Memory and aging

We’ve all misplaced keys, blanked on someone’s name, or forgotten a phone number. When you’re young, you don’t tend to pay much attention to these lapses, but as you grow older, you may worry about what they mean. Perhaps you start to talk about a movie you saw recently when you realize you can’t remember the title. You’re giving directions to your house when you suddenly blank on a familiar street name. Or you find yourself standing in
the middle of the kitchen wondering what you went in there for. Memory lapses can be frustrating, but most of the time they aren’t cause for concern. Age-related memory changes are not the same thing as dementia.

As you grow older, you experience physiological changes that can cause glitches in brain functions you’ve always taken for granted. It takes longer to learn and recall information. You’re not as quick as you used to be. In fact, you may mistake this slowing of your mental processes for true memory loss. But in most cases, if you give yourself time, the information will come to mind. So, while it’s true that certain brain changes are inevitable when it comes to aging, major memory problems are not one of them. That’s why it’s important to know the difference between normal age-related forgetfulness and the symptoms that may indicate a developing cognitive problem.

**Age-related memory loss**

The brain is capable of producing new brain cells at any age, so significant memory loss is not an inevitable result of aging. But just as it is with muscle strength, you have to use it or lose it. Your lifestyle, habits, and daily activities have a huge impact on the health of your brain. Whatever your age, there are many ways you can improve your cognitive skills, prevent memory loss, and protect your grey matter.

Furthermore, many mental abilities are largely unaffected by normal aging, such as:

- Your ability to do the things you’ve always done and continue to do often
- The wisdom and knowledge you’ve acquired from life experience
- Your innate common sense and your ability to form reasonable arguments and judgments

**3 causes of age-related memory loss**

1. The hippocampus, a region of the brain involved in the formation and retrieval of memories, often deteriorates with age.
2. Hormones and proteins that protect and repair brain cells and stimulate neural growth also decline with age.
3. Older people often experience decreased blood flow to the brain, which can impair memory and lead to changes in cognitive skills.
Normal forgetfulness vs. dementia

For most people, occasional lapses in memory are a normal part of the aging process, not a warning sign of serious mental deterioration or the onset of dementia. The following types of memory lapses are normal among older adults and generally are not considered warning signs of dementia:

- Occasionally forgetting where you left things you use regularly, such as glasses or keys.
- Forgetting names of acquaintances or blocking one memory with a similar one, such as calling a grandson by your son’s name.
- Occasionally forgetting an appointment or walking into a room and forgetting why you entered.
- Becoming easily distracted or having trouble remembering what you’ve just read, or the details of a conversation.
- Not quite being able to retrieve information you have “on the tip of your tongue.”

Does your memory loss affect your ability to function?

The primary difference between age-related memory loss and dementia is that the former isn’t disabling. The memory lapses have little impact on your daily performance and ability to do what you want to do. Dementia, on the other hand, is marked by a persistent, disabling decline in two or more intellectual abilities such as memory, language, judgment, and abstract thinking.

When memory loss becomes so pervasive and severe that it disrupts your work, hobbies, social activities, and family relationships, you may be experiencing the warning signs of Alzheimer’s disease, or another disorder that causes dementia, or a condition that mimics dementia.

<table>
<thead>
<tr>
<th>Normal age-related memory changes</th>
<th>Symptoms that may indicate dementia</th>
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<tbody>
<tr>
<td>Able to function independently and pursue normal activities, despite occasional memory lapses</td>
<td>Difficulty performing simple tasks (paying bills, dressing appropriately, washing up); forgetting how to do things you’ve done many times</td>
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<tr>
<td>Able to recall and describe incidents of forgetfulness</td>
<td>Unable to recall or describe specific instances where memory loss caused problems</td>
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</table>
Normal age-related memory changes
May pause to remember directions, but doesn’t get lost in familiar places
Occasional difficulty finding the right word, but no trouble holding a conversation
Judgment and decision-making ability the same as always

Symptoms that may indicate dementia
Gets lost or disoriented even in familiar places; unable to follow directions
Words are frequently forgotten, misused, or garbled; Repeats phrases and stories in same conversation
Trouble making choices; May show poor judgment or behave in socially inappropriate ways

**Symptoms of mild cognitive impairment (MCI)**

Mild cognitive impairment (MCI) is an intermediate stage between normal age-related cognitive changes and the more serious symptoms that indicate dementia. MCI can involve problems with memory, language, thinking, and judgment that are greater than normal age-related changes, but the line between MCI and normal memory problems is not always a clear one. The difference is often one of degrees. For example, it’s normal as you age to have some problems remembering the names of people. However, it’s not normal to forget the names of your close family and friends and then still be unable to recall them after a period of time.

