

# Dementia

Dementia is a general term that represents a group of diseases and illnesses that affect your thinking, memory, reasoning, personality, mood and behavior. The decline in mental function interferes with your daily life and activities. It's estimated that about 50% of people age 85 and older have dementia. Current medications may help slow the mental decline.

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## What is dementia?

Learn more about living with Alzheimer's disease.

Dementia is a description of the state of a person's mental function and not a specific disease.

Dementia entails a decline in mental function from a previously higher level that's severe enough to interfere with daily living. A person with dementia has two or more of these specific difficulties, including a decline in:

- Memory.
- Reasoning.
- Language.
- Coordination.
- Mood.
- Behavior.

Dementia develops when the parts of your brain involved with learning, memory, decision-making or language are affected by infections or diseases. The most common cause of dementia is [Alzheimer's disease](#).

But other known causes of dementia include:

- [Vascular dementia](#).
- [Dementia with Lewy bodies](#).
- [Frontotemporal dementia](#).
- Mixed dementia.
- Dementia due to [Parkinson's disease](#).
- Dementia-like conditions due to reversible causes, such as medication side effects or [thyroid problems](#).

## **What's the difference between dementia and Alzheimer's disease?**

Dementia is a description of the state of a person's mental function and not a specific disease. Dementia is an "umbrella category" describing mental decline that's severe enough to interfere with daily living.

There are many underlying causes of dementia, including Alzheimer's disease and Parkinson's disease. Alzheimer's disease is the most common underlying cause of dementia.

## **Who gets dementia?**

Dementia is considered a late-life disease because it tends to develop mostly in people who are older.

About 5% to 8% of all people over the age of 65 have some form of dementia, and this number doubles every five years above that age. It's estimated that as many as half of people 85 years of age and older have dementia.

The number of people age 65 and older who have Alzheimer's disease and related dementias by race is:

- Blacks: 14%
- Hispanics: 12%
- Non-Hispanic whites: 10%
- American Indian and Alaska Natives: 9%
- Asian and Pacific Islanders: 8%

## **How common is dementia?**

The U.S. Centers for Disease Control and Prevention (CDC) estimate that 5 million U.S. adults age 65 or older have Alzheimer's and related dementia. By 2060, the CDC projects that about 14 million people will have dementia, which is about 3.3% of the population.

Alzheimer's disease is the sixth leading cause of death in the U.S. and the fifth leading cause of death in Americans age 65 and older.

## **Does memory loss mean dementia is starting?**

One common misbelief about memory loss is that it always means you or a loved one has dementia. There are many causes of memory loss. Memory loss alone doesn't necessarily confirm a diagnosis of dementia.

It's also true that some memory changes are normal as a person ages (some neurons in your brain naturally die as we age). However, this type of memory loss isn't functionally disabling; meaning, it doesn't interfere with daily life.

Dementia interferes with your ability to function. Dementia isn't forgetting where you left your keys. A person with dementia can have situations like forgetting what keys are used for. Dementia isn't a normal part of aging.

## **Are there different types of dementia?**

Dementias can be divided into three groups:

- Primary (diseases and conditions in which dementia is the main illness).
- Secondary (dementia due to another disease or condition).
- Reversible dementia-like symptoms caused by other illnesses or causes.

### **Primary dementia**

Types of primary dementia include:

- Alzheimer's disease: This is the most common type of dementia. Two abnormal proteins build up in your brain: tau and amyloid proteins. These proteins disrupt communication between nerve cells in your brain. Nerve cells die, starting in one area and spreading as more nerve cells die in other areas. Symptoms include short-term memory loss, confusion, personality and behavior changes. Trouble talking, remembering distant memories and issues with walking happen later in the disease. Alzheimer's disease mainly affects adults who are older — up to 10% of those over age 65 and about 50% of people older than 85 have the disease. Family history is an important risk factor. Approximately 60% to 80% of people with dementia have this type.
- Vascular dementia: This is the second most common type of dementia. It's caused by conditions such as [strokes](#) or [atherosclerosis](#), which block and damage [blood vessels](#) in your brain. Symptoms include memory problems, confusion and trouble concentrating and completing tasks. The decline may appear suddenly (following a major stroke) or in steps (following a series of [mini strokes](#)). Risk factors include [high blood pressure](#), [diabetes](#) and [high cholesterol levels](#). About 15% to 25% of people with dementia have vascular dementia.
- Lewy body dementia: This condition involves the buildup of clumps of proteins — called Lewy bodies — in your brain's nerve cells. Lewy bodies damage nerve cells. Symptoms include movement and balance problems, changes in sleep patterns, memory loss, planning and problem-solving difficulties, and visual hallucinations and delusions. About 5% to 10% of dementias are Lewy Body dementia.

