

What is Alzheimer's Disease?

Alzheimer's disease (AD) is the most common form of dementia among older people. Dementia is a brain disorder that seriously affects a person's ability to carry out daily activities.

AD begins slowly. It first involves the parts of the brain that control thought, memory and language. People with AD may have trouble remembering things that happened recently or names of people they know. A related problem, mild cognitive impairment (MCI), causes more memory problems than normal for people of the same age. Many, but not all, people with MCI will develop AD.

In AD, over time, symptoms get worse. People may not recognize family members or have trouble speaking, reading or writing. They may forget how to brush their teeth or comb their hair. Later on, they may become anxious or aggressive, or wander away from home. Eventually, they need total care. This can cause great stress for family members who must care for them.

AD usually begins after age 60. The risk goes up as you get older. Your risk is also higher if a family member has had the disease.

No treatment can stop the disease. However, some drugs may help keep symptoms from getting worse for a limited time.

CAUSES

You are more likely to get Alzheimer's disease (AD) if you:

- Are older. However, developing AD is not a part of normal aging.
- Have a close blood relative, such as a brother, sister, or parent with AD.
- Have certain genes linked to AD, such as APOE epsilon4 allele

The following may also increase your risk, although this is not well proven:

- Being female
- Having high blood pressure for a long time
- History of head trauma

There are two types of AD:

- Early onset AD*: Symptoms appear before age 60. This type is much less common than late onset. However, it tends to get worse quickly. Early onset disease can run in families. Several genes have been identified.
- Late onset AD*: This is the most common type. It occurs in people age 60 and older. It may run in some families, but the role of genes is less clear.

The cause of AD is not clear. Your genes and environmental factors seem to play a role. Aluminum, lead, and mercury in the brain is no longer believed to be a cause of AD.

SYMPTOMS

Dementia symptoms include difficulty with many areas of mental function, including:

- Emotional behavior or personality
- Language

- Memory
- Perception
- Thinking and judgment (cognitive skills)

Dementia usually first appears as forgetfulness.

Mild cognitive impairment is the stage between normal forgetfulness due to aging, and the development of AD. People with MCI have mild problems with thinking and memory that do not interfere with everyday activities. They are often aware of the forgetfulness. Not everyone with MCI develops AD.

Symptoms of MCI include:

- Difficulty performing more than one task at a time
- Difficulty solving problems
- Forgetting recent events or conversations
- Taking longer to perform more difficult activities

The early symptoms of AD can include:

- Difficulty performing tasks that take some thought, but used to come easily, such as balancing a checkbook, playing complex games (such as bridge), and learning new information or routines
- Getting lost on familiar routes
- Language problems, such as trouble finding the name of familiar objects
- Losing interest in things previously enjoyed, flat mood
- Mislplacing items
- Personality changes and loss of social skills

As the AD becomes worse, symptoms are more obvious and interfere with your ability to take care of yourself. Symptoms can include:

- Change in sleep patterns, often waking up at night
- Delusions, depression, agitation
- Difficulty doing basic tasks, such as preparing meals, choosing proper clothing, and driving
- Difficulty reading or writing
- Forgetting details about current events
- Forgetting events in your own life history, losing awareness of who you are
- Hallucinations, arguments, striking out, and violent behavior
- Poor judgment and loss of ability to recognize danger
- Using the wrong word, mispronouncing words, speaking in confusing sentences
- Withdrawing from social contact

People with severe AD can no longer:

- Understand language
- Recognize family members
- Perform basic activities of daily living, such as eating, dressing, and bathing

Other symptoms that may occur with AD:

- Incontinence
- Swallowing problems

EXAMS AND TESTS

A skilled health care provider can often diagnose AD disease with the following steps:

- Complete physical exam, including neurological exam
- Asking questions about your medical history and symptoms
- A mental status examination

A diagnosis of AD is made when certain symptoms are present, and by making sure other causes of dementia are not present.

Tests may be done to rule out other possible causes of dementia, including:

- Brain tumor
- Chronic infection
- Intoxication from medication
- Severe depression
- Stroke
- Thyroid disease
- Vitamin deficiency

Computed tomography (CT) or magnetic resonance imaging (MRI) of the brain may be done to look for other causes of dementia, such as a brain tumor or stroke.

- In the early stages of dementia, brain image scans may be normal. In later stages, an MRI may show a decrease in the size of different areas of the brain.
- While the scans do not confirm the diagnosis of AD, they do exclude other causes of dementia (such as stroke and tumor).

However, the only way to know for certain that someone has AD is to examine a sample of their brain tissue after death. The following changes are more common in the brain tissue of people with AD:

- "Neurofibrillary tangles" (twisted fragments of protein within nerve cells that clog up the cell)
- "Neuritic plaques" (abnormal clusters of dead and dying nerve cells, other brain cells, and protein)
- "Senile plaques" (areas where products of dying nerve cells have accumulated around protein).

TREATMENT

There is no cure for AD. The goals of treatment are:

- Slow the progression of the disease (although this is difficult to do)
- Manage symptoms, such as behavior problems, confusion, and sleep problems
- Change your home environment so you can better perform daily activities
- Support family members and other caregivers

DRUG TREATMENT

Medicines are used to help slow down the rate at which symptoms become worse. The benefit from these drugs is usually small. You and your family may not notice much of a change.

