



Dementia

Overview

Dementia is a term used to describe a group of symptoms affecting memory, thinking, and social abilities. In people who have dementia, the symptoms interfere with their daily lives. Dementia isn't one specific disease. Several diseases can cause dementia.

Dementia generally involves memory loss. It's often one of the early symptoms of the condition. But having memory loss alone doesn't mean you have dementia. Memory loss can have different causes.

Alzheimer's disease is the most common cause of dementia in older adults, but there are other causes of dementia. Depending on the cause, some dementia symptoms might be reversible.

Symptoms

Dementia symptoms vary depending on the cause. Common symptoms include:

- Cognitive changes
 - Memory loss, which is usually noticed by someone else.
 - Problems communicating or finding words.
 - Trouble with visual and spatial abilities, such as getting lost while driving.
 - Problems with reasoning or problem-solving.
 - Trouble performing complex tasks.
 - Trouble with planning and organizing.
 - Poor coordination and control of movements.
 - Confusion and disorientation.
- Psychological changes
 - Personality changes.
 - Depression.
 - Anxiety.
 - Agitation.
 - Inappropriate behavior.
 - Being suspicious, known as paranoia.
 - Seeing things that aren't there, known as hallucinations.

When to see a doctor

See a health care professional if you or a loved one has memory problems or other dementia symptoms. It's important to determine the cause. Some medical conditions that cause dementia symptoms can be treated.

Causes

Dementia is caused by damage to or loss of nerve cells and their connections in the brain. The symptoms depend on the area of the brain that's damaged. Dementia can affect people differently.

Dementias are often grouped by what they have in common. They may be grouped by the protein or proteins deposited in the brain or by the part of the brain that's affected. Also, some diseases have symptoms like those of dementia. Some medicines can cause a reaction that includes dementia symptoms. Not getting enough of certain vitamins or minerals also can cause dementia symptoms. When this occurs, dementia symptoms may improve with treatment.

Progressive dementias

Dementias that are progressive get worse over time. Types of dementias that worsen and aren't reversible include:

- **Alzheimer's disease.** This is the most common cause of dementia. Although not all causes of Alzheimer's disease are known, experts do know that a small percentage are related to changes in three genes. These gene changes can be passed down from parent to child. People with Alzheimer's disease have plaques and tangles in their brains. Plaques are clumps of a protein called beta-amyloid. Tangles are fibrous masses made up of tau protein. It's thought that these clumps damage healthy brain cells and the fibers connecting them.
- **Vascular dementia.** This type of dementia is caused by damage to the vessels that supply blood to the brain. Blood vessel problems can cause stroke or affect the brain in other ways, such as by damaging the fibers in the white matter of the brain. The most common symptoms of vascular dementia include problems with problem-solving, slowed thinking, and loss of focus and organization. These tend to be more noticeable than memory loss.
- **Lewy body dementia.** Lewy bodies are balloonlike clumps of protein. They have been found in the brains of people with Lewy body dementia, Alzheimer's disease and Parkinson's disease. Lewy body dementia is one of the more common types of dementia. Common symptoms include acting out dreams in sleep and seeing things that aren't there, known as visual hallucinations. Symptoms also include problems with focus and attention. Other signs include uncoordinated or slow movement, tremors, and stiffness, known as parkinsonism.
- **Frontotemporal dementia.** This is a group of diseases characterized by the breakdown of nerve cells and their connections in the frontal and temporal lobes of the brain. These areas are associated with personality, behavior, and language. Common symptoms affect behavior, personality, thinking, judgment, language, and movement.
- **Mixed dementia.** Autopsy studies of the brains of people age 80 and older who had dementia indicate that many had a combination of several causes. People with mixed dementia can have Alzheimer's disease, vascular dementia, and Lewy body dementia. Studies are ongoing to determine how having mixed dementia affects symptoms and treatments.