- Frontotemporal dementia (FTD): This dementia results from damage to the [frontal and temporal lobes](#) of your brain. The damage is caused by the buildup of abnormal proteins in these areas. It causes changes in social behavior, personality, and/or loss of language skills (speaking, understanding or forgetting the meaning of common words) or motor coordination. FTD is a common cause of early dementia, often occurring in people between the ages of 45 and 64. Between 5% and 6% of all dementias are FTD.
- Mixed dementia: This is a combination of two or more types of dementia. The most common combination is Alzheimer's disease with vascular dementia. It's most common in people 80 years of age and over. It's often hard to diagnose because symptoms of one dementia may be more obvious and/or many symptoms of each type overlap. The decline is faster in people who have mixed dementia compared with those who only have one type.

## Dementia due to other diseases and conditions

Other causes of dementia include:

- [Huntington's disease](#): A single defective gene causes this brain disorder. The disease causes a breakdown in your brain's nerve cells, which causes body movement control problems, as well as thinking, decision-making and memory trouble, and personality changes.
- [Parkinson's disease](#): Many people in the later stages of Parkinson's disease develop dementia. Symptoms include trouble with thinking and memory, hallucinations and delusions, depression and trouble with speech.
- [Creutzfeldt-Jakob disease](#): This rare infective brain disease affects about only 1 in 1 million people. An abnormal protein in your brain called prions causes the disease. These prions clump together and cause nerve cell death in your brain. Symptoms include problems with thinking, memory, communication, planning and/or judgment, confusion, behavior changes, agitation and depression.
- Wernicke-Korsakoff syndrome: This brain disorder is caused by a severe [thiamine \(vitamin B1\) deficiency](#). This can result in bleeding in key areas related to memory in your brain. It's most commonly caused by [alcohol use disorder](#) but can also be due to malnutrition and chronic infection. Symptoms include [double vision](#), loss of muscle coordination, and difficulty processing information, learning new skills and remembering things.
- [Traumatic brain injury](#): Repeated blows to your head can cause this injury. It's most often seen in football players, boxers, soldiers and people who've had a vehicle accident. Dementia symptoms, which appear years later, include memory loss, behavior or mood changes, slurred speech and headaches.

## Dementias due to reversible causes

Some conditions can cause dementia-like symptoms that can be reversed with treatment, including:

- [Normal pressure hydrocephalus \(NPH\)](#): This condition happens when cerebrospinal fluid (CSF) builds up in your brain's spaces (ventricles). The excess buildup harms your brain. NPH can be caused by a brain infection, brain injury, brain bleed or previous brain surgery. Symptoms include poor balance, forgetfulness, trouble paying attention, mood swings, frequent falls and loss of bladder control. Your healthcare provider can drain excess fluid through the surgical placement of a shunt (tube).
- Vitamin deficiency: Not getting enough vitamin B1, B6, B12 cooper and vitamin E in your diet can cause dementia-like symptoms.
- Infections: Infections that can cause dementia-like symptoms include [HIV infection](#), [syphilis](#) and [Lyme disease](#). Symptoms reported with [COVID-19](#) infection include “[brain fog](#)” and acute delirium. Because of the inflammation and stroke risk seen with COVID-19 infection, both short- and long-term cognitive effects are being investigated. [Urinary tract infections \(UTIs\)](#) and infections in your lungs in the elderly can also result in dementia-like symptoms. Other central [nervous system](#) infections and brain infections caused by fungi, bacteria and parasites can also cause cognitive symptoms.
- Metabolic and endocrine conditions: Conditions that can mimic dementia include [Addison's disease](#), [Cushing's disease](#), low blood sugar ([hypoglycemia](#)) exposure to heavy metals (like arsenic or mercury), high calcium levels ([hypercalcemia](#), often due to [hyperparathyroidism](#)), [liver cirrhosis](#) and thyroid problems.
- Medication side effects: Some medications, in some people, can mimic dementia symptoms. These include sleeping pills, anti-anxiety drugs, antidepressants, anti-seizure drugs, antiparkinson drugs, nonbenzodiazepine sedatives, narcotic pain relievers, statins and others. Ask your healthcare provider to review your medications if you have any dementia-like symptoms.
- Other causes: Other causes of dementia-like symptoms include [brain tumors](#) and [subdural hematomas](#) (brain bleeds between your brain's surface and the covering over your brain).

