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Building a Better Memory

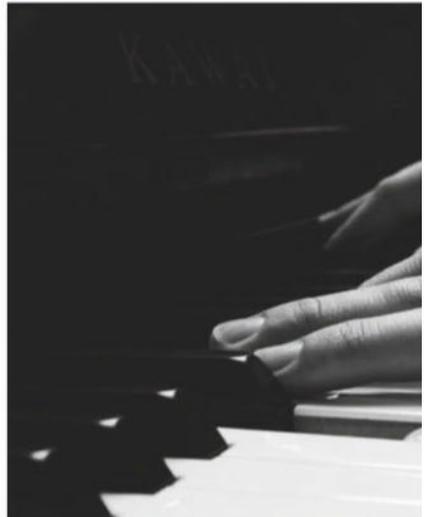
Mark Twain invented a game to improve his memory. Andy Warhol wore cologne. You can try everything from sleep to drawing to chewing gum.

TRAIN YOUR BRAIN



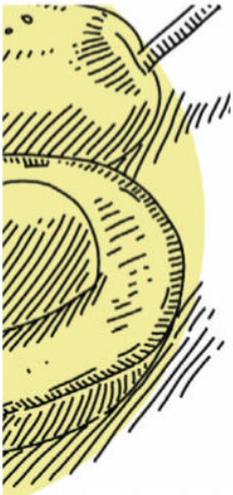
Understanding how recall works is the job of neuroscience, but there are plenty of tricks, foods and exercises that may help to protect your memory from decline

ONE OF OUR GREATEST FEARS IS losing our memory to a disease such as Alzheimer's, but there are ways to not only sharpen the recall we have but also potentially ward off the illness. It starts, perhaps unsurprisingly, with diet. Some research suggests foods rich in vitamin E and leafy greens could have a role in lowering the risk of the disease. To preserve memory, exercise is a no-brainer, but there are surprising strategies as well, including drawing information rather than writing down words, chewing gum and associating quirky images with material to be remembered.





HELLO
 MY NAME IS
Robert



DARK GREEN LEAFY VEGETABLES

Kale, collard greens, spinach and broccoli are good sources of vitamin E and folate, says Martha Clare Morris, director of the section on nutrition and nutritional epidemiology in the Department of Internal Medicine at Rush University in Chicago. Exactly how folate may protect the brain is unclear, but it may be by lowering levels of the amino acid homocysteine, which has been linked to an increased risk for heart disease and may trigger the death of nerve cells in the brain.

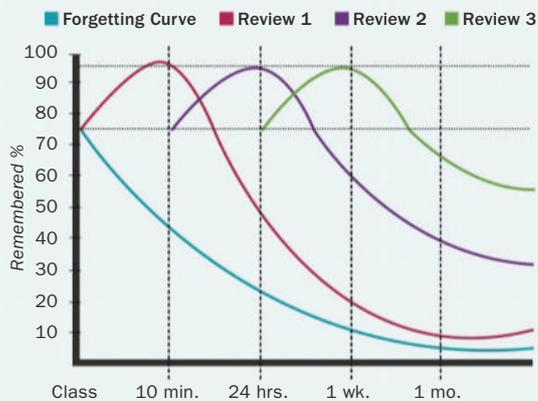


When we are between the ages of 30 and 34, we can identify about 83% of faces, a percentage that slides to 75% at age 70.

—DARTMOUTH COLLEGE AND HARVARD UNIVERSITY STUDY

The Unforgiving Curve of Forgetting

The forgetting curve, which shows how quickly we forget information, is steepest in the first 24 hours after we learn something. Just how much then evaporates into thin air varies from person to person, but unless you review the material, you'll forget most of the new information after the first day. The rest will slip away gradually.





SIX-MINUTE TEST

In one Friends episode, the group tries to name all 50 states in six minutes. Joey reaches 56 but then concedes South Oregon isn't a state, bringing him to 55. Can you beat him?



Drawing on Experience

Memory may be imperfect, but a recent study suggests an unusual strategy

As long ago as 1973, investigators were exploring the memory-boosting advantage of dual-coding—how thinking about an object and drawing a picture of it can make us remember it better. Research showed that the strategy worked, but the studies were flawed, failing to account for important questions, such as if writing a word in a time-consuming way, like calligraphy, would

boost recall.

