

[alzheimer's disease & dementia](#)

Alzheimer's Disease: Signs, Symptoms, Causes, and Stages

Alzheimer's is a frightening prospect as you age. But by understanding your risk factors and differentiating the symptoms from normal signs of aging, you can ensure early intervention and the best possible outcome.



What is Alzheimer's disease?

Alzheimer's disease is the most common form of dementia, accounting for 60 to 70 percent of dementia cases worldwide. It's a progressive brain disorder that gradually degenerates

neurons causing memory loss and changes in thinking and behavior. According to the Alzheimer's Association, one in ten Americans over the age of 65, and nearly one-third of those over 85, have Alzheimer's disease. Similar figures are reported in many other countries, with millions of new cases being diagnosed around the world each year.

Since it's a progressive disease, the symptoms of Alzheimer's usually develop slowly and deteriorate over time. Mild forgetfulness—misplacing keys, forgetting names, or repeating questions—eventually declines into widespread brain impairment. As critical cells die, drastic changes to your memory and personality can occur, leading to mood and behavior problems and making it impossible to remember, communicate, or process information, or carry out the functions of daily living. Ultimately, each one of us with Alzheimer's disease will one day require care and assistance.

Suspecting that you or a loved one are exhibiting the signs of Alzheimer's can be a life-changing, profoundly frightening, and stressful experience. But while there is currently no cure for Alzheimer's, that doesn't mean that you're powerless against the disease. Firstly, it's important to remember that not all memory loss indicates Alzheimer's or another form of dementia. It's crucial to distinguish between the normal signs of aging and the symptoms of something more serious.

Secondly, even when your worst fears are realized, the earlier you're diagnosed and seek help, the better your outlook. There are treatments available for some symptoms and there's a great deal of ongoing research looking for new therapies. There are also specific lifestyle changes that can be highly effective in helping you slow the progression of Alzheimer's, prolong your independence, and preserve your quality of life for as long as possible.

[\[Read: Dementia Symptoms, Types, and Causes\]](#)

What is early-onset Alzheimer's?

Symptoms of early-onset or young-onset Alzheimer's disease occur before the age of 65, often in middle age, sometimes even as early as your 30s. It is seen more often in those whose parents or grandparents also developed the disease at a young age. In some cases, the disease is caused by a rare gene mutation that can be passed from parent to child.

Recognizing Alzheimer's symptoms at any age is never easy. In middle-age or younger, it can present even more challenges to your relationships, work, and family life. But it's important to remember that you're not alone. Early-onset Alzheimer's affects about five

percent of Alzheimer's patients and there is help available. As well as ensuring you get an accurate diagnosis and start treatment early, the same steps that can [help prevent the disease](#) may also help you delay the onset of more debilitating symptoms.

Causes and risk factors

Despite its prevalence and the amount of research into the disease, there's still much about Alzheimer's that remains unclear. For a long time, scientists looking for the causes of Alzheimer's focused mainly on the buildup of proteins in the brain—amyloid that accumulates in plaques and tau that forms tangles—which degenerate nerve connections and gradually destroy memory and thinking.

However, new evidence suggests that many other factors may also play a role in the development of the disease, such as inflammation, immunity impairment, exposure to toxins, and changes in the way the brain handles glucose. Since women experience Alzheimer's at significantly higher rates than men, it's possible hormonal changes could also contribute to the disease.

With the exception of early-onset Alzheimer's, the disease is most likely triggered by a combination of advancing age and genetic, environmental, and lifestyle factors.

Risk factors

While the symptoms of Alzheimer's disease don't usually appear until later in life, over the age of 65, the risk factors can develop much earlier. Some—such as age, family history, and genetics—are clearly out of anyone's control. Others, such as lifestyle choices that affect your brain health—diet, exercise, and blood pressure, for example—are factors you can influence throughout your life. In fact, a 2017 study in the UK concluded that as many as 35 percent of Alzheimer's cases could be prevented by addressing a number of lifestyle factors.