## Symptoms and Causes

### What are the symptoms of dementia?

Early symptoms of dementia include:

- Forgetting recent events or information.
- Repeating comments or questions over a very short period.
- Misplacing commonly used items or placing them in unusual spots.
- Not knowing the season, year or month.
- Having difficulty coming up with the right words.
- Experiencing a change in mood, behavior or interests.

Signs that dementia is getting worse include:

- Your ability to remember and make decisions further declines.

- Talking and finding the right words becomes more difficult.
- Daily complex tasks, such as brushing your teeth, making a cup of coffee, working a TV remote, cooking and paying bills become more challenging.
- Lessening of rational thinking and behavior and your ability to problem-solve.
- Sleeping pattern changes.
- Increases or worsening of [anxiety](#), frustration, confusion, [agitation](#), suspiciousness, sadness and/or [depression](#).
- Needing more help with activities of daily living, such as grooming, toileting, bathing and eating.
- Experiencing hallucinations (seeing people or objects that aren't there).

These symptoms are general symptoms of dementia. Each person diagnosed with dementia has different symptoms, depending on what area of their brain is damaged. Additional symptoms and/or unique symptoms occur with specific types of dementia.

## **What are the causes of dementia?**

Dementia is caused by damage to your brain. Dementia affects your brain's nerve cells, which destroys your brain's ability to communicate with its various areas. Dementia can also result from blocked blood flow to your brain, depriving it of needed oxygen and nutrients. Without oxygen and nutrients, brain tissue dies.

Damage to your brain results in different symptoms, depending on the area of your brain affected. Some dementias aren't reversible and will worsen over time. Other dementias are due to other medical conditions that also affect your brain. Another group of health issues can result in dementia-like symptoms. Many of these conditions are treatable, and the dementia symptoms are reversible.

All of the possible causes of dementia are discussed in the question, "Are there different types of dementia?"

## **Diagnosis and Tests**

### **How is dementia diagnosed?**

Confirming a diagnosis of dementia can be difficult. Many diseases and conditions can cause or lead to dementia. In addition, many of its symptoms are common to many other illnesses.

Your healthcare provider will:

- Ask about the course of your symptoms.
- Ask about your medical history.
- Review your current medications.
- Ask about your family history of disease including dementia.

They may also order tests, including laboratory tests, imaging tests and neurocognitive tests (thinking tests).

Neurologists and geriatricians may assist in making the diagnosis of dementia.

### Laboratory tests

Laboratory tests rule out other diseases and conditions as the cause of dementia, such as infection, inflammation, underactive thyroid and vitamin deficiency (especially B12).

Sometimes, healthcare providers order cerebrospinal fluid tests to evaluate autoimmune conditions and neurodegenerative diseases, if warranted.

### Imaging tests

Your healthcare provider may order the following imaging tests of your brain:

- Computed tomography (CT) and magnetic resonance imaging (MRI): CT uses X-rays and a computer to show detailed images of your brain. MRI uses magnets, radio frequencies and a computer to create detailed images of your brain. These imaging tests look for evidence of stroke, bleeding, tumors and fluid on your brain.
- FDG-PET scan: This is a special type of brain scan that aids in determining brain function and cognitive decline by the pattern of how a type of glucose is absorbed by brain tissue, and is sometimes needed in specific diagnoses.

### Neurocognitive testing

During neurocognitive testing, your healthcare provider uses written and computerized tests to evaluate your mental abilities, including:

- Problem solving.
- Learning.
- Judgment.
- Memory.
- Planning.
- Reasoning.
- Language.

### Psychiatric evaluation

A mental health professional may check for signs of depression, mood changes or other mental health issues that might cause memory loss.

## Management and Treatment

## Is dementia treatable?

First, it's important to understand the terms "treatable," "reversible" and "curable." All or almost all forms of dementia are treatable, in that medication and other measures can help manage your symptoms. However, most types of dementia can't be cured or reversed, and treatments provide only modest benefits.

Fortunately, some types of dementia, like those brought on by treatable causes, may be successfully reversed. These dementia-like symptoms are caused by:

- Side effects of medications, illicit drugs or alcohol.
- Tumors that can be removed.
- Subdural hematoma (a buildup of blood beneath the outer covering of your brain that's caused by a head injury).
- Normal pressure hydrocephalus (a buildup of cerebrospinal fluid in your brain).
- Metabolic disorders, such as a vitamin B12 deficiency.
- [Hypothyroidism](#), a condition that results from low levels of [thyroid hormones](#).
- [Hypoglycemia](#) (low blood sugar).
- Depression.