Enter psychologist Jeffrey D. Wammes. A few years ago, he ran a series of trials built around some easy-to-draw objects, such as a balloon or a fork. After viewing the items flash up on a screen, participants were told to either draw the item or write its name. They then performed an unrelated task (identifying tones) to allow the memories

to either consolidate or vanish. In one trial, subjects were given four seconds to write down as many of the objects as they could, but in the rest they got 40 seconds, along with a variety of instructions.

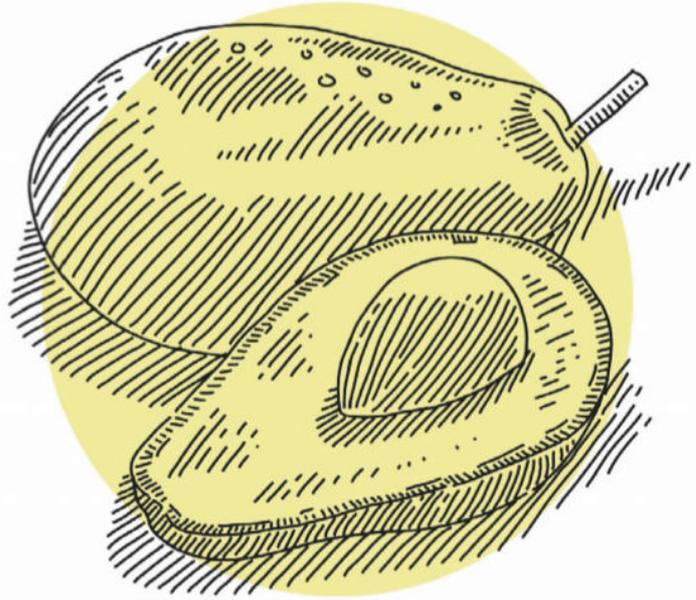
No matter how many variations of the test the researchers ran, drawing beat every other option, every time. Just why isn't clear. One theory had been that drawing requires a deeper level

of processing. But in one trial, the subjects were required to list the characteristics of an object, which went pretty deep too. Another theory had been that drawing simply takes longer, but the four-second trial appeared to debunk that. For now, Wammes only concludes that drawing encourages the integration of various aspects of a memory trace.

LIST YOUR TOP 10 MEMORIES

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Odds are, most will be from your teens or 20s, when we try big things for the first time.



AVOCADOS

This creamy treat is a rich source of the antioxidant vitamin E, which some researchers suggest is associated with a lower risk of developing Alzheimer's.



"If I've been wearing one perfume for three months, I force myself to give it up . . . so whenever I smell it again it will always remind me of those three months."

—ANDY WARHOL

Fetal Recall

Experiments have shown that fetuses as young as 30 weeks can remember what they hear, supporting stories by mothers that their newborns calm down at certain sounds. Scientists even think that prenatal memory is key in an infant developing an attachment to his or her mother. One study looked at babies whose mothers had watched a popular soap opera while pregnant and found that the infants calmed down when the show's theme music played.



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Need to Memorize a Long Number?

Memory champ Chester Santos suggests breaking it into clusters of three and associating a word with each group. For the number above, it could be: 689 (lightbulb); 904 (tissue); 897 (camera); 521 (octopus). Think of a tiny lightbulb. You wrap it in tissue; Madonna appears and takes a picture. She trips, drops the camera in the ocean, and an octopus grabs it. Read the sentences a few times; recite the words in parentheses. When you see “lightbulb,” you’ll think of 698; “tissue” will prompt 904, and so on.

Visualize. Visualize. Visualize.

Not convinced that visualization helps your memory? A Harvard study found that people who visualized playing the piano turned on the same part of the brain as those who actually practiced the piano. The finding suggests that mentally practicing, say, a golf swing could lead to mastery with less physical practice, and more profoundly, that mental training changes the physical structure of the brain.





Memory Power: The Best Time to Exercise

Move it or lose it.

That's the message from a study published in the journal *Current Biology*, in which researchers found that people who exercised four hours after a memory task retained information better than

people who exercised immediately after or who did not work out at all.