[\[Read: Preventing Alzheimer's Disease and Dementia\]](#)

Lifestyle risk factors for Alzheimer's include:

Heart problems. What's good for your heart is also good for your brain. Eating a heart-healthy diet and [avoiding high blood pressure](#), heart disease, stroke, diabetes, and high cholesterol can significantly decrease your risk for Alzheimer's disease.

Obesity. As well as adversely impacting your heart health, being overweight appears to increase the risk of developing a buildup of amyloid plaque in the brain later in life. [Maintaining a healthy weight](#), on the other hand, reduces your risk of developing Alzheimer's.

Smoking. [Smoking](#) increases your risk of vascular disease and the toxins can increase inflammation, both of which are risk factors for Alzheimer's and other types of dementia.

Social isolation and depression. Loneliness and social isolation in older adults is linked to increased rates of [depression](#), anxiety, and premature death. The CDC reports it is also associated with about a 50 percent increase in the risk of dementia.

Poor sleep. Lack of quality sleep and excessive daytime sleepiness can lead to impaired brain function and an increase in the buildup of amyloid plaque associated with Alzheimer's. Having untreated [sleep apnea](#) may also make you more vulnerable to Alzheimer's.

Physical inactivity. [Regularly exercising](#) your body is one of the best things you can do for your brain. It can help you improve your vascular health, maintain a healthy weight, sleep better, and manage depression, all major risk factors for Alzheimer's.

Alcohol use. Drinking small amounts of wine may actually help protect your brain, but [heavy or binge drinking](#) has the opposite effect and increases your risk of Alzheimer's.

Brain injury. Studies suggest that suffering a traumatic brain injury may increase the risk of developing Alzheimer's in older age. While avoiding injury is often outside your control, you can help to lower your risk by protecting your head whenever possible, such as wearing a helmet when cycling or a seatbelt when driving.

Early signs and symptoms of Alzheimer's disease

For most people who develop Alzheimer's, it tends to be changes in memory that are detected first. You may notice the decline yourself or have it pointed out to you by family or friends. But the disease is about more than just memory changes. Alzheimer's also presents itself as problems with language, judgment, and abstract thinking.

The early warning signs of Alzheimer's disease include:

1. **Memory loss that impacts your daily life.** You frequently forget important events, dates, or things you've recently been told, causing you to continually repeat yourself or

rely more and more on memory aids like sticky notes or reminders on your phone.

2. **Struggling to find words when talking or writing.** You find it hard to follow or join in conversations, lose track of what you were saying, or have trouble naming familiar objects.
3. **Difficulty with visual images or judging distance.** You have trouble balancing or driving, and fall or spill things more often. Reading may also be more challenging.
4. **Misplacing things** such as putting your wallet in the fridge and then having difficulty retracing your steps to find it.
5. **Problems handling familiar tasks** such as driving to familiar destinations, using your phone or computer, or following recipes you used to know well.
6. **Trouble with planning or problem solving.** You struggle to concentrate and deal with numbers, making it harder to pay bills, balance your checkbook, or manage your finances.
7. **Confusion about time or places.** You lose track of dates or seasons, and forget where you are or how you came to be there.
8. **Withdrawing from social interests.** You neglect hobbies and interests you used to enjoy and decline social activities.
9. **Deteriorating judgment.** You neglect your personal hygiene, struggle to care for a pet, or find yourself the victim of scams.
10. **Mood and personality changes.** You're easily upset, quick to anger, or often feel depressed, anxious, suspicious, or confused.

[\[Read: Recognizing Alzheimer's Disease\]](#)

Other causes of Alzheimer's symptoms

Other conditions can mimic early Alzheimer's symptoms, such as:

Central nervous system and other degenerative disorders, including head injuries, brain tumors, stroke, epilepsy, Pick's Disease, [Parkinson's disease](#), and Huntington's disease.