Dementias that aren't reversible may still partially respond to medications that treat memory loss or behavior problems. These dementias include:

- Alzheimer's disease.
- Multi-infarct (vascular) dementia.
- Dementias associated with Parkinson's disease and similar disorders.
- AIDS dementia complex.
- Creutzfeldt-Jakob disease.

## What medications are available to manage dementia?

Drugs approved for the most common form of dementia, Alzheimer's disease, include:

- Cholinesterase inhibitors, including [donepezil](#) (Aricept®), [rivastigmine](#) (Exelon®) and [galantamine](#) (Razadyne®).
- NMDA receptor antagonist [memantine](#) (Namenda®).
- Anti-amyloid antibody aducanumab (Aduhelm®).

Healthcare providers use these drugs to treat people with some of the other forms of dementia.

Cholinesterase inhibitors and the NMDA receptor antagonist affect different chemical processes in your brain. Both drug classes have been shown to provide some benefit in improving or stabilizing memory function in some people with dementia.

Cholinesterase inhibitors manage the chemicals in your brain that allow messages to be sent between brain cells, which is needed for proper brain function. (Connections are lost as brain

cells die when dementia worsens.) Memantine works similarly to cholinesterase inhibitors except it works on a different chemical messenger and helps the nerve cells survive longer.

Aducanumab targets amyloid proteins, which build up into the plaques seen in the brains of people with Alzheimer's disease.

Although none of these drugs appear to stop the progression of the underlying disease, they may slow it down.

If other medical conditions are causing dementia or co-exist with dementia, healthcare providers prescribe the appropriate drugs used to treat those specific conditions. These other conditions include sleeping problems, depression, hallucinations and agitation.

## Prevention

### Can dementia be prevented?

Although dementia can't be prevented, living a health-focused life might reduce risk factors for certain types of dementia.

Keeping blood vessels clear of cholesterol buildup, maintaining normal blood pressure, maintaining healthy blood sugar levels, staying at a healthy weight — basically, staying as healthy as you can — can keep your brain fueled with the oxygen and nutrients it needs to function at its highest possible level. Specific healthful steps you can take include:

- [Stop smoking](#).
- Follow a [Mediterranean diet](#), which is one filled with whole grains, vegetables, fruits, fish and shellfish, nuts, beans, olive oil and only limited amounts of red meats.
- [Exercise](#). Get at least 30 minutes of exercise most days of the week.
- Keep your brain engaged. Solve puzzles, play word games and try other mentally stimulating activities. These activities may delay the start of dementia.
- Stay socially active. Interact with people, discuss current events, and keep your mind, heart and soul engaged.

### What are the risk factors for dementia?

Risk factors for dementia include:

- Age: This is the strongest risk factor. Your chance of dementia increases as you age. Most cases affect people over the age of 65.
- Family history: If you have biological parents or siblings with dementia, you're more likely to develop dementia.
- [Down syndrome](#): If you have Down syndrome, you're at risk of developing early-onset Alzheimer's disease by middle age.

- Poor heart health: If you have high cholesterol levels, high blood pressure, atherosclerosis or smoke, you increase your risk of dementia. These health problems, as well as diabetes, affect your blood vessels. Damaged blood vessels can lead to reduced blood flow and strokes.
- Race and ethnicity: If you're a Black person, you have twice the risk as a white person for developing dementia. If you're a Hispanic person, you're 1.5 times more likely than a white person to develop dementia.
- Brain injury: If you've had a severe brain injury, you're at a higher risk for dementia.

## Outlook / Prognosis

### Is there a cure for dementia?

Unfortunately, there isn't a cure for the most common types of dementia. Currently, approved medications can, at best, slow the decline.

### What are the possible complications of dementia?

Your brain controls all of your body's functions. When your brain functions decline, your overall health is eventually at risk. Many illnesses and conditions can happen as a result of having dementia.

Possible complications of dementia include:

- [Dehydration](#) and malnutrition.
- [Bedsores](#) (pressure ulcers).
- Injuries and [bone fractures](#) from falls.
- Strokes.
- [Heart attacks](#).
- [Kidney failure](#).
- [Pneumonia](#) and aspiration pneumonia (food particles are inhaled into your lung and cause infection).
- [Sepsis](#) (infection).

