. Your memory can be honed and sharpened with the right lifestyle choices and a basic knowledge of memory-enhancing strategies. Scientists agree that, in the absence of a brain disease, it is possible to improve your memory, although there are varied ideas about the best way to go about it.

Many experts agree that one of the most important ways to keep your memory sharp, or to improve it if it's starting to falter, is to engage in plenty of mental exercise throughout life. We've all heard that getting regular physical activity can keep the heart muscle strong and functioning at its best. Even though the brain is not a muscle, it, too, needs regular exercise in the form of mental calisthenics to stay sharp and perform well. While the heart's job is to pump blood to the body's cells, what the brain does best is communicate with its own cells. The more numerous and healthy the brain-cell connections and the faster the signals can go back and forth, the better the mind and the memory will work.

Keeping the brain nimble through puzzles, riddles, and other brain-challenging exercises and activities helps build new connections between brain cells and strengthen those that already exist. Pretty much any activity that actively engages the brain, such as jigsaw and crossword puzzles, board games such as chess, and even watching programs that test your knowledge or expose you to new ideas and concepts, can help. The more interesting and enjoyable the activity is to you, the more likely you are to engage in it consistently and in the long-term. Stimulating your senses, facing new physical challenges, learning to play a musical instrument or speak a foreign language -- all of these can help build more cellular bridges within the brain and improve overall brain function.

We'll start off by touching on memory exercises. Learn more about these fun and useful exercises that keep your memory in tip top shape.

Memory Exercises

One of the most popular methods for getting brain cells working is to solve puzzles or riddles, which force you to think in unusual or creative ways. Puzzles and riddles help exercise your mind because they involve a host of mental tasks, including mathematics, logical reasoning, pattern recognition, and nonlinear thinking.

While puzzles and games are obvious choices for keeping memory sharp, it also helps to expose yourself to new and interesting environments. Research with animals has clearly shown that novel, stimulating environments can stop the brain from shrinking with age and actually improve brain-cell connections and boost memory skills. Get out and see new places, do new things, take up a new sport, or start a hobby. Visit museums or places of interest in your town you've never taken the time to explore before.

If you stay active, interested in life, and engaged in the world around you, your memory doesn't have to deteriorate as you grow older. Even if you can't get out much, try to ensure that your home environment and daily life are stimulating and enriched, with lots of colors, sounds, smells, and things to do. Here are some ideas:

- Make sure you have music playing for at least a little while every day; while any music is good, research has found that classical music is especially stimulating to the intellect.
- Keep lots of books on hand, and make time to read them. If you can't block out specific reading times, keep a paperback in your purse or briefcase so you can squeeze in some reading while you're riding a train or bus or waiting for an appointment.
- Add a fish tank to your home or office with lots of colorful fish and interesting tank toys.
- Paint the walls of your home interesting, unusual colors or add some wallpaper. Select interesting art, knickknacks, rugs, and curtains. Try to include a variety of textures with things like pillows, blankets, and furniture fabrics.
- If you have the space, put a birdhouse and a bird feeder or birdbath outside your window, and keep a pair of binoculars handy. Add some brightly colored flowers to your yard or place planters or window boxes outside your windows.
- Don't forget the flowers indoors, too; the colors and smells will be an added sensory boost.
- Set out a jigsaw puzzle or chessboard and regularly engage visitors in a game.
- Plug in a computer and use it to surf the Internet or play a challenging game; computer games can improve memory in such fun ways you'll hardly notice the effort.
- Try cooking food from a different culture, or visit restaurants with cuisines that are not usually on your menu.
Here's a quick list of ways to regain some control over your daily life and your memory.

1. Get organized. Develop a routine and stick to it. If you're organized, you can often make up for not remembering certain things by keeping information and various possessions in easily accessible places.
2. Enlist a list. Keep a daily to-do list, and cross off items once they've been done. Always keep the list in the same place, and organize the list into categories. Make your list easy to find: Put it on a large, colored sheet of paper.
3. Keep a calendar handy to keep track of important dates. Check the calendar at the same time every day so it becomes a habit. When you buy a new calendar at the beginning of the year, transfer all important dates from the old calendar.
4. Have a place for everything, and put everything in its place. If you have a key rack right inside your door, you'll be more likely to hang your keys there and remember where they are.
5. If you need to remember to take certain things to work or school, keep a tote bag or backpack right by the front door. Keep all papers and items that need to go with you in that bag or backpack.

Some research indicates that strong social connections can help stave off depression and Alzheimer's disease and keep you alert and interested in life. Make an effort to spend time with other people, especially if you do not have relatives or close friends nearby. Join a book club, a bowling league, or a study group at your place of worship or check into local volunteer activities that can bring you in touch with a variety of new people. Write letters or make phone calls to distant relatives and long-lost friends or try going online and finding out about people from all over the world through e-mail, message boards, discussion groups, and chat rooms.

Remember, anything that engages the senses will help to stimulate your mind and strengthen your memory. So touch, feel, smell, and experience new things as often as you can.

Visualization is another good exercise for your brain. As you sit in your car in a traffic jam, wait for a doctor's appointment, or lie in bed before you fall asleep, try to visualize something from your childhood: your bedroom in the house where you grew up, your first-grade classroom, the inside of your parents' car when you were a teenager. Visualization helps stimulate the mind and can also serve as a relaxation tool by distracting you from worries and stresses.