Seventy-two subjects participated in a picture-location task for about 40 minutes. They were either assigned 35 minutes of exercise right away, exercise four hours

later or no exercise. Two days later, the people returned to see what they remembered and to have their brains scanned. Those who exercised hours later had better recall and more clear activation in the areas of their brain

associated with memory retrieval. Although the study was too small to prove that four hours is the magic number linking exercise and remembering, you might consider a workout as part of an overall memory strategy.

▼ FISH

Salmon, mackerel, tuna and other fish are rich in heart-healthy omega-3 fatty acids, including docosahexaenoic acid (DHA), which “seems to be very important for the normal functioning of neurons,” Martha Clare Morris says. Plus, if you are eating fish more often, that means eating less red meat and other forms of protein that are high in artery-clogging saturated fats.



▼
PEANUTS AND PEANUT BUTTER

Peanuts and peanut butter are both high in fat, but it tends to be the healthy kind; plus, they are packed with vitamin E and may help keep the brain healthy and functioning properly. Other good choices are almonds and hazelnuts. “There has been some very good research that diets that are high in healthy fats, low in saturated fat and trans fats, and rich in whole grains, green leafy vegetables and nuts are good for the brain,” says María C. Carrillo, senior director of medical and scientific relations at the Chicago-based Alzheimer’s Association.



*“I hope when I get old I don’t sit around thinking about it/
 But I probably will/ Yeah, just sitting back trying to recapture .../
 Boring stories of glory days.”*

—BRUCE SPRINGSTEEN

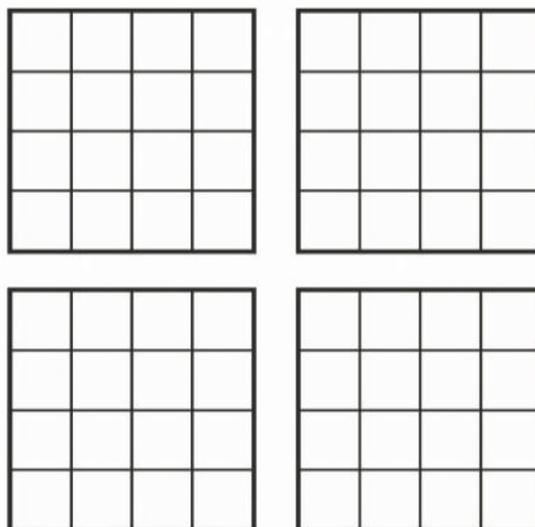


The Binge Factor

TV binge-watchers forget contents more quickly than people who watch an episode a week, according to a study from Australia. Right after watching a show, bingers scored high on a contents quiz, but after 140 days, they scored lower than viewers who watched the same show weekly. Bingers also said they enjoyed the show less than the once-a-weekers.

LOCK IN THE GRID

Test your visual short-term memory. Make a copy of the images below and set it aside. Then color in one or two of the squares in each grid. Close the magazine and try to replicate the pattern on your copy. See if you can improve your score.





▼ WHOLE GRAINS

Fiber-rich whole grains are an integral part of the Mediterranean diet, which is also loaded with fruits, vegetables, nuts and seeds, olive oil and wine. Research out of Columbia University Medical Center in New York City shows that this diet may be linked to lower risk of the mild cognitive impairment that can progress to Alzheimer's disease. "We don't eat foods or nutrients in isolation; we eat in combination with other foods, so there is value in dietary patterns," says Nikolaos Scarmeas, an associate professor of neurology at Columbia University, who conducted the studies. This type of diet may reduce inflammation, oxidative stress and other vascular risk factors such as high blood pressure—all of which may have a role in increasing risk for brain and heart diseases.

Ace the Cocktail-Party Circuit

When you meet someone, pay attention to their name and repeat it in conversation. *Hello, Robert, nice to meet you, Robert. Where are you from, Robert?* Come up with a mental association, like a famous person with the same name. Say, Robert Downey Jr. Or picture a hapless bank robber covered in burrs. In your mind, ask what the person's name is again. And then one more time.