Metabolic ailments, such as hypothyroidism, hypoglycemia, malnutrition, vitamin deficiencies, dehydration, and kidney or liver failure.

Substance-induced conditions, such as drug interactions, medication side-effects, alcohol and [drug abuse](#).

Psychological factors, such as depression, emotional trauma, [chronic stress](#), psychosis,

chronic [sleep deprivation](#), and delirium.

Infections, such as meningitis, encephalitis, and syphilis.

The difference between normal signs of aging and Alzheimer's

For many people, detecting the first signs of memory problems in themselves or a loved one brings an immediate fear of Alzheimer's disease. However, most of us over 65 experience some level of forgetfulness. Occasionally forgetting where you left your glasses, calling your grandson by your son's name, walking into a room and forgetting why, or not quite being able to retrieve information you have "on the tip of your tongue", for example, are not considered warning signs of Alzheimer's disease.

It is normal for age-related brain shrinkage to produce changes in processing speed, attention, and short-term memory, creating so-called "senior moments". For most of us, these occasional lapses in short-term memory are a normal part of the aging process.

[\[Read: Age-Related Memory Loss\]](#)

The primary difference between the normal signs of aging and Alzheimer's disease is that the former doesn't affect your ability to function in daily life. Occasional memory lapses as you get older don't prevent you from doing what you want to do. In Alzheimer's disease, however, memory loss becomes so severe that it disrupts your work, hobbies, social activities, and family relationships.

Signs of Normal Change vs. Early Alzheimer's Symptoms

Normal change: Can't find your keys.

Early Alzheimer's: Routinely place important items in odd places, such as keys in the fridge, wallet in the dishwasher.

Normal change: Search for casual names and words.

Early Alzheimer's: Forget names of family members and common objects, or substitute words with inappropriate ones.

Normal change: Briefly forget conversation details.

Early Alzheimer's: Frequently forget entire conversations.

Normal change: Feel the cold more.

Early Alzheimer's: Dress regardless of the weather. For example, wearing several skirts on a warm day or shorts in a snow storm.

Signs of Normal Change vs. Early Alzheimer's Symptoms

Normal change: Can't find a recipe.

Early Alzheimer's: Can't follow recipe directions.

Normal change: Forget to record a check.

Early Alzheimer's: Can no longer manage checkbook, balance figures, solve problems, or think abstractly.

Normal change: Cancel a date with friends.

Early Alzheimer's: Withdraw from usual interests and activities, sit in front of the TV for hours, sleep far more than usual.

Normal change: Make an occasional wrong turn.

Early Alzheimer's: Get lost in familiar places, don't remember how you got there or how to get home.

Normal change: Feel occasionally sad.

Early Alzheimer's: Experience rapid mood swings, from tears to rage, for no discernible reason.

Diagnosing Alzheimer's disease

There is no single definitive medical test for identifying Alzheimer's. To make a diagnosis from your symptoms, [a doctor will look for](#):

Significant memory problems in immediate recall, short-term, or long-term memory.

Significant cognitive deficits in at least one of four areas:

1. Expressing or comprehending language.
2. Identifying familiar objects through the senses.
3. Coordination, gait, or muscle function.
4. The executive functions of planning, ordering, and making judgments.

Mood, personality, and behavior problems such as experiencing sleep problems, depression, anxiety, or mood swings.

Decline severe enough to interfere with relationships and/or work performance.

Symptoms that appear gradually and become steadily worse over time.

Other causes to be ruled out to ensure memory and cognitive symptoms are not the result of another medical condition or disease, such as mild cognitive impairment.

Alzheimer's disease vs. mild cognitive impairment (MCI)

Early dementia, also known as mild cognitive impairment (MCI), involves problems with memory, language, or other cognitive functions. But unlike those with full-blown Alzheimer's, people with MCI are still able to function in their daily lives without relying on others.

According to the Alzheimer's Association, about 15 to 20 percent of people over the age of 65 experience mild cognitive impairment. Many people with MCI eventually develop Alzheimer's disease or another type of dementia. However, others plateau at a relatively mild stage of decline and are able to live independently. Some people with mild cognitive impairment even return to normal.