Other disorders linked to dementia

- **Huntington's disease.** Huntington's disease is caused by a genetic change. The disease causes certain nerve cells in the brain and spinal cord to waste away. Symptoms include a decline in thinking skills, known as cognitive skills. Symptoms usually appear around age 30 or 40.
- **Traumatic brain injury (TBI).** This condition is most often caused by repetitive head trauma. Boxers, football players, or soldiers might develop TBI. Dementia symptoms depend on the part of the brain that's injured. TBI can cause depression, explosiveness, memory loss, and impaired speech. TBI also may cause slow movement, tremors, and stiffness. Symptoms might not appear until years after the trauma.
- **Creutzfeldt-Jakob disease.** This rare brain disorder usually occurs in people without known risk factors. This condition might be due to deposits of infectious proteins called prions. Symptoms of this fatal condition usually appear after age 60. Creutzfeldt-Jakob disease usually has no known cause, but it can be passed down from a parent. It also may be caused by exposure to diseased brain or nervous system tissue, such as from a cornea transplant.
- **Parkinson's disease.** Many people with Parkinson's disease eventually develop dementia symptoms. When this happens, it's known as Parkinson's disease dementia.

Dementia-like conditions that can be reversed

Some causes of dementia-like symptoms can be reversed with treatment. They include:

- **Infections and immune disorders.** Dementia-like symptoms can result from a fever or other side effects of the body's attempt to fight off an infection. Multiple sclerosis and other conditions caused by the body's immune system attacking nerve cells also can cause dementia.
- **Metabolic or endocrine problems.** People with thyroid problems and low blood sugar can develop dementia-like symptoms or other personality changes. This also is true for people who have too little or too much sodium or calcium or problems absorbing vitamin B-12.
- **Low levels of certain nutrients.** Not getting enough of certain vitamins or minerals in your diet can cause dementia symptoms. This includes not getting enough thiamin, also known as vitamin B-1, which is common in people with alcohol-use disorder. It also includes not getting enough vitamin B-6, vitamin B-12, copper, or vitamin E. Not drinking enough liquids, leading to dehydration, also can cause dementia symptoms.
- **Medicine side effects.** Side effects of medicines, a reaction to a medicine, or an interaction of several medicines can cause dementia-like symptoms.
- **Subdural bleeding.** Bleeding between the surface of the brain and the covering over the brain can be common in older adults after a fall. Subdural bleeding can cause symptoms similar to those of dementia.
- **Brain tumors.** Rarely, dementia can result from damage caused by a brain tumor.
- **Normal-pressure hydrocephalus.** This condition is a buildup of fluid in the cavities in the brain known as ventricles. It can result in walking problems, loss of bladder control, and memory loss.

Risk factors

Many factors can eventually contribute to dementia. Some factors, such as age, can't be changed. You can address other factors to reduce your risk.

Risk factors that can't be changed

- **Age.** The risk of dementia rises as you age, especially after age 65. However, dementia isn't a typical part of aging. Dementia also can occur in younger people.
- **Family history.** Having a family history of dementia puts you at greater risk of developing the condition. However, many people with a family history never develop symptoms, and many people without a family history do. There are tests to determine whether you have certain genetic changes that may increase your risk.
- **Down syndrome.** By middle age, many people with Down syndrome develop early-onset Alzheimer's disease.

Risk factors you can change

You might be able to control the following risk factors for dementia.