It is possible, however, to actually get better at remembering those things you tend to forget. On the next page, get tips on how to actually improve your memory.
6. Focus on one thing at a time, and try to pay active attention each time you put something down.
7. Make visual cues: Place a colored sticky note on your steering wheel, protruding up from your briefcase or purse, on your office chair, or on your bathroom mirror, your shoes, or your wallet. Don’t assume you’ll remember; leave plenty of reminders.
8. Keep important numbers in one place, so you can locate them even if you’re under a lot of stress. Be sure to keep these numbers in your wallet: phone numbers for doctors, emergency contacts, neighbors, medical insurance and social security numbers, license-plate number and automobile-insurance information.
9. Write things down as they occur -- use lists, schedules, and so on.
10. Return frequently used items to the same spot each time, and rely on placement to trigger your memory (for example, leave an umbrella on the doorknob).
11. Repeat yourself. If someone tells you information that you need to remember, repeat it over and over again to yourself.
12. Keep a positive attitude about memory lapses as you get older. Remember, memory decline is not inevitable. Be sensitive to the many things that can make you prone to forget. You can take action to overcome or mitigate most of them.

The more harried you are, the harder it can be to remember the everyday details of your life. You need a system, which is why so many people rely on calendars, electronic organizers, appointment books, computerized reminders, and other memory aids. There are also certain strategies that you can employ to handle specific types of memory problems.

On the next page learn how to improve your memory when it comes to remembering daily tasks and habits.

To learn more about the various aspects of memory, see:

- How to Test Your Memory
- Improving Your Memory: Lifestyle Changes
- How Your Brain Works
- How Human Memory Works

**Remembering Habitual Tasks**

If you have trouble remembering habitual tasks such as turning off the coffee pot each morning or feeding the cat, the key to solving this problem is to relate the activity to something that you don't generally forget to do every day. For example, if you often forget to take your vitamin pill in the morning, tell yourself each day that you won’t eat your breakfast until you have taken your vitamin. Make swallowing that vitamin pill a prerequisite to taking your first bite of food. By incorporating a task into an outline of things that you don’t forget to do, you will be less likely to forget that task. You can even make the connection a physical one, say by storing your bottle of vitamins right in front of your cereal box in the cabinet.

**Recalling Where You Put Things**

There is hope for those who can't remember where they left their car keys or their purse. The main reason why you forget where you put these items is that you weren’t paying attention when you dropped them on the hall table, the bedside table, or the kitchen counter. Because you weren’t paying attention in the first place, when it comes time to retrieve the memory of where you left the object, you can’t. It was never properly absorbed into your short-term memory in the first place.

This problem is compounded by the fact that you have probably dropped your keys or glasses down in many different places many different times, so when you do recall leaving them somewhere, you may not be recalling the most recent place you put them.

Once again, the solution is really quite simple: Pay attention. And if you can’t pay attention, be consistent. Make a concerted effort to pay attention to where you are placing the keys. Stop yourself in the middle of dropping them on the desk and take a deep breath. Stare at the desk and say out loud, “I am putting my keys on the desk.” If you force yourself to pay attention, you’re less likely to forget when it comes time to retrieve that particular memory. This may feel a bit silly at first, but it’s a sure bet you’ll remember where you left them.

The other sure-fire way to remember particular items is to put them back in exactly the same place, every single time. Find specific places to keep all the items that are often misplaced:

- glasses
- keys
- medications
- coupons
- TV remote
- cell phone
- cordless phone

In addition, you can take steps to minimize the number of less significant things you have to remember in the first place. If you never seem to be able to find small, often-used items, such as tape dispensers, scissors, or pens, stop torturing yourself. Simply buy extras and keep them all over the house.

To end the frustration of tracking down the TV remote, consider attaching one of the commercially available “homing devices” -- the kind that beeps when you clap your hands -- to the remote. You may be able to find a key chain that works in a similar fashion to help you locate your keys.
Cordless phones are a real boon to our busy, modern lives but not if the last person to use the phone simply left it on the sofa instead of back on the base unit. If you find yourself wasting time searching high and low for the handset of the cordless phone each time that you want to use it, check to see if your unit has an "intercom" button on the base unit; pressing this button makes the handset ring, making it faster and easier for you to find it.

Remembering Your Schedule

It won't matter much if you can remember to do something in the future if you don't remember to do it at the right time. For example, you may remember that you need to mail in your IRS payment a week before the deadline, but if you forget all about the task on the day you intended to do it and the deadline passes, you haven't solved your problem. In fact, a problem with remembering dates is one of the most common memory failures. A combination of mental strategies and mechanical reminders should help get this problem under control.

One way to solve the problem of forgetting dates is to cue your attention. For example, you could take your IRS payment and tape it to the front door, or tape a dollar bill to the front door to remind yourself. Here are some tried-and-true cues:

- Attach a safety pin to your sleeve.
- Put a rubber band around your wrist.
- Move your watch to the opposite arm.
- Leave a note to yourself (a brightly colored sticky note is ideal) in a prominent place.

