

NIH News in Health

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A Well-Aged Mind Maintaining Your Cognitive Health

Getting older can bring many changes, both physically and mentally. Even when you're healthy, your brain and body start slowing down. Maintaining your cognitive health—the ability to clearly think, learn, and remember—is important for your overall well-being.

Many things influence cognitive health. Your genes, lifestyle, and environment can all impact your thinking skills and ability to perform everyday tasks.

It's common to experience some decline in cognitive function as you get older. That may mean occasionally losing things, forgetting words, or briefly forgetting what day it is. Or you may notice that it takes longer to learn new things. Such symptoms don't necessarily mean that you're developing Alzheimer's disease or another type of dementia.

"I like to think about the brain as a computer disk for memory and thinking," explains Dr. Marie Bernard, an aging expert at NIH. "As you get older it gets fuller and fuller. So, it can get more difficult to retrieve data and add data to it. But you're still able to learn and grow."

Aging is bound to bring changes. But there are many things you can do to protect your cognitive health as you age. That includes knowing what puts your well-being at risk.

Staying Aware • It's not only occasional memory problems that older



adults are more likely to experience. Aging can bring other changes to the way the brain works. These changes can impact your ability to deal with complex social situations. That can put you at higher risk of being scammed.

"Older adults are often targeted by scam artists," says Dr. Patricia Boyle, who studies the aging brain at Rush University. Older adults are also more likely than younger ones to pick up the phone without knowing who's calling, she explains. "Simply by doing that, you're opening yourself up to a conversation with someone who may be an unscrupulous person trying to steal from you."

Common scams targeting older adults include identity theft, risky or fake investments, charity scams, and people posing as relatives in distress to ask for money.

Any adult can fall victim to these sorts of scams. But Boyle and her

team recently found that low awareness of tactics used by scam artists may be an early indicator of worsening brain function.

In their study, people with low scam awareness were about twice as likely to later develop Alzheimer's disease as those with high scam awareness.

People should verify any investment proposal or request for money before acting, Boyle explains. Trusted family members or friends may be able to help with this. "Take the time to look into financial propositions and make sure they are legitimate," she says.

Reversing Changes • Many things can cause memory or other thinking problems. Depression, anxiety, an infection, or even certain medications can cause cognitive changes. Sometimes these types of issues can be resolved with treatment.

If you experience a sudden change in thinking, memory, or mood, it may be caused by a new medication. Some drugs may not cause cognitive changes when taken on their own but can do so when combined with

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other medications. Even common supplements or over-the-counter remedies can cause these types of interactions.

Sometimes, if you have more than one doctor, one might not know what the others prescribed. “Older adults really benefit from having a list of all their over-the-counter, herbal, and prescribed medications with them whenever they see a health care professional,” says Bernard.

Certain medications can also have dangerous, or even deadly, effects when combined with alcohol. And alcohol alone poses risks for the older brain. It can take less alcohol to alter judgment, coordination, balance, or sleep patterns in an older adult.

Dangerous drinking habits have been rising among older adults in the U.S. A recent NIH-funded study found that 1 in 10 Americans aged 65 or older binge drinks regularly. That means drinking four or more drinks on the same occasion for women and five or more for men.

Older adults may change their drinking habits to cope with the death of a partner or other loved one, or because they’re lonely. But drinking can also be part of social

activities for older adults, explains Dr. Edith Sullivan, an alcohol researcher at Stanford University.

“Older adults might feel that ‘well, I’m old now, it’s OK for me to drink,” Sullivan says. But older brains and bodies are especially vulnerable to the effects of alcohol, she adds.

A recent study by Sullivan and her team used brain imaging to see how alcohol affects the brain. They found that older adults who misused alcohol had greater loss of brain tissue compared with their peers who didn’t drink. This was true even if they started misusing alcohol later in life.

The good news, she explains, is that some problems with thinking or memory caused by medications or alcohol misuse can be reversed.

“That’s different from classical dementia, which is a one-way street of decline,” says Sullivan.

Building Brain Power • There are many things you can do to protect your brain as you age. “Cognitive activity, physical activity, and social engagement are associated with better cognitive functioning in older adulthood,” Boyle explains.

Managing your health conditions is also important. Controlling your blood pressure, for example, reduces the risk of having a small stroke (bleeding from blood vessels in the brain). Small strokes can cause temporary or permanent cognitive problems.