- **Diet and exercise.** Research has found that people at higher risk of dementia who followed a healthy lifestyle lowered their risk of cognitive decline. They ate a diet that included fish, fruits, vegetables, and oils. They also exercised, had cognitive training, and participated in social activities.
- **Drinking too much alcohol.** Drinking large amounts of alcohol has long been known to cause brain changes. Several large studies and reviews found that alcohol use disorders were linked to an increased risk of dementia, particularly early-onset dementia.
- **Cardiovascular risk factors.** These include obesity, high blood pressure, high cholesterol, and the buildup of fats in the artery walls, known as atherosclerosis. Having high levels of low-density lipoprotein, in particular, is a risk factor for cognitive decline and dementia. Diabetes and smoking also are cardiovascular risk factors.
- **Hearing loss or vision loss that is not treated.** Having hearing loss is associated with a higher risk of dementia. The worse the hearing loss, the higher the risk. Research also suggests that vision loss can raise the risk of dementia, while treating vision loss can lower the risk.
- **Depression.** Although not yet well understood, late-life depression might indicate the development of dementia.
- **Air pollution.** Studies in animals have indicated that air pollution particulates can speed degeneration of the nervous system. And human studies have found that air pollution exposure — particularly from traffic exhaust and burning wood — is associated with greater dementia risk.
- **Head trauma.** People who've had a severe head trauma have a greater risk of Alzheimer's disease. The risk increases in people with more-severe and multiple TBIs.
- **Sleep symptoms.** People who have sleep apnea and other sleep disturbances might be at higher risk of developing dementia.
- **Low levels of certain vitamins and nutrients.** Low levels of vitamin D, vitamin B-6, vitamin B-12, and folate can increase the risk of dementia.

Complications

Dementia can affect many body systems and, therefore, the ability to function. Dementia can lead to:

- **Poor nutrition.** Many people with dementia eventually reduce or stop eating, affecting their nutrient intake. Ultimately, they may be unable to chew and swallow.
- **Pneumonia.** Trouble swallowing increases the risk of choking. Food or liquids can enter the lungs, known as aspiration, which can block breathing and cause pneumonia.
- **Inability to perform self-care tasks.** As dementia gets worse, people have a hard time bathing, dressing, and brushing their hair or teeth. They need help using the toilet and taking medicines as directed.
- **Personal safety challenges.** Some day-to-day situations can present safety issues for people with dementia. These include driving, cooking, walking, and living alone.
- **Death.** Coma and death can occur in late-stage dementia. This often happens because of an infection.

Prevention

There's no sure way to prevent dementia, but there are steps you can take that might help. More research is needed, but it might help to do the following:

- **Keep your mind active.** Mentally stimulating activities might delay the onset of dementia and decrease its effects. Spend time reading, solving puzzles, and playing word games.
- **Be physically and socially active.** Physical activity and social interaction might delay the onset of dementia and reduce its symptoms. Aim for 150 minutes of exercise a week.
- **Quit smoking.** Some studies have shown that smoking in middle age and beyond might increase the risk of dementia and blood vessel conditions. Quitting smoking might reduce the risk and improve health.
- **Get enough vitamins.** Some research suggests that people with low levels of vitamin D in their blood are more likely to develop Alzheimer's disease and other forms of dementia. You can increase your vitamin D levels with certain foods, supplements, and sun exposure.
- **Manage cardiovascular risk factors.** Treat high blood pressure, high cholesterol, and diabetes. Pay attention to your levels of LDL cholesterol, and get treatment if the levels are too high. Lose weight if you're overweight.
High blood pressure might lead to a higher risk of some types of dementia. More research is needed to determine whether treating high blood pressure may reduce the risk of dementia.
- **Treat health conditions.** See your doctor for treatment of depression or anxiety.
- **Maintain a healthy diet.** A diet such as the Mediterranean diet might promote health and lower the risk of developing dementia. A Mediterranean diet is rich in fruits, vegetables, whole grains, and omega-3 fatty acids, which are commonly found in certain fish and nuts. This type of diet also improves cardiovascular health, which also may help lower dementia risk.

- **Get good-quality sleep.** Practice good sleep hygiene. Talk to a health care professional if you snore loudly or have periods where you stop breathing or gasp during sleep.
- **Treat hearing loss.** People with hearing loss have a greater chance of developing problems with thinking, known as cognitive decline. Early treatment of hearing loss, such as use of hearing aids, might help decrease the risk.
- **Get regular eye exams and treat vision loss.** Research suggests that not treating vision loss may be associated with a raised risk of dementia.

Information provided by the Mayo Clinic