Using a calendar is an excellent mechanical method of remembering dates. The key is not to use two calendars -- one at home and one at work. If you do, you're asking for trouble when you forget to transfer an important date and then inadvertently schedule two things for the same day. Get one calendar that's convenient to carry with you. Or, if you can access your computer both at home and at work, try using your software's calendar program to keep track of appointments and important dates electronically. Whatever calendar you ultimately choose, all important days should be marked down. Every morning, consult the calendar and cross off items as they occur. On the first day of the new year, get out a new calendar and transfer all of the important dates from the old calendar so you don't forget anything.

Remembering What You're Doing

We've all gone into a room and totally forgotten what we're doing there. If you've done this, you're not alone; experts suggest that more than half of all Americans experience this problem. It's not incipient dementia, it's just a lack of attention.

Each time you have a thought about going into a room to get something, simply stop for a moment and tell yourself out loud what you are going to get. If you're already in the other room and can't remember what you're doing there, try retracing your steps to where you were standing when you had the thought to leave the room. This form of association will often help jog the memory of your errand.

Studies show that it's not unusual for people of all ages to forget places, names, and dates. On the next page, learn memory tricks and other strategies to remember these basics.

To learn more about the various aspects of memory, see:

- How to Test Your Memory
- Improving Your Memory: Lifestyle Changes
- How Your Brain Works
- How Human Memory Works

Remembering Places, Names and Dates

It's not unusual to forget where you've parked the car. Here's how to remember where you parked it: After you park your car in a big parking lot, don't just get out of the car and head straight for your destination. Stop. Look around and make a mental note of where you are. Find something that will help you remember: Did you park next to a tall lamp post? Is there a parking number or letter posted to help you find your way? Check to see if there's a sign on the store or in the store window that aligns with the row you parked in, and repeat what the sign says to yourself as you enter the store. Better yet, write a description of the location on the parking garage ticket or other paper and put it with your keys. Don't rely on a description of the cars parked around you; they could very well be gone when you come back for your car.

If you tend to lose your way as you walk, ride your bike, or travel in a car, you need to better register the way as you go:

- As you travel, try to take mental snapshots along the route. Flash back to them in your mind once in a while.
- Record visual "cues" from both directions if you can (things might look different from the opposite direction). Look for that big red barn, the funny sign, the crooked tree.
- Use all your senses. Pay attention to unusual smells or noises; the more senses you involve, the stronger the memory trace will be.
- Use maps. And if you're not good at reading maps, write down directions, and study them thoroughly before you leave.

Remembering Quantities

If you've ever been in the midst of baking brownies and suddenly realized you have no idea how much flour you've dumped in the bowl, you need help in paying attention to amounts.

Try visualizing the amount of flour in the measure. Pour it in while saying out loud the amount you're using, "One cup, two cups..." You'll find that when you comment out loud on how many cups you've put in, you're less likely to forget or get sidetracked.

You may want to resort to a backup strategy. For every cup of flour you pour, set aside an object to represent that cup: a coffee bean, a raisin, a spoon. Each time you add another cup of flour, set aside another bean or raisin. This way you can visually check exactly how much you've added, even if you're continually interrupted.
Remembering Names

There you are at a business party, chatting with someone whose name you've forgotten. A third person comes up and you're expected to make an introduction, but you can't remember the name.

This is certainly not unusual. Most of us can remember faces quite easily, even if we've only seen them once or twice. But when it comes to attaching a name to that face, that's another matter entirely. We tend to remember faces more readily because it involves the process of recognition, whereas attaching a name to the face requires a process called recall. What's the distinction? Recognition is much easier for the brain to accomplish, because recognition simply requires you to choose among a limited number of alternatives that are present in front of your eyes -- sort of like a multiple-choice question. But to recall a name, the brain has to go digging for it, which is a much more complex process. Recall, then, is more like a fill-in-the-blank question.

The process of recall is generally easier if we have some retrieval cues -- or hints -- that give the brain some direction as it searches through our memory banks for a name. One way to do this is to associate an individual's name with another piece of information that you already know. For example, when you first meet a person and hear their name, you might tell yourself that this person has the same name as your mother-in-law or the same name as your favorite baseball player.

You can also use the verbal technique to help implant a person's name in your memory when you first meet them. To do this, simply:

1. Register the person's name: Pay attention to it as it is said!
2. Repeat the person's name to yourself.
3. Comment on the name.
4. Use the person's name out loud as soon as possible.

Another strategy for remembering names is to use the visual technique. There are three simple steps to get the name right every time using this technique:

1. Associate the name with something meaningful. That's easy with a name like "Bales" (picture two bales of hay). If it's something more difficult, like Sokoloff, think of "Soak it all off" and picture a giant sponge sopping up spilled milk.
2. Note distinctive features of the person's face.
3. Form a visual association between the face and the name. If you've just met Jill Brown, and she has very dark eyes, picture those brown eyes as you say the name to yourself.

After you've done all you can to remember the name, you need to rehearse the name if you're going to remember it. Repeat the name to yourself again in about 15 seconds. If you've met several people, repeat the names to yourself while picturing the faces before the end of the event. The more often you can repeat the names early on, the more likely they will stick in your head.

Remembering names can be an important social skill; we all like to think that other people remember us. The ability to remember names of even slight acquaintances is highly regarded.

