

Brain fitness

Forget names, numbers, and words? Can't remember what you were looking for? Don't worry: Despite occasional glitches, your brain may actually be at its peak. Here's how to make it even sharper.

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YOU EAT WELL, rarely veg out in front of the television, and never shy away from a mental challenge. (Six-letter word for a group of performers? *Chorus!*). So why do you find yourself staring into the fridge, unable to remember why you opened the door in the first place? Why do you sometimes mangle sentences and blank at a pivotal moment in a big work presentation?

Brain blips can be unnerving, but here's the good news: They're rarely the sign of a declining mind. Although your child-prodigy days are long gone, your brain is most likely to be at its best during midlife. That's when your life experiences combine with decades' worth of neural connections, resulting in peak intelligence and ability. "We may not learn or recall information quite as quickly as we did in our teens and 20s," says Sandra Bond Chapman, Ph.D.,

the founder and chief director of the Center for BrainHealth at the University of Texas at Dallas. "But during our 30s, 40s, and 50s, we get better at what matters most: making decisions, synthesizing information, and coming up with big ideas."

While your neurons can fire more slowly with age, more often than not stress and anxiety cause you to pathologize perfectly normal experiences, like forgetting an acquaintance's name (again). "You probably pay attention to the few things that go wrong but don't give your brain credit for the thousands of things it did right," says Chapman.

Instead of focusing on the occasional lapse, concentrate on your daily habits, which play a major role in whether you operate optimally today—and whether you develop more serious problems, like dementia, later in life. "Brains are very malleable and can easily be changed, either for better or for worse," says Majid Fotuhi, M.D., Ph.D., a neurologist and the chairman and CEO of the NeuroGrow Brain Fitness Center, a neurology practice in McLean, Virginia. "Factors like stress, anxiety, and poor sleep shrink areas like the hippocampus, which organizes and stores memories. But those same brain regions bounce back with good diet, exercise, and cognitive stimulation." When it comes to brain function, everyday behavior matters as much as—if not more than—your DNA. Here's how to gain a mental edge.

Make mental space

Like a computer hard drive, your brain has plenty of room, but there are only so many tasks it can perform at once before it crashes. Media is the big culprit here: Research shows you're exposed to an average of nearly 10 hours of media every single day. (That's twice as much as people took in during the 1940s.) So even if you're not filling your head with news and random trivia, the mini TV in your office elevator can do the job for you. That takes a toll on your ability to focus and form new memories. "Distractions and interruptions keep longer neural pathways in the brain from developing, so you don't process and store information the way you could," explains Chapman.

To lighten your mental load, limit the time you spend on the Internet to about an hour a day; research shows that that's enough to encourage neural engagement without overtaxing the brain. And instead of reading or responding to a new



e-mail within six seconds of its arrival—as a whopping 70 percent of us do, according to one small study—turn your in-box off every hour or two, even if it's for just 10 minutes.

And, yes, you really should make mono-tasking your default state. "Homing in on one task at a time increases essential neural connections instead of destroying them," says Fiona Gupta, M.D., a neurologist at Hackensack University Medical Center, in New Jersey. "That's why one of the first things I recommend to patients who come in because they're worried about mental slips is to quit multitasking."

Trying to process too many ideas at the same time is just as problematic as tackling multiple tasks. Daydreaming about an upcoming vacation while you're grocery shopping is fine, but if you're brainstorm-

ing a future presentation in the middle of a meeting about something else, you are not only giving short shrift to both projects but also weakening your ability to turn those thoughts into long-term memories, according to a 2014 study from the University of Texas, Austin.

Your better brain plan

Once you've created mental space, these research-backed recommendations will help you improve your attention, memory, and intelligence in less than a month, says Fotuhi.

SWAP OLD STANDARDS FOR NEW SKILLS. Listening to Beethoven and doing sudoku will bolster your brain, right? Not exactly. While they're certainly more stimulating than, say, zoning out to a *Scandal* marathon, new research suggests that a great

way to boost brainpower is through learning—either mental, such as learning Spanish, or physical, like signing up for a CrossFit class.

According to a 2013 study from the University of Texas at Dallas, older adults who learned cognitively demanding activities, like quilting and digital photography, improved their memories. Those who listened to classical music, watched classic movies, or engaged in social activities, on the other hand, didn't have the same gains. That's because the brain loves novelty. "We build 'brain muscle'—that is, stronger connections in the frontal-lobe regions that control short-term working memory—by engaging in interesting, new tasks," says Gary Small, M.D., director of the University of California, Los Angeles, Longevity Center.

