

How to Optimize Your Brain Health

Once you reach a “certain age,” you might expect your memory to start slipping.

You can’t put your finger on the right words. Or your ability to troubleshoot complex problems slows down. Even your reflexes feel sluggish. These aren’t necessarily the first signs of Alzheimer’s or dementia. As you get older, so does your brain. The age and health of your brain affect the function of every muscle and organ in the body.

You may already know that exercising and eating well can strengthen your muscles and bones. Similarly, healthy lifestyle changes could make your brain more resilient to the signs of aging. Supporting your brain health can sharpen mental acuity, improve memory and verbal recall, and strengthen the mind-body connection.

Your brain is not beyond your control.

An evaluation of your brain health is based on a combination of factors.

“The non-modifiable factors such as your age, sex, genetics, and family history constitute about 60% of your attributable risk for diseases including Alzheimer’s disease and related disorders,” says James E. Galvin, M.D., M.P.H., director of the University of Miami Miller School of Medicine’s Comprehensive Center for Brain Health, who specializes in memory and cognitive disorders.

This means that your habits and choices

contribute to the remaining 40% of the risk.

Protective factors that support brain resilience:

- Education
- Cognitive reserve (robust functional brain networks)
- Physical activity
- Cognitive activity
- Social engagement
- Diet/nutrition
- Mindfulness
- Social support
- Green space

Risk factors that contribute to brain vulnerability:

- Depression
- Hearing loss
- Heart disease
- High cholesterol
- Hypertension
- Diabetes
- Stroke
- Obesity
- Obstructive sleep apnea
- Smoking
- Drinking

- Substance abuse
- Head injury
- Frailty

“Less education in early life; hearing loss and hypertension in midlife; and smoking, depression, physical inactivity, and social isolation in late-life produce the majority of this risk,” says Brian W. Kunkle, M.P.H., Ph.D., a researcher with the Miller School of Medicine, who focuses on discovering genomic risk factors for Alzheimer’s disease and related dementias.

“At the University of Miami, we have developed novel instruments (like the Resilience Index and Vulnerability Index) that allow us to measure these protective traits and risk factors in patients,” says Dr. Galvin. “This enables us to tailor interventions to reduce risk in asymptomatic individuals and reduce disease burden in symptomatic individuals.”

It’s not too late to put your brain first.

Have you heard that the brain is “plastic”? Neuroplasticity means that your neuronal processes and connections are constantly being remodeled, even into old age. “In fact, in the absence of disease, cognitive domains such as crystalized information (knowledge), the application of that knowledge (wisdom), and vocabulary continue to expand into the ninth and tenth decade of life,” Dr. Galvin says.

To optimize your brain health, start sooner than later for the biggest payoff.

- Avoid brain disease.
- Quit smoking.
- Reduce your alcohol intake.

- Maintain a healthy weight.
- Enjoy a nutrient-filled diet (low in added sugars and processed foods and high in fiber-rich vegetables and lean proteins). Prioritize regular physical activity.
- Protect your head from injury when riding a bike, skateboarding, or if playing contact sports.

Manage underlying medical conditions.

Keep heart health numbers in the normal range (blood pressure, cholesterol, and blood sugar). Correct hearing and vision loss, when possible. Take advantage of talk therapy and medical intervention for depression. If you're struggling with sleep apnea or inadequate sleep, speak with a sleep medicine specialist for relief.

Boost your mood and feed your brain.



Participate in activities that lift your spirit and engage your mind (like language learning, reading, playing an instrument, making art, or learning to cook). Spend more time outside. Stay connected with family and friends to avoid social isolation. Reduce stress with meditation, yoga, and relaxing hobbies. Try something new because the brain lights up with novel experiences.

Make good choices more often to optimize your brain health.

Live by the 80/20 rule, which means you eat well, exercise consistently, and avoid harmful habits 80% of the time. This balance supports overall wellness while leaving room for guilt-free “cheat days,” recovery periods, and occasional indulgences.

Forget about the fountain of youth.

There’s no miracle cure to optimize your brain health. Some over-the-counter supplements claim to improve memory with plant superfoods, mushroom extracts, and nootropics. “But, there are no supplements that prevent Alzheimer’s disease and little evidence that they improve memory or other thinking capabilities,” says Dr. Galvin.

“Any product that claims to do so has a disclaimer in small print on the back of the bottle: ‘These statements have not been approved by the Food and Drug Administration. This product is not intended to treat, diagnosis, prevent, or cure disease.’ Since your body doesn’t need and can’t use these supplements, most are excreted.”

Brain games and apps also promise to sharpen memory and other cognitive skills. Dr. Galvin says playing games is associated with an overall lower risk of dementia. “However, playing a game only leads to being better at that game. It’s not clear that this translates into an improvement in memory or other domains.”

“The most important aspect of ‘brain games’ is how they help a person to stay mentally active,” Dr. Kunkle says. “These and other activities — such as learning to

play a musical instrument, a new language, or a type of dance — should be part of an overall strategy to maintain and potentially improve your brain health. Evidence suggests that incorporating these types of activities into our lives, along with physical activity, social interaction, and a healthy diet, can build what is termed ‘cognitive reserve.’ This could potentially help protect you from developing dementia.”

Dana Kantrowitz is a contributing writer for UMiami Health News.

Learn more about the University of Miami's Comprehensive Center for Brain Health.

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