Mnemonic Strategies

If you're interested in greatly sharpening your memory, there is a range of more sophisticated methods called mnemonic strategies that have been proven to aid memory. Some of them are fairly complex and take practice to learn, but they do work.

On the next page, learn about linking and chaining strategies, which involve making associations, to improve your memory.

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Linking and Chaining Strategies

The most basic strategy for remembering is called the link method (or "chaining"), which is particularly good for memorizing short lists. It's a form of visualizing, but with this system you must link the items together by thinking of images that connect them. Here's how it works:

1. First, form a visual image for each item on the list
2. Associate the image for the first item with the image for the second, and then link the second with the third, and so on.
3. To recall the list, begin with the first item, and then proceed in order as each item leads to the next one.

When using the link system, don't try to associate every item with every other item on the list; just associate the items two at a time. While a grocery list does not necessarily have to be remembered in order (although it sometimes helps you to find things faster), let's use it as an example:

- cabbage
- pickles
- potatoes
- orange juice
- bread

1. Form a visual association between the cabbage and the pickles. You might, for example, imagine a pickle trying to roll a giant head of cabbage up a steep hill.
2. Next, create a link between the pickles and the potatoes: Imagine one giant dill pickle in a bow tie and tails dancing with a potato dressed in an evening gown.

3. Then, link the potatoes with the orange juice, perhaps by imagining the potato in a jogging suit swigging down a frosty glass of orange juice.

4. Finally, tie the orange juice to the bread, say, by visualizing a slice of bread with a sail, battling waves in a vast sea of orange juice.

Why such zany visuals? Well, we tend to notice and more easily remember things that are out of the ordinary. When you're creating images, the more vivid they are, the more likely they will stick in your head. It's also important to use the first association that pops into your mind, since this, too, will make it easier for you to remember the same association when you are trying to recall the list.

Here's a bigger list of words to try to chain:

- shoe
- piano
- tree
- pencil
- bird
- bus
- book
- dog
- pizza
- flower
- basketball
- door
- rabbit
- spoon
- eye
- chair
- house
- computer
- rock

One problem with this strategy is that, while each link is associated with the one before it, you have to be able to remember the first item on your own. And if you have a really bad memory for lists, you may find that quite difficult to do. To solve this problem, you should cue the first item in some way, preferably in a way that is related to the purpose of the list. If you're trying to remember a grocery list, for example, link the first item with the front door of the store. Using our previous shopping list, you could imagine a big green cabbage handing out sales fliers at the front door of the grocery store or perhaps sitting in a grocery cart and waving at you.

If you have a really bad memory, it's still possible that if you forget one item on the linked list, it may drag the item that's linked to into oblivion as well. For you, another mnemonic strategy, such as the method of loci, may be a better choice. The method of loci, discussed later in this article, has an advantage over the link method because all of the items are linked to a place, not to each other.

On the other hand, one nice thing about the link system is that once you are good at using it to remember a few items, you can move on to remember 20 or 30 items. Don't think so? Take this test and find out:

- Have a friend give you a list of 20 items (the words should be nouns, not verbs or adjectives, and they should be concrete objects rather than abstract concepts).
- Write down the first word, and associate it visually with your partner (for example, if the first noun is CHAIR, imagine your partner balancing a chair on their nose).
- As you write down each consecutive noun, create a mental image that links it to the previous noun in the list.
- Then give the list back to your partner, and try to recall the list using the mental images you created. You are likely to be amazed at how many items you can remember.

The more you practice this linking system, the more efficient you'll become at creating mental links between words in a list and the better your memory for lists will become.

On the next page, learn how telling yourself a story can be an effective way to remember lists of information.

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Story System Strategies
A close cousin to the link method is the story system, in which you link the items you want to remember in a story. Using our previous grocery list, you could create a story like this: The cabbage picked up a jar of pickles to throw at the potato, who slipped in a puddle of orange juice and landed on a mattress made of bread.

You can see that the story system, unlike the link system, links all of the items in an integrated narrative. This can make it much easier for you to remember all of the items, since the items occur in a logical framework instead of in an unrelated association of pairs. On the other hand, it takes some time and creativity to weave together a story that incorporates all the items in a list. Some people simply aren't good at making up stories, and even those who are may find it difficult if the list has more than a few items, because the story becomes rather complex quite quickly. In addition, like the link system, the story system makes it difficult to recall items out of sequence.

On the next page, learn about the method of loci, one of the oldest memory aids and favorite of ancient thinkers such as Cicero.

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The Method of Loci

The oldest known mnemonic strategy is called the method of loci ("loci" is the plural of locus, which means location, or place). It's based on the assumption that you can best remember places that you are familiar with, so if you can link something you need to remember with a place that you know very well, the location will serve as a clue that will help you to remember.

Devised during the days of the Roman Empire, the method of loci is really a sort of linking method with a twist. According to Cicero, this method was developed by the poet Simonides of Ceos, who was the only survivor of a building collapse during a dinner he attended. Simonides was able to identify the dead, who were crushed beyond recognition, by remembering where the guests had been sitting. From this experience, he realized that it would be possible to remember anything by associating it with a mental image of a location. The loci system was used as a memory tool by both Greek and Roman orators, who took advantage of the technique to give speeches without the aid of notes. Dating back to about 500 b.c., it was the most popular mnemonic system until about the mid-1600s, when the phonetic and peg systems were introduced.