If you have mild cognitive impairment, you and your family or close friends will likely be aware of the decline in your memory or mental function. But, unlike people with full-blown dementia, you are still able to function in your daily life without relying on others.

While many people with MCI eventually develop Alzheimer’s disease or another type of dementia, that doesn’t mean it’s inevitable. Some people with MCI plateau at a relatively mild stage of decline while others even return to normal. The course is difficult to predict, but in general, the greater the degree of memory impairment, the greater your risk of developing dementia some time in the future.

**Symptoms of MCI include:**

- Frequently losing or misplacing things
- Frequently forgetting conversations, appointments, or events
- Difficulty remembering the names of new acquaintances
- Difficulty following the flow of a conversation
When to see a doctor for memory loss

It’s time to consult a doctor when memory lapses become frequent enough or sufficiently noticeable to concern you or a family member. If you get to that point, make an appointment as soon as possible to talk with your primary physician and have a thorough physical examination. Even if you’re not displaying all the necessary symptoms to indicate dementia, now may be a good time to take steps to prevent a small problem becoming a larger one.

Your doctor can assess your personal risk factors, evaluate your symptoms, eliminate reversible causes of memory loss, and help you obtain appropriate care. Early diagnosis can treat reversible causes of memory loss, lessen decline in vascular dementia, or improve the quality of life in Alzheimer’s or other types of dementia.

What to expect at your doctor’s visit

The doctor will ask you a lot of questions about your memory, including:

- how long you or others have noticed a problem with your memory
- what kinds of things have been difficult to remember
- whether the difficulty came on gradually or suddenly
- whether you’re having trouble doing ordinary things

The doctor also will want to know what medications you’re taking, how you’ve been eating and sleeping, whether you’ve been depressed or stressed lately, and other questions about what’s been happening in your life. Chances are the doctor will also ask you or your partner to keep track of your symptoms and check back in a few months. If your memory problem needs more evaluation, your doctor may send you to a neuropsychologist.

Reversible causes of memory loss

It’s important to remember that memory loss doesn’t automatically mean that you have dementia. There are many other reasons why you may be experiencing cognitive problems, including stress, depression, and even vitamin deficiencies. That’s why it’s so important to go to a doctor to get an official diagnosis if you’re experiencing problems. Sometimes, even what looks like significant memory loss can be caused by treatable conditions and reversible external factors, such as:

Depression. Depression can mimic the signs of memory loss, making it hard for you to
concentrate, stay organized, remember things, and get stuff done. Depression is a common problem in older adults—especially if you’re less social and active than you used to be or you’ve recently experienced a number of important losses or major life changes (retirement, a serious medical diagnosis, the loss of a loved one, moving out of your home).

**Vitamin B12 deficiency.** Vitamin B12 protects neurons and is vital to healthy brain functioning. In fact, a lack of B12 can cause permanent damage to the brain. Older people have a slower nutritional absorption rate, which can make it difficult for you to get the B12 your mind and body need. If you smoke or drink, you may be at particular risk. If you address a vitamin B12 deficiency early, you can reverse the associated memory problems. Treatment is available in the form of a monthly injection.

**Thyroid problems.** The thyroid gland controls metabolism: if your metabolism is too fast, you may feel confused, and if it’s too slow, you can feel sluggish and depressed. Thyroid problems can cause memory problems such as forgetfulness and difficulty concentrating. Medication can reverse the symptoms.

**Alcohol abuse.** Excessive alcohol intake is toxic to brain cells, and alcohol abuse leads to memory loss. Over time, alcohol abuse may also increase the risk of dementia. Because of the damaging effects of excessive drinking, experts advise limiting your daily intake to just 1-2 drinks.

**Dehydration.** Older adults are particularly susceptible to dehydration. Severe dehydration can cause confusion, drowsiness, memory loss, and other symptoms that look like dementia. It’s important to stay hydrated (aim for 6-8 drinks per day). Be particularly vigilant if you take diuretics or laxatives or suffer from diabetes, high blood sugar, or diarrhea.

**Side effects of medication.** Many prescribed and over-the-counter drugs or combinations of drugs can cause cognitive problems and memory loss as a side effect. This is especially common in older adults because they break down and absorb medication more slowly. Common medications that affect memory and brain function include sleeping pills, antihistamines, blood pressure and arthritis medication, muscle relaxants, anticholinergic drugs for urinary incontinence and gastrointestinal discomfort, antidepressants, anti-anxiety meds, and painkillers.