### What can I expect if I have dementia?

Getting a diagnosis of dementia is certainly difficult to hear. Several types of dementia aren't reversible. Others are a side effect of other serious diseases. Some dementia-like symptoms are due to conditions that can be treated and reversed.

Your healthcare team, which will probably include a neurologist and/or a geriatric-psychiatrist or a geriatrician, will order the needed tests to make the correct diagnosis. The medications available today focus on slowing the decline.

The goal is to maintain your or your loved one's quality of life. Some people with Alzheimer's dementia can live up to two decades, but each person has their own unique course. Researchers continue learning about the mechanisms that cause dementia and testing different methods to slow, and someday, hopefully, cure this disease.

## Living With

### When should I see my doctor about dementia?

Make an appointment with your healthcare provider if you or your friends and family see changes in:

- Your memory.
- Your mental functioning.
- Your ability to perform everyday tasks.
- Your behavior.
- Your personality.

### What happens to a person's brain and body as dementia gets worse?

Unfortunately, many types of dementia are conditions that worsen over time. When your brain doesn't get the nutrients and oxygen it needs, or "junk" (abnormal proteins) blocks needed communication between the nerve cells of the brain, your brain tissue begins to die.

Alzheimer's disease and other types of dementia usually begin with memory loss or lapses in judgment — things that can be lived with for a while. As you lose more and more brain function, functions vital to life begin to be affected. Vital functions include breathing, digestion, heart rate and sleep.

In the late stages of dementia, people can't perform the tasks needed to keep their bodies alive. Brain damage and muscle weakness no longer allow even simple, needed movements. You can't communicate, walk, talk, control your bladder or bowels, feed yourself, or chew or swallow food without help.

When you can't care for yourself, move about, eat or drink enough to keep yourself hydrated and nourished, plus have mental decline, you leave yourself vulnerable to other illnesses. Pneumonia is one of these commonly seen illnesses in people with dementia. With a now frail body, a person may not be able to fight infections or even benefit from medication. The person's pain and discomfort may outweigh treatment options that can only offer a short-term benefit.

At this point, many families choose [hospice](#) for end-of-life care. Hospice provides comfort care, with a focus on your quality of life over life-extending measures. Many people who pass away from a dementia-related condition don't have that listed on their death certificate. This is because the complication from which they die — pneumonia, for example — is listed instead.

Another reason may be that many people were never officially diagnosed with a dementia condition before they passed away.

## **What's the life expectancy of a person with dementia?**

There's no easy way to answer this question. Dementia is an "umbrella" term that covers the many different types of underlying neurodegenerative diseases.

Each type of neurodegenerative disease has its own unique pattern and development in each person. Also, each person has a unique health profile. Some people may be relatively healthy and others may have several co-existing health issues. All of these factors play a role in the pace of decline in a person with dementia.

To answer more broadly, Alzheimer's is the most common type of dementia. The average lifespan after the earliest symptoms is eight years. However, some people have lived as long as 20 years after an Alzheimer's disease diagnosis.

# **Additional Common Questions**

## **Are there stages of dementia?**

No national dementia-related organizations define dementia by numerical stages. The Alzheimer's Association does, however, define three stages of Alzheimer's disease. Alzheimer's disease dementia is the most common type of dementia. Some of the symptoms in these three stages are the same as symptoms for many of the forms of dementia.

### **Early-stage Alzheimer's disease (mild)**

People in the mild stage of Alzheimer's disease are still able to function on their own. They may still drive, go to work and socialize. Some changes are happening that may or may not be noticed by the person with Alzheimer's disease, but may be noticeable by close friends and family members.

Difficulties may include:

- Trouble remembering a person's name after being introduced.
- Losing or misplacing multiple objects.
- Having a hard time coming up with the right word consistently.
- Trouble planning, organizing, managing or completing tasks.
- Consistently forgetting what you just read.

### **Middle-stage Alzheimer's disease (moderate)**

People in the middle stage of Alzheimer's disease can be in this stage for many years. They can take part in everyday activities with help. Symptoms are more obvious.

Difficulties may include:

- Confusion about what year/season it is or where you are.
- Forgetting events and being unable to recall personal history (phone number, address, the college you attended, etc.).
- Changes in personality, mood and behavior, such as becoming suspicious, delusional and performing compulsive, repetitive actions.
- Changes in day/night sleeping patterns.
- Controlling your bladder and/or bowels.
- Wearing clothes for the wrong season or occasion.
- Wandering and becoming lost.