This method works especially well if you're good at visualizing. Here's how it works:

- Think of a place you know well, such as your own house.
- Visualize a series of locations in the place in logical order. For example, picture the path you normally take in your house to get from the front door to the back door. Begin at the front door, go through the hall, turn into the living room, proceed through the dining room and into the kitchen, and so on. As you enter each location, move logically and consistently in the same direction, from one side of the room to the other. Each piece of furniture could serve as an additional location.
- Place each item that you want to remember at one of the locations.
- When you want to remember the items, simply visualize your house and go through it room by room in your mind. Each item that you associated with a specific location in your house should spring to mind as you mentally make your way through your home.

Here's how it would work if you wanted to remember the following shopping list:

- shaving cream
- peaches
- hot dogs
- ketchup
- ice cream

As you visualize your house, imagine spraying shaving cream all over the front door. Don't just imagine the word "shaving cream." Really see it as you depress the nozzle and spray the foam all over the front door. Try to imagine the smell of the shaving cream, as well.

Now open the door, enter the hall, and imagine a giant peach rolling down the steps in the front hall and heading right for you. Now walk into the living room, and visualize a six-foot-tall hot dog in a bun wearing a cowboy hat and lounging by the fireplace. Enter the dining room and picture a bottle of ketchup, dressed in an old-fashioned maid's uniform, setting the table. Finally, go to the kitchen and picture a gallon of ice cream, melting as it slavens over a hot stove.

After you've visually placed all your list items around the house, when you try to remember your shopping list, all you have to do is visualize your front door. You will instantly see the shaving cream; as you enter the hall, the peach will pop into your mind; and so on. The more outrageous and unusual you make your mental images, the easier you'll find it is to remember them.

You can use this method to remember lists of items, important points in a speech, names of people at an event or meeting, things you need to do, even a thought you want to keep in mind. This method works well because it changes the way you remember; so that you use familiar locations to cue yourself about things. Because the locations are organized in an order that you know well, one memory flows into the next very easily.

You can adapt this system by adding other buildings you know very well: your office building, a mall, your friend's house, a trip through your town, your garden -- any place you know well. It doesn't matter how close or how far apart each room or location is. What is important is how distinct one place is from another. In other words, you might not want to use your town library, which is probably built with identical aisles of shelves filled with books. In addition to making each location very distinct and memorable, you'll want to be sure to have an association between an item and its location by having the item and location interact. If you were trying to remember the First Amendment and visualized a reporter just standing beside a desk in the front hall, it would not be as memorable as it would be if the reporter were busy typing the Constitution at the desk in your front hall.
You can also place more than one item in any location. If you have a list of 50 grocery items to remember, you could place 5 items at each of 10 locations. Each of these five items should interact at its location.

For example, you might think of your daily routine, beginning at home:

- your bedroom
- your bathroom
- your kitchen
- your garage
- the driver's seat of your car

Now you must link the items that you want to remember to each of these places. Of course, first you must remember the places, but this should be easy, because they are a part of your daily routine. Then chain each item to a place; remember, the more creative and vivid your ideas, the better. Using the grocery-list example: You wake up next to a giant can of shaving cream; you find a giant peach having a bubble bath in your bathroom; a hot dog in a chef's hat is cooking you breakfast; a bottle of ketchup on wheels is parked in your spot in the garage; and a gallon of ice cream, wearing a seatbelt and sunglasses, is melting in the driver's seat. You could then picture five more items along your route to work, five more in your office, and so on.

Both the linking and the loci methods allow you to remember items on a list, but neither lets you locate just one particular item. For example, if you wanted to find the tenth item using the linking system, you'd have to work your way down through the first nine items to get to it. Of course, this is true for anything we learn in a serial way: Most people wouldn't be able to name the nineteenth letter of the alphabet without counting from A to S first.

The way around this problem is to place a distinguishing mark at every fifth place. Using the loci method, at the fifth place, you could incorporate a five-dollar bill into the image. At the tenth location, you could incorporate an image of a clock with its hands pointing to ten o'clock.

The same thing can be done with the linking method: Incorporate a five-dollar bill image into the link between the fourth and sixth items, for example, or a ten-dollar bill between the ninth and eleventh. Using these added touches, there is really no limit to the number of things you can remember with either of these two methods.

On the next page, learn about peg systems, which allow you to use associations with familiar ideas to help you remember new information.

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Peg Systems

Peg systems are probably the best known of all memory systems. In these systems, items to be remembered are pegged to, or associated with, certain images in a prearranged order. The idea behind the peg systems has been traced to the mid-1600s, when it was developed by Henry Herdson, who linked a digit with any one of several objects that resembled the number (for example, "1 candle"). The system gets its name from the fact that the peg words act as mental "pegs" on which you can hang the information that you need to remember.

The peg method is a better memory strategy than either the link or loci method because it's not dependent on retrieving items in sequence. You can access any item on the list without having to work your way through the whole thing. It is, however, a bit more complicated to learn at first. In the peg system, you learn a standard set of peg words, and then you link the items you need to remember with the pegs. The peg method can be used to remember ideas and concepts and to organize activities as well as to remember lists for shopping and errands.