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.

It is not yet fully understood why MCI progresses to Alzheimer's disease in some, while remaining stable in others. The course is difficult to predict, but in general, the greater the degree of memory impairment, the greater the risk of developing Alzheimer's down the line.

Coping with a diagnosis

A diagnosis of Alzheimer's disease is the last thing anyone wants to hear. While it is undoubtedly a life-altering experience that will take both you and your family time to come to terms with, it doesn't mean that your life is over. Once you have a diagnosis and know what you're facing, you can start to take steps to slow the progression of the disease and ensure you're able to live your life as fully as possible for as long as possible.

It's important to give yourself time to process the myriad of emotions you're likely experiencing. Allowing yourself to feel even unpleasant emotions will allow the shock and distress of your diagnosis to eventually pass, and enable you to see a way forward. It's also important to reach out to others at this difficult time. The love and support of friends and loved ones can make a huge difference to your mood and outlook.

Similarly, pursuing activities that bring you meaning and joy can help bolster your sense of purpose—whether that’s engaging in favorite hobbies and interests, traveling, volunteering, or building your legacy by writing your memoirs or spending more time with your family.

[\[Read: Coping with an Alzheimer’s or Dementia Diagnosis\]](#)

Slowing the progression of symptoms

The same healthy lifestyle changes that are used to [prevent Alzheimer’s disease](#) can also be useful in slowing the advancement of symptoms.

1. **Get regular exercise** to stimulate your brain’s ability to maintain old connections, make new ones, and slow deterioration of cognitive abilities.
2. **Stay socially engaged.** Connecting face-to-face with others can help improve your cognitive function.
3. **Eat a brain-healthy diet.** The right foods can help reduce inflammation and promote better communication between brain cells.
4. **Find mental stimulation.** Learning new things and challenging your brain can help strengthen your cognitive skills.
5. **Get quality sleep** to flush out brain toxins and avoid the build-up of damaging plaques.
6. **Manage stress** to help slow shrinking in a key memory area of the brain and protect nerve cell growth.
7. **Take care of your heart.** Controlling your blood pressure and cholesterol levels can be just as good for your brain health.

Understanding the different stages of Alzheimer’s disease

Understanding the different stages of Alzheimer’s can help you to track the progression of symptoms and plan appropriate care. However, it’s important to remember that everyone with Alzheimer’s disease progresses differently and there are steps you can take to slow the onset of symptoms at each stage.

Also, cognitive, physical, and functional phases often overlap, the time in each stage varies from patient to patient, and not everyone experiences all symptoms.

Two commonly used models of Alzheimer’s progression are the 3-stage model and 7-stage model.

Stages of Alzheimer's disease: 3-stage model

In the 3-stage Alzheimer's disease model:

Stage 1 - Mild/Early

Many people at this stage experience frequent recent memory loss, particularly of recent conversations and events. They may ask repeated questions and have some problems expressing and understanding language.

Mild coordination problems include having difficulty writing and using objects. Depression and apathy can occur, accompanied by mood swings. They may need reminders for daily activities and have difficulty driving.

Duration: 2 to 4 years.

Stage 2 - Moderate/Middle

People at this stage can likely no longer cover up their problems. Pervasive and persistent memory loss includes forgetfulness about their personal history and inability to recognize friends and family. They may experience rambling speech, unusual reasoning, and confusion about current events, time, and place. They're more likely to become lost in familiar settings, experience sleep disturbances, and undergo changes in mood and behavior, which can be aggravated by stress and change.

Experiencing delusions, aggression, and uninhibited behavior are common. Mobility and coordination is affected by slowness, rigidity, and tremors. They need structure, reminders, and assistance with the activities of daily living.

Duration: 2 to 10 years.