Mark Twain's Unlikely Board Game

Remembering British monarchs

You might know Mark Twain as the author of *Huckleberry Finn*, but the memory-challenged writer was also the inventor of “Mark Twain’s Memory Builder: A Game for Acquiring and Retaining All Sorts of Facts and Dates.” The project started with Twain’s daughters, Susy

and Clara Clemens, who were unsuccessfully trying to learn the reigns of the English monarchs. Twain thought if he could help the girls see the dates, they would succeed. He went out to the driveway and measured out 817 feet—each foot represented a year—

and planted stakes where the monarchs’ rule started. Twain may not have known it, but his system was a variation on the ancient loci method used by rhetoric students in Greece and Rome, which organizes images in locations. Before long, Susy and Clara had

nailed the assignment.

You can try it, too. Think of a place you know well, such as your house, and visualize locations in an order, like front door, hallway, den. Assign each monarch to a location. To recall the reign of William I, think of a whale floating at your front door. The whale is the biggest fish, just as William was the most important king. For Henry II, think of a hen in the hallway; Richard the Lionhearted, as a lion roaring in the living room; and so on.



The average native English-speaking American knows about 42,000 words by age 20 and around 48,000 words by age 60.

—GHENT UNIVERSITY STUDY

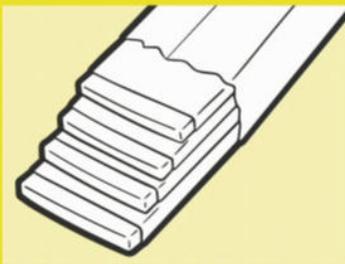


▼ **BERRIES**

The latest research presented at the National Meeting of the American Chemical Society in Boston found that blueberries, strawberries and acai berries may help put the brakes on age-related cognitive decline by preserving the brain’s natural “housekeeper” mechanism, which wanes with age. This mechanism helps get rid of toxic proteins associated with age-related memory loss.

6 Funny Things You Can Do to Remember

Drawings of aliens. Chewing gum. Oddball type fonts. If you need to jog your memory, try some of these unconventional tricks



CHEW GUM: Your dentist might not like it, but if you need to remember a piece of information for about half an hour, pop in a piece of gum (sugarless is OK). Research has shown that people are better able to remember visual and audio memory tasks if they simultaneously chew gum. It keeps you more focused and improves concentration.

DRAW AN ALIEN: One old-fashioned way to remember a simple task—returning your library book, feeding your turtle—was to tie a red string around your finger. But if you use something more distinctive, you might have a better success rate. To prove the point, a research team from Harvard University and the University of Pennsylvania stationed assistants outside a coffee shop with two sets of materials to distribute. One set invited customers to show a plain flyer and attached coupon to get a dollar off their next purchase. The other made the same offer, with the difference that the flyer featured a stuffed alien doll. The alien delivered, according to the study, published in *Psychological*

Science. Almost a quarter of customers who received the alien flyer remembered to use their coupons, while just 17% with the plain flyer did.

SMELL THE ROSEMARY: Roasting potatoes, meat or other edibles with rosemary is a sure way to kick the flavor up a notch, but it turns out that the smell of rosemary can also help you remember complex events and tasks. In some tests, people who sniffed essential oil from the herb had a 75% better recall than participants who didn't. Rosemary has also been shown to help alertness and arithmetic.



STAY PUT: Have you ever walked through a doorway and couldn't remember why, or what you were looking for? You're not alone. It turns out that the simple act of passing from one room to another can make you go blank. The phenomenon is what University of Notre Dame psychology professor Gabriel Radvansky calls "event boundary." In a study published in the *Quarterly Journal of Experimental Psychology*,

Radvansky had college students perform memory tasks while crossing a room and exiting a doorway. What he found in three different settings was that students forgot more after walking through a doorway versus moving the same distance across a room. His conclusion? The doorway or "event boundary" hurts your ability to retrieve thoughts made in a different room.



USE A FUNNY FONT: The right typeface, or font, can make all the difference in a reading experience. You want the words to be legible and easy to read, whether it's in a book or on the internet. But if you want to remember what you're reading, you might want to switch it up, choosing the weirdest, most challenging font possible (but not bold or oversize fonts that make you think the words are easier). When something is unfamiliar and difficult to read, you are forced to concentrate on it more, allowing you to remember it more easily.

EAT SOUR PATCH DOLLS AND OTHER ODD FLAVORS: While learning a complex point for an exam, eat something with a distinctive taste, such as a sour candy. When you taste the same flavor again during the test, it should help you remember the concept and its finer details. Make sure the professor will let you take the candy into the test with you.