The various forms of the peg system all use a concrete object to represent each number. What's different amongst them is how you choose the object that represents each number. One peg system relies on using pegs that look like the numbers they represent, another relies on pegs that rhyme with the number, one relies on meaning, and another uses alphabetic pegs. Two of the easiest peg systems to master are the rhyming and alphabet forms, which we'll discuss here.

Rhyming Pegs (Visual Pegs)

The best-known of thepeg systems is the rhyming peg method, in which numbers from one to ten are associated with rhymes: one-bun, two-shoe, and so on. This system was introduced in England sometime around 1879 by John Sambrook. The system is easy to use, and many people already know many of the standard rhymes from the nursery rhyme "one, two, buckle my shoe." In order to use the system, you must memorize the words that rhyme with numbers one through ten (most peg systems don't include a peg word for zero, but you can make one up yourself):

1 = bun
2 = shoe
3 = tree
4 = door
5 = hive
6 = sticks
7 = heaven
8 = gate
9 = vine
10 = hen

1. Now, as you say each rhyme, visualize the item that the peg word represents. Picture it vividly -- is the bun a hot dog bun or a hot cross bun? Is the shoe an old battered sneaker or a black high-heeled pump?

2. Now draw the item. The act of drawing will help you remember the rhyme, creating a strong mental association between the numbers and the words that rhyme with them.

3. Imagine each peg word as vividly as possible. By visualizing the object that each word represents, you'll fix it securely in your mind, creating a strong mental association between the number and the word that rhymes with it.

Once you've formed an association between the numbers and the words that rhyme with them, you've constructed your pegs. Practice by saying each of the peg words out loud. Then try picturing the peg words in place of the numbers as you randomly jump amongst the numbers: five, three, one, eight. Because the words rhyme with the numbers, you don't have to say the numbers to remember the words.

If you want to remember a list, all you have to do is link each item with a peg: the first item with a bun, the second item with a shoe, and so on. To remember the list, call up each peg, and you'll automatically remember the mental image that is linked to each peg.

Here's how it could work for a short grocery list of milk, bread, eggs, and ham. You could start out by visualizing a jug of milk balancing a bun on its lid. Then imagine a muddy sneaker squashing a loaf of French bread. Then think of a tree filled with eggs. And finally, picture a ham in a beret banging on a door to be let in. When you get to the store and you think of one -- bun -- you'll think of a bottle of milk. Two -- shoe -- you'll see a shoe squashing the bread.

Peg words can help you remember lists of items or errands and daily activities. This system may not work for those with memory problems caused by brain damage on one side of the brain, however, since it requires remembering in two distinct stages, one involving the right hemisphere and the other involving the left.

Alphabet Peg Systems
The alphabet makes a good system, since it is naturally ordered and everyone knows it. In order to create concrete images for the letters, each image either rhymes with the letter of the alphabet it represents or has the letter as the initial sound of the word. The alphabet peg system might be: A = hay, B = bee, C = sea.

Peg words can be created that rhyme with or sound similar to the letters of the alphabet that they represent:

A = bay
B = bee
C = sea
D = deep
E = eve
F = effect
G = geology
H = age
I = eye
J = jay
K = quay
L = elm
M = Emma
N = end
O = open
P = pea
Q = cue
R = art
S = essay
t = tea
U = you
V = veer
W = double you
X = exit
Y = why
Z = zebra

If you don't like the rhyming aspect of the alphabetic peg-word system, you can come up with a list that doesn't rhyme but that simply uses the same letter of the alphabet to begin each word.

A = artichoke
B = bat
C = cake
D = dog
E = elephant
F = fireman
G = goat
H = horse
I = iron
J = jelly
K = kangaroo
L = llama
M = mouse
N = napkin
O = orange
P = pail
Q = queen
R = rat
S = shoe
T = tank
U = umbrella
V = vase
W = wagon
X = xylophone
Y = yarn
Z = zebra

The only problem with using the alphabet system is that most people don't automatically know the numeric equivalent of the alphabet, so they can't be directly retrieved as easily. For example, most people don't know, without counting, that S is the nineteenth letter, so if they wanted to recall the nineteenth item out of sequence, they would have to count off the letters and then retrieve the associated image.

Other Peg Systems
You can also select peg words on the basis of meaning: one = me (there is only one "me"); three = pitchfork (three prongs); five = hand (five fingers on a hand). Numbers make good peg words because they have a natural order, and everyone knows them. Unfortunately, this system is limited because it's hard to find good peg words to represent numbers beyond ten.

Chunking
One good way of remembering information is to use chunking; that is, grouping separate bits of information into larger chunks in order to better remember them.

Often, organizing them in a particular way, such as according to sound, rules of grammar, or rhythm can help you recall them. For example, if you want to remember a ten-digit phone number (9991357920), it's much easier to break it up into chunks of two, three, and four digits: 999-135-7920. That's why social security numbers are given in chunks of three, two, and four (999-99-9999) instead of as one unbroken number (9999999999). Remembering things is easier when
the information is grouped in smaller chunks.