**Are you taking three or more drugs?**

As well as certain individual medications, taking too many medications can also create
cognitive problems. A recent study found that the more medications you take, the higher your risk for brain atrophy. Researchers found that the loss of gray matter was most acute in people who took three or more different medications. If you are concerned about the medications you’re taking, talk to your doctor. But do NOT stop taking your medications without your doctor’s consent.

**Compensating for memory loss**

The same practices that contribute to healthy aging and physical vitality also contribute to a healthy memory. So, by taking steps early to prevent cognitive decline, you’ll also be improving all other aspects of your life as well.

**Stay social.** People who aren’t socially engaged with family and friends are at higher risk for memory problems than people who have strong social ties. Quality face-to-face social interaction can greatly reduce stress and is powerful medicine for the brain, so schedule time with friends, join a book club, or visit the local senior center. And be sure to put your phone away and focus fully on the people you’re with if you want the full brain benefit.

**Stop smoking.** Smoking heightens the risk of vascular disorders that can cause stroke and constrict arteries that deliver oxygen to the brain. When you quit smoking, the brain quickly benefits from improved circulation.

**Manage stress.** Cortisol, the stress hormone, damages the brain over time and can lead to memory problems. But even before that happens, stress or anxiety can cause memory difficulties in the moment. When you’re stressed out or anxious, you’re more likely to suffer memory lapses and have trouble learning or concentrating. But simple stress management techniques can minimize these harmful effects.

**Get enough sleep.** Getting a good night’s sleep as you age is necessary for memory consolidation, the process of forming and storing new memories so you can retrieve them later. Sleep deprivation reduces the growth of new neurons in the hippocampus and causes problems with memory, concentration, and decision-making. It can even lead to depression—another memory killer.

**Watch what you eat.** Eat plenty of fruits and vegetables and drink green tea as these foods contain antioxidants in abundance, which can keep your brain cells from “rusting.” Foods rich in omega-3 fats (such as salmon, tuna, trout, walnuts, and flaxseed) are particularly good for your brain and memory. Eating too many calories, though, can increase your risk of
developing memory loss or cognitive impairment.

**Exercise regularly.** Starting a regular exercise routine, including cardio and strength training, may reduce your risk of developing dementia by up to 50 percent. What’s more, exercise can also slow further deterioration in those who have already started to develop cognitive problems. Exercise protects against Alzheimer’s by stimulating the brain’s ability to maintain old connections as well as make new ones.

**Walking: An easy way to fight memory loss**

New research indicates that walking six to nine miles every week can prevent brain shrinkage and memory loss. According to the American Academy of Neurology, older adults who walked between six and nine miles per week had more gray matter in their brains nine years after the start of the study than people who didn’t walk as much.

**Brain exercises to combat memory loss**

Just as physical exercise can make and keep your body stronger, mental exercise can make your brain work better and lower your risk of mental decline. Try to find brain exercises that you find enjoyable. The more pleasurable an activity is to you, the more powerful its effect will be on your brain. You can make some activities more enjoyable by appealing to your senses—by playing music during the exercise, for example, or lighting a scented candle, or rewarding yourself after you’ve finished.

Here are some ideas for brain exercise, from light workouts to heavy lifting:

- Play games you are not already familiar with that involve strategy, like chess or bridge, and word games like Scrabble. Try crossword and other word puzzles, or number puzzles such as Sudoku.
- Read newspapers, magazines, and books that challenge you.
- Get in the habit of learning new things: games, recipes, driving routes, a musical instrument, a foreign language. Take a course in an unfamiliar subject that interests you. The more interested and engaged your brain, the more likely you’ll be to continue learning and the greater the benefits you’ll experience.
- Improve how well you do existing activities. If you already speak a foreign language, commit to improving your fluency. Or if you’re a keen golfer, aim to lower your handicap.
• Take on a project that involves design and planning, such as a new garden, a quilt, or a koi pond.

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Understanding Mild Cognitive Impairment (Harvard Medical School Special Health Report)

Achieving Optimal Memory (Harvard Medical School Guide)

Understanding Memory Loss (PDF) – Advice for diagnosis and ways to compensate for memory loss. (National Institute on Aging)

Mild Cognitive Impairment – How it can be diagnosed and handled. (UCSF Memory and Aging Center)

10 Early Signs and Symptoms of Alzheimer’s – Warning signs of Alzheimer’s disease. (Alzheimer’s Association)