GO DEEP. Take your learning to the next level by using your brain for what it does best: fusing existing and new information. "It will repay you by strengthening its complex neural networks," says Chapman. For example, crack open a Hilary Mantel or Oliver Sacks book—and once you've finished it, spend some time writing a Goodreads review. You might be surprised at what you come up with while mulling it over again. Or reach for a pen and your journal: Studies show that writing by hand, rather than typing, improves information processing as well as the ability to remember what you're writing about.

TWEAK YOUR DIET. A healthy brain diet looks a lot like a healthy body diet. Middle-aged and older adults who adhered to an eating plan called the Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) diet slowed cognitive decline—so much so that they scored the equivalent of 7½ years younger on cognitive tests after a year, according to a 2015 study from

Rush University and the Harvard School of Public Health.

Like the Mediterranean diet, the MIND diet emphasizes nuts, beans, whole grains, poultry, and olive oil. But unlike the former plan, it calls for consuming leafy greens daily and at least two weekly servings of berries, as both are rich in brain-benefiting antioxidants. (No surprise, people on the MIND diet limited red meat, butter, margarine, cheese, pastries and other sweets, and fried and fast food, too.) An added benefit? The MIND diet includes a daily glass of wine, because the researchers believe that small amounts of alcohol may have protective properties. (But save a second glass for special occasions only: Excess alcohol kills brain cells—literally—and increases cellular inflammation, upping your odds of dementia.)

WORK OUT—ESPECIALLY WHEN YOU NEED TO BE EXTRA SHARP. It's not news that exercise is good for your head. But researchers continue to learn more about what, when, and how much activity you need to maintain a mental advantage. Good news for couch potatoes: Previously sedentary adults who did an average of just 15 minutes of aerobic activity (like walking) five days a week experienced a significant improvement in their cognitive test scores, according to a 2015 study from the University of Kansas Medical Center, in Kansas City. If you're already active, "keep at



it—and ideally push yourself a little farther than you're used to, at least once in a while," says Jeffrey Burns, M.D., a codirector of the University of Kansas's Alzheimer's Disease Center and the lead author of the study.

Working out on days when you have, say, a big presentation or test is key. Adults who did aerobic exercise regularly for four weeks—and exercised the morning that they took memory tests—scored higher than did regular exercisers who skipped their workout on test day, according to a 2012 study from Dartmouth College. Exercise's stress-thwarting effects may be partially responsible: "Stress is toxic to the brain," says Chapman. "It releases the hormone cortisol onto the hippocampus, where memories are stored." That can

When should you worry?

"There's a saying among neurologists and psychiatrists: 'Forgetting your keys is normal; forgetting how to use them isn't,'" says Gary Small, M.D. If you find yourself doing things that are out of character or you have mental slips (like blanking on where you're going while you're driving) most days, rather than once in a while, see your doctor. The same advice applies if you feel mentally fuzzy and experience regular problems with balance or coordination.

make you momentarily forgetful and may weaken neural connections over time, increasing the odds of dementia.

PRIORITIZE SLEEP. Short-change your sleep for just one night and it can take several nights of solid slumber to return to your sparkling, coherent self. "The brain processes information and consolidates ideas while you sleep," says Chapman. "And most of that appears to happen between the sixth and eighth hours." Hence the importance of a full night's sleep.

If you have trouble falling asleep, consult a doctor before turning to sleep aids. Prescription sleeping pills, although safe for occasional use, contain active ingredients that can

slow down brain waves, making you feel groggy the next day. Over-the-counter (OTC) sleep medications are dicey, too. Most contain diphenhydramine, an ingredient that's been linked to short-term cognitive impairment (i.e., that hungover feeling). Worse yet, people who used the OTC medications regularly for several years were at an increased risk of dementia and Alzheimer's disease later in life, according to a 2015 study published in *JAMA Internal Medicine*. See a sleep specialist if you spend as much time counting sheep as you do dreaming.

Do brain-boosting supplements work?

Type "nootropics" into a search engine and you'll get a plethora of hits for sites selling over-the-counter supplements that are claimed to enhance memory and supercharge focus. Many of the compounds in these supplements may sound familiar—for example, caffeine, L-theanine (found in green tea), and creatine (the bodybuilding staple). But that doesn't make them safe, warns

neurologist Fiona Gupta: "There is no good science supporting nootropics, and they're not approved or regulated by the Food and Drug Administration."

The one supplement you may want to consider? Vitamin D. Older adults with low blood levels of vitamin D experienced accelerated declines in memory and thought processes, according to a study just published in *JAMA Neurology*. Ask your doctor to run a blood test to check your D levels, and to recommend a supplement dose that's safe for you.

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