On the next page, learn how you can use something called acrostics as a strategy to better remember information.

To learn more about the various aspects of memory, see:

- How to Test Your Memory
- Improving Your Memory: Lifestyle Changes
- How Your Brain Works
- How Human Memory Works

Acrostic Strategies

An acrostic is a phrase that uses the first letter of a word as a cue to remembering it. If you were a young medical student, one of the most familiar acrostics you would use would be: On Old Olympus' Towering Top A Famous Vocal German Viewed Some Hops.

What does this mean? The first letters of each of the words in this phrase stand for the first letter of each of the cranial nerves, in order: olfactory nerve (I), optic nerve (II), oculomotor nerve (III), trochlear nerve (IV), trigeminal nerve (V), abducens nerve (VI), facial nerve (VII), vestibulocochlear nerve (VIII), glossopharyngeal nerve (IX), vagus nerve (X), spinal accessory nerve (XI), and hypoglossal nerve (XII).

And if you've ever taken a beginning music class, you probably learned an acrostic phrase similar to "Every Good Boy Does Fine," which is designed to remind you that the notes that fall on the lines of the musical staff are E, G, B, D, F.

And if you want to remember the order of the colors in a rainbow, just remember the name Roy G. Biv. Each letter in his name stands for a color: R= red; O = orange; Y = yellow; G = green; B = blue; I = indigo; V = violet.

Now that you've learned several different memorization strategies, let's try applying them to one of the most common scenarios that requires memorization: delivering a prepared speech.

How to Remember Speeches

There you are at your desk, staring down at five pages of a speech that you're supposed to give to your colleagues tomorrow evening. You're struggling to memorize every last word but you're worried that, come tomorrow, your memory will fail you. What should you do?

Contrary to what you might think, you should not try to memorize the speech word for word. A memorized speech doesn't sound like a spontaneous, off-the-cuff set of remarks -- it sounds canned and therefore can be rather boring and flat. Even Jay Leno would probably put viewers to sleep if he recited a memorized speech.

What's worse, if you do try to memorize a speech and you forget a word or phrase, odds are you'll panic, and that will only compound your memory problems.

Of course, you can sidestep this problem by reading your speech right from the paper, but that's worse than memorizing it -- it's a sure way to lose your audience. And woe to you if you lose your place -- more fumbling and panic.

Ideally, what you want to do is to appear before your audience and calmly have a conversation with them, in your own words, explaining what you want to say. Sound impossible?

Not at all. The best speakers do this every day, using the same techniques that you can master. There is a whole range of mnemonic strategies you can use to help you remember a speech without having to learn the whole thing word for word and without reading it from cue cards or index cards. What's a speech, anyway, but a series of thoughts strung together in an interesting way? If you can use your own words and follow a logical sequence, you'll be home free.

To do this, you'll have to write out the whole speech, to make sure you cover the important points. Next, you can simply choose one of the mnemonic techniques we discussed above.

- One of the oldest ways of remembering a speech is to use the method of loci, in which you place information in imaginary locations. To remember the information, you remember the location. Here's how to remember a speech using this method:
  - Write down the main points of your speech.
  - Choose a familiar building to place the main points of your speech: Your own home is a good choice.
  - Visualize the first point of your speech at your front door.
  - Visualize the second point of your speech in your hallway.
  - Move through your home in a logical sequence, leaving one main point in each room.
  - When you stand up to give your speech, simply go to your front door: The main point will be waiting for you. Mentally work your way around the rooms, and you'll cover all the main points of your speech.

Of course, the loci system isn't the only way to remember a speech. You can use a different mnemonic strategy if you prefer. Some people prefer the linking system for remembering the key points in a speech. They select a key word to represent a whole thought, and they link each of the representative words together.

On the next page, learn how you can tweak your memory to study more effectively.

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- Improving Your Memory: Lifestyle Changes
- How Your Brain Works
How to Improve Your Memory While Studying

Kara doesn't much like American history, and she's put off studying for the final exam on Friday. On Thursday night, she stays up and reads over each chapter from beginning to end. But when she sits down to take the test the next day, she can’t seem to remember a thing that she read. What happened?

Kara went about studying for the test in the wrong way. Simply sitting down the night before and reading through the entire chapter, without questioning, commenting, or categorizing, with the vague hope that she'd remember what she read, is pretty much like throwing a batch of file cards into a box and hoping to remember what's on them later.

Unfortunately, Kara's study methods are pretty common among students. Studying for a test just by reading over the information one time will give you a retention rate of only about 20 percent, no matter how smart you are.

Fortunately, by learning some simple retention strategies, you can boost your recall to more than 80 percent. Memory strategies can help you learn spelling, vocabulary, a foreign language, names of historical figures, states and capitals, scientific terms, cities and primary products, U.S. presidents, foreign kings, basic math -- just about everything a person needs to learn in school or on the job.

There are three main ways to boost your memory of basic facts:

- by practicing active recall during learning
- by periodic reviews of the material
- by overlearning the material beyond the point of bare mastery

Involve Yourself in Reading

Instead of just reading, you need to read and think about what you're reading. Here are some suggestions for doing just that:

- Think of questions for yourself before, during, and after the reading session.
- Ask yourself what is happening next, why it's happening, and what would happen if one event or fact was different.
- Note what interests you. Take a moment to make a mental comment out loud.
- Train yourself to summarize, a section at a time. What are the main points in the text you just read? What are the logical conclusions?