Stage 3 - Severe/Late

In late stage Alzheimer's, most people are confused about past and present. They lose the ability to remember, communicate, or process information. They're generally incapacitated with severe to total loss of verbal skills, unable to care for themselves, and likely immobile and prone to falls.

Problems with swallowing, incontinence, and illness are also common. Many also experience

extreme problems with mood, behavior, hallucinations, and delirium. They need around the clock care.

Duration: 1 to 3+ years.

Stages of Alzheimer's disease: 7-stage model

In addition to the three stages of Alzheimer's, your doctor may also use a diagnostic framework with five, six, or seven levels. Progression through these stages usually lasts from 8 to 10 years, but again, differs from person to person and can stretch out for as long as 20 years.

Sample 7-stage model of Alzheimer's disease:

Stage 1 - No Impairment

Memory and cognitive abilities appear normal.

Stage 2 - Minimal Impairment/Normal Forgetfulness

Memory lapses and changes in thinking are rarely detected by friends, family, or medical personnel.

Stage 3 - Early Confusional/Mild Cognitive Impairment

While subtle difficulties begin to impact function, the person may try to cover up their problems. They may have difficulty with retrieving words, planning, organization, misplacing objects, and forgetting recent learning, which can affect life at home and work. Depression and other changes in mood can also occur.

Duration: 2 to 7 years.

Stage 4 - Late Confusional/Mild Alzheimer's disease

Mathematical challenges can cause problems handling finances. Increasingly, the person will forget recent events and conversations, although most people in this stage still know themselves and their family.

Problems carrying out sequential tasks, including cooking, driving, ordering food at

restaurants, and shopping are common. The person often withdraws from social situations, becomes defensive, and denies any problems.

Duration: roughly 2 years.

Stage 5 - Early Dementia/Moderate Alzheimer's disease

Decline is more severe and the person requires assistance. They're no longer able to manage independently or recall personal history details and contact information. They're frequently disoriented regarding place or time.

People in this stage experience a severe decline in numerical abilities and judgement skills, which can leave them vulnerable to scams and safety problems. Basic daily living tasks like eating and dressing require increased supervision.

Duration: average of 1.5 years.

Stage 6 - Middle Dementia/Moderately Severe Alzheimer's disease

People in this stage are often no longer aware of present events and unable to accurately remember the past. They progressively lose the ability to take care of daily living activities like dressing, toileting, and eating, but are still able to respond to nonverbal stimuli, and communicate pleasure and pain via behavior.

Agitation and hallucinations often show up in the late afternoon or evening. Dramatic personality changes such as wandering or suspicion of family members are common. Many can't remember close family members, but know they are familiar.

Duration: approximately 2.5 years.

Stage 7 - Late or Severe Dementia and Failure to Thrive

In this final stage, speech becomes severely limited, as well as the ability to walk or sit. Total support around the clock is needed for all functions of daily living and care.

Duration: impacted by quality of care, but average length is 1 to 2.5 years.

Caring for someone with Alzheimer's

Caring for a loved one with Alzheimer's disease can be a long, stressful, and intensely emotional journey. But it can be a rewarding, life-affirming experience as well.

The more you understand about the caregiving role, the better you'll be able to prepare for future challenges and cope with the stress and emotional upheaval that comes with each new stage.

Read: [Tips for Alzheimer's and Dementia Caregivers](#).

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HelpGuide

Find support

In the U.S.: Call the [Alzheimer's Association](#) helpline at 1 800 272 3900 or the [Alzheimer's Foundation of America](#) at 1-866-232-8484.

UK: Call the [Alzheimer's Society](#) helpline at 0300 222 1122 or [find support near you](#).

Australia: Call the [Dementia Australia](#) helpline at 1800 100 500 or [find support in your region](#).

Canada: [Find an Alzheimer Society](#) in your area.

India: Call the Alzheimer's and Related Disorders Society of India [24-hour helpline in your area](#).

In other countries: Browse a worldwide directory of [Alzheimer associations](#) for information, advice, and support near you. (Alzheimer's Disease International)