### **Late-stage Alzheimer's disease (severe)**

People in the late stage of Alzheimer's disease can't carry on conversations, lose awareness of what's going on around them and can't control their movement.

Difficulties may include:

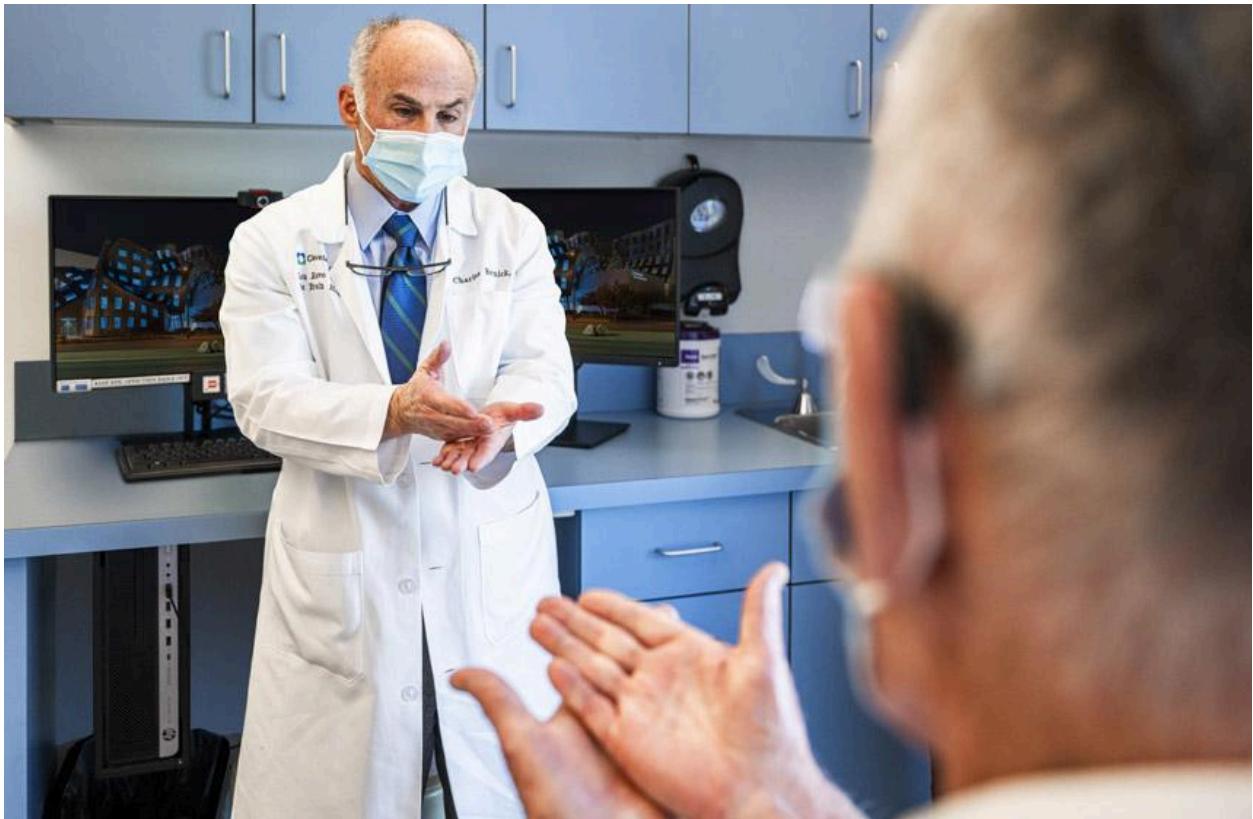
- Trouble communicating, which may include only being able to say a few words or phrases.
- Trouble walking.
- Trouble swallowing.
- Being more prone to infections, especially pneumonia.
- Requiring 24-hour assistance with care.

### **A note from Cleveland Clinic**

Learning early that you have a diagnosis of dementia allows you and your family to plan for a meaningful quality of life together and enables you to get your legal, financial and healthcare plans and desires in order. Your healthcare team, including clinicians, social workers, hospice and pastoral care members, is ready to provide education, support and care for you or your loved one. Ask your team for information on local dementia support groups, as well. Support groups can be very helpful for sharing care tips and providing comfort in knowing you're not alone.

### **Care at Cleveland Clinic**

It can be unsettling when your brain stops working like it used to. Cleveland Clinic's cognitive decline experts help you manage the symptoms and provide support.



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