Visualize as You Read

Try to imagine yourself in the place you're reading about, or try to imagine yourself doing what you're studying. Include yourself in images that you build in your mind. If you're reading about the Civil War, picture yourself on the battlefield. Why are you there? What is the enemy doing, and why? The better you can put yourself into a scene, the better you'll remember what you are reading.

Of course, it's much easier to visualize yourself in a battle than it is to link yourself to the major exports of Peru. Instead of just trying to visualize "wool, wheat, and corn," imagine you're a Peruvian farmer raising sheep and growing wheat and corn. This will work with just about anything, except perhaps for numbers and dates.

Take a Note!

Taking notes won't help you if you scribble down the words in class without thinking about what you're writing, which is unfortunately the way too many students take notes.

The best way to take notes in class:

- Take them carefully while thinking about their content.
- Review them as you write.
- Summarize whenever possible. Isolate what's important and discard the rest while you're writing.
- Don't take down every word your teacher says.

PQRST Method

One of the most popular techniques for remembering written material is the PQRST method: Preview, Question, Read, State, and Test. Memory experts think this works better than simple rehearsal because it provides you with better retrieval cues.

- Preview. Skim through the material briefly. Read the preface, table of contents, and chapter summaries. Preview a chapter by studying the outline and skimming the chapter (especially headings, photographs, and charts). The object is to get an overview of the book or chapter (this shouldn’t take more than a few minutes).
- Question. Ask important questions about the information you're reading. If the chapter includes review questions at the end, read them before you begin reading the chapter and try to keep them in mind as you go. What are the main points in the text? How does the action occur? Read over the paragraph headings and ask yourself questions about them.
- Read. Now read the material completely, without taking notes. Underlining text can help you remember the information, provided you do it properly. The first time you read a chapter, don't underline anything (it's hard to pick out the main points the first time through). Most people tend to underline way too many things, which isn't helpful when you want to be able to go back later and review important points. Instead, read over one section and then go back and, as you work your way through each paragraph, underline the important points. Think about the points you're underlining.
- State. State the answers to key questions out loud. Reread the chapter and ask yourself questions and answer them out loud. Read what you've underlined out loud, and think about what you're saying. You should spend about half your studying time stating information out loud.
- Test. Test yourself to make sure you remembered the information. Go through the chapter again and ask questions. Space out your self-testing so you're doing it during a study session, after a study session, and right before a test. If you'd like, enlist the help of a friend to quiz you.
When you study is almost as important as how you study. It's better to schedule several shorter study sessions rather than one marathon all-nighter. This is probably because you can only concentrate for a certain period of time. If you try to study in one long session, you won't be able to maintain your concentration throughout. Breaks help you consolidate what you've learned.

On the other hand, you can overdo the short sessions as well -- scheduling too many short study sessions can be worse than cramming all of your studying into one marathon session. The trick is to determine the optimum length of a study session and how many sessions work best for you and for the material. Research suggests that difficult information or inexperienced students require shorter sessions for best results. If you have several subjects to study, it's better to separate them and spread them out over several days. You should also vary your learning methods: Take notes one day, make an outline the next, recite information out loud during the third study session.

You'll also want to avoid interference when you study. If you're boning up for a math test, don't close the math book and then read magazines, watch TV, and listen to music before going to bed. Study, then go to bed, so nothing else can interfere with what you've learned. Studies have also shown that sleeping between studying and testing is the best way to do well on a test. A person who sleeps right after studying will remember more than someone who stays awake.

It's also true that other activities between studying and the test will influence how well you remember. If you've spent several hours studying French, you shouldn't then study Latin before going to bed. In fact, if you have two very similar subjects to study, it's best not to study them in the same location.

First-Letter Cuing (Acronyms) The use of the first letter of a word as a cue to remembering the word itself can be helpful in remembering material. This cueing usually employs acronyms -- making a word out of the first letters of the words to be remembered. For example, it's possible to remember the Great Lakes using the acronym HOMES (Huron, Ontario, Michigan, Erie, Superior). Another related type of first-letter cueing is the acrostic, discussed previously, in which the first letters in a series of words form a word or phrase. For example, names of the strings of the viola (CGDA) can be remembered by the acrostic: Cats Go Down Alleys.

Because the acronym system is so effective, most organizations and governmental bodies make use of first-letter cueing: NATO (North Atlantic Treaty Organization) or AA (Alcoholics Anonymous). Some acronyms are so well known that the original full name has been all but forgotten, as in “scuba” (Self-Contained Underwater Breathing Apparatus) gear.

The only problem with first-letter cueing is the propensity to forget what the strategy has been used for. Therefore, it's a good idea to make the association remind you of the information to be remembered. Imagine HOMES floating on the Great Lakes, so that when you want to think of the names of all the lakes, the image of HOMES will return to you and with it, the first letter of each of the lakes.

Peg and Link Both the peg and linking systems that we discussed earlier also work well with studying school subjects. Review those methods and try practicing with them, especially for rote learning and memorization (such as a list of U.S. Presidents or the amendments to the Constitution).

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