Feeling a sense of purpose in one’s life also seems to help protect older adults from cognitive decline. A study from Boyle and her colleagues found that people who felt more purpose in life had fewer symptoms from brain changes linked to Alzheimer’s disease.

“The aging brain can accumulate Alzheimer’s changes, but if you’re stimulating your brain and



Wise Choices Protecting Your Brain Health

Good overall health can help you maintain your brain health. These tips can help you stay active and healthier physically and mentally:

- Choose healthy foods whenever possible
- Drink enough fluid
- Limit your use of alcohol
- Don’t smoke or use tobacco products
- Get enough sleep
- Make physical activity part of your routine
- Keep your mind active with learning, teaching, and volunteering
- Stay connected with loved ones, friends, and your community
- Manage chronic health problems like diabetes, high blood pressure, and high cholesterol

strengthening it like a muscle, you may be better able to tolerate those changes,” she says.

Bernard stresses that getting older can also bring cognitive advantages you might not know about.

“Older adults have greater verbal ability than younger adults. They’re better problem solvers. And accumulated experiences are very helpful,” she says.

“Think about the positive things that come with aging,” Bernard says. “It’s a great time to become engaged in meaningful activities, maintain connections to friends and family, develop new connections, and be physically active. And in turn, all of these things can enhance one’s quality of life and one’s aging.” ■

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Web Links

For more about cognitive health and aging, see “Links” in the online article:
newsinhealth.nih.gov/2019/10/well-aged-mind

Family Health Matters

How Twin Studies Can Help Everyone

Have you ever met a set of identical twins? Did you have trouble telling them apart? Twins are similar in ways you can't see, too. That makes twins a powerful tool for studying health and disease.

Many health conditions run in families. If your parents or siblings have a disease, your chance of having it increases. That's because you share many genes. Genes are stretches of DNA that you inherit from your parents. They define features like your risk for getting a disease. But that doesn't mean you'll get the disease. Many other factors can influence your risk of disease, like how much physical activity you get, your diet, and whether you drink or smoke.



Wise Choices

Use Your Family Health History

- **Talk with your family.** Write down the names of your close relatives on both sides of your family and the conditions they have or had, and at what age they were first diagnosed. Include causes and ages of any deaths.
- **Ask questions.** Ask your relatives about any chronic diseases and conditions, like heart disease, diabetes, high blood pressure, high cholesterol, cancer, or stroke.
- **Record and update the information whenever you learn something new.** My Family Health Portrait, a free web-based tool, can help you keep organized. Find it at phgkb.cdc.gov/FHH/html/index.html.
- **Share family health history information with your doctor.** Your health care providers can use it to get a more complete picture of your health and risk for disease. Together, you can work on ways to reduce that risk.

Identical twins make for a natural experiment. They share many things while growing up: the same DNA, their mother's womb, the same home environment, and the same parents. But as they get older and start living separate lives, they're exposed to more unique environments. That lets scientists look at differences between twins' health and their lifestyles as they age.

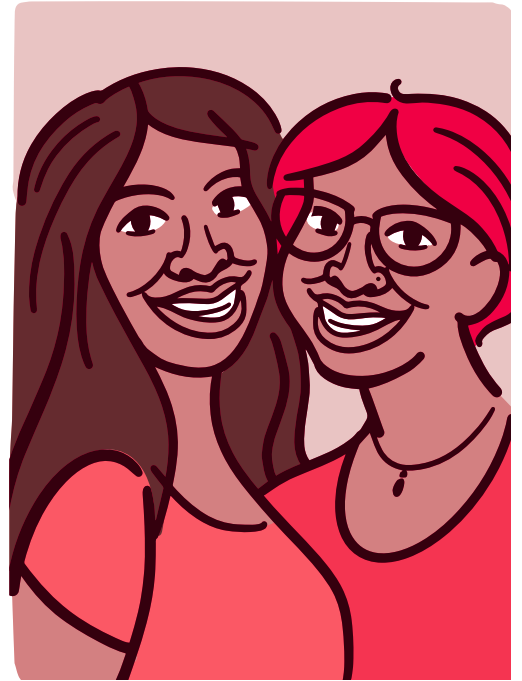
"There's a potential with identical twins who are different in terms of disease to see whether we can find the causes," explains Dr. Thomas Mack, a twin and chronic disease expert at the University of Southern California. That's because both twins don't always get a disease, even though they share the same DNA.

Identical twins arise when a fertilized egg splits into two identical fertilized eggs. Since the two eggs share the same genes, identical twins are always the same sex and have the same physical features.

The other type of twin is called fraternal twins. Fraternal twins come from two separate eggs that happened to be fertilized at the same time by two different sperm. These twins get different mixtures of their parents' genes, so they look just like normal siblings except that they're the same age.

Mack is studying twins to understand what puts women at higher risk for breast cancer. It's not clear why one person gets cancer but another doesn't. His team is looking at differences between identical twins, fraternal twins, and normal siblings.

"There are several common risk factors for breast cancer which include the age at which you have your



first baby, age of first menstruation, age of menopause, and whether or not you've been an alcohol drinker," Mack explains.

His work found that fraternal twins and normal siblings had similar risk patterns. But the known risk factors couldn't explain why one identical twin got breast cancer and the other did not. Now, his team is looking at what else may be involved.

"We want to know what environmental things make a difference between one twin who gets affected by the disease and the other twin who does not," Mack explains. His team hopes that studying twins will help uncover new risk factors for breast cancer.

Whether or not you're a twin, knowing your family's health history is important for your health. It can help your health care team provide better care for you. Talk to your provider about how to lower your risk for diseases that run in your family. ■



Web Links

For more about twins and research, see "Links" in the online article: newsinhealth.nih.gov/2019/10/family-health-matters



Health Capsules

For links to more information, please visit our website and see these stories online.

Millions Taking Aspirin Without Clear Benefit

Many people take aspirin every day to prevent a heart attack or stroke. But daily aspirin isn't advised for everyone. A survey found that about 29 million adults without heart disease take low-dose aspirin for prevention. But many of them shouldn't under new guidelines.

Aspirin works by thinning the blood and preventing clots. But taking a daily aspirin can also increase the risk of bleeding.

New studies found that aspirin has little benefit for some people. As a

result, experts no longer recommend daily low-dose aspirin for adults age 70 and older—or for people with a higher risk of bleeding, like those with stomach ulcers.

So how many people are affected by the new guidelines? To answer this, scientists surveyed 14,000 adults age 40 and older. About 23% of people without heart disease were taking a daily aspirin for prevention. Almost a quarter of these did so without a health care provider's recommendation.

Nearly half of people age 70 and older who did not have heart disease reported using aspirin daily. So did a quarter of people with a history of stomach ulcers.

“Our findings suggest that a substantial portion of adults may be taking aspirin without their physician's advice and potentially without their knowledge,” says Dr. Christina Wee at Harvard University, who led the study.

Talk with your doctor if you're taking aspirin daily or plan to start. ■

Eye Safety Tips for Kids

Do your kids know how to keep their eyes healthy? Do they know what to do if their eye is injured or they get something in it? It's important for kids to learn how to take care of their eyes and know what to do if they're injured, so they can act fast and get help.

One of the most common eye injuries for kids is getting hit in the eye with an object, like a ball, rock, or an elbow. If that happens, they can

place a cold compress on their eye for 15 minutes to help the pain and swelling go down.

Getting something in the eye, like dust or sand, is also common. It can hurt and make kids want to rub their eyes. Instead, wash the eye out with water. Do the same if a chemical splashes into their eye—for at least 10 minutes.

Kids should always tell an adult if they've had an eye injury. They

may need to go to the doctor.

Good eye health involves eating a well-balanced diet, getting enough physical activity, washing your hands before putting them near your eyes, and wearing protective gear during sports activities or science class.

Learn more eye health tips for kids at nei.nih.gov/learn-about-eye-health/nei-for-kids/first-aid-tips. ■



Featured Website

Cancer Information Service

www.cancer.gov/contact

If you have cancer questions, NIH specialists can help. Get free information on clinical trials, finding treatment, the latest cancer research, and more.

You can call 1-800-4-CANCER, send an email, or chat online. Services are available in English or Spanish.

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The Cancer Information Service (CIS)

Information specialists at NCI's Cancer Information Service (CIS), NCI's contact center, are available to help answer your cancer-related questions whether you are a patient, family member or friend, health care provider, or researcher. Our service is available in English and Spanish.

We provide accurate, up-to-date, and reliable information that is easy to understand and free of charge. Our trained information specialists provide personalized responses to a range of cancer questions, including:

- national clinical trials searches
- cancer research
- how to find cancer treatment centers
- symptoms
- diagnosis and treatment
- living with cancer

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