Before using these medicines, ask the doctor or nurse:

- What are the potential side effects? Is the medicine worth the risk?
- When is the best time, if any, to use these medicines?

Medicines for AD include:

- Donepezil (Aricept), rivastigmine (Exelon), and galantamine (Razadyne, formerly called Reminyl). Side effects include stomach upset, diarrhea, vomiting, muscle cramps, and fatigue.
- Memantine (Namenda). Possible side effects include agitation or anxiety.

Other medicines may be needed to control aggressive, agitated, or dangerous behaviors. Examples include haloperidol, risperidone, and quetiapine. These are usually given in very low doses due to the risk of side effects including an increased risk of death.

It may be necessary to stop any medications that make confusion worse. Such medicines may include painkillers, cimetidine, central nervous system depressants, antihistamines, sleeping pills, and others. Never change or stop taking any medicines without first talking to your doctor.

SUPPLEMENTS

Some people believe certain vitamins and herbs may help prevent or slow down AD.

- There is no strong evidence that Folate (vitamin B6), vitamin B12, and vitamin E prevent AD or slows the disease once it occurs.
- High-quality studies have not shown that ginkgo biloba lowers the chance of developing dementia. DO NOT use ginkgo if you take blood-thinning medications like warfarin (Coumadin) or a class of antidepressants called monoamine oxidase inhibitors (MAOIs).

If you are considering any drugs or supplements, you should talk to your doctor first. Remember that herbs and supplements available over the counter are NOT regulated by the FDA.

SUPPORT GROUPS

- Alzheimer's Association - www.alz.org
- Alzheimer's Disease Education and Referral Center - www.nia.nih.gov/alzheimers
- Alzheimer's Disease Research - www.ahaf.org/alzheimers
- Alzheimer's.gov - www.alzheimers.gov
- U.S. Centers for Disease Control and Prevention - www.cdc.gov/Features/Alzheimers

PROGNOSIS

How quickly AD gets worse is different for each person. If AD develops quickly, it is more likely to worsen quickly.

Patients with AD often die earlier than normal, although a patient may live anywhere from 3 - 20 years after diagnosis.

The final phase of the disease may last from a few months to several years. During that time, the patient becomes totally disabled. Death usually occurs from an infection or organ failure.

Possible Complications

- Abuse by an over-stressed caregiver
- Bedsores
- Loss of muscle function that makes you unable to move your joints
- Infection, such as urinary tract infection and pneumonia
- Other complications related to immobility
- Falls and broken bones
- Harmful or violent behavior toward self or others
- Loss of ability to function or care for self
- Loss of ability to interact
- Malnutrition and dehydration

When to Contact a Medical Professional

Call your health care provider if someone close to you has symptoms of dementia.

Call your health care provider if a person with AD has sudden change in mental status. A rapid change may be a sign of another illness.

Talk to your health care provider if you are caring for a person with AD and you can no longer care for the person in your home.

PREVENTION

Although there is no proven way to prevent AD, there are some practices that may be worth incorporating into your daily routine, particularly if you have a family history of dementia. Talk to your doctor about any of these approaches, especially those that involve taking a medication or supplement.

- Consume a low-fat diet.
- Eat cold-water fish (like tuna, salmon, and mackerel) rich in omega-3 fatty acids, at least 2 to 3 times per week.
- Reduce your intake of linoleic acid found in margarine, butter, and dairy products.
- Increase antioxidants like carotenoids, vitamin E, and vitamin C by eating plenty of darkly colored fruits and vegetables.
- Maintain a normal blood pressure.
- Stay mentally and socially active throughout your life.
- Consider taking nonsteroidal anti-inflammatory drugs (NSAIDs) like ibuprofen (Advil, Motrin), sulindac (Clinoril), or indomethacin (Indocin). Statin drugs, a class of medications normally used for high cholesterol, may help lower your risk of AD. Talk to your doctor about the pros and cons of using these medications for prevention.

DEMENTIA AND DRIVING

If your loved one has dementia, deciding when they can no longer drive is a difficult decision. They may react in different ways:

- They may be aware they are having problems, and they may be relieved to stop driving.
- They may feel their independence is being taken away.

Signs that Driving May No Longer Be Safe

People with signs of dementia should have regular driving tests. Even if they pass a driving test, they should be retested in 6 months.

If your loved one resists you getting involved in their driving, get help from their health care provider, lawyer, or other family members.

Even before you see driving problems in someone with dementia, look for these signs that they may be at risk for driving badly:

- Forgetting recent events
- Mood swings or getting angry more easily
- Problems doing more than one task at a time
- Problems judging distance
- Having trouble making decisions and solving problems
- Becoming confused more easily

Signs that driving may be getting more dangerous are:

- Getting lost on familiar roads
- Reacting more slowly in traffic
- Driving too slowly or stopping for no reason
- Not noticing traffic signs or not paying attention to them
- Taking chances on the road
- Drifting into other lanes
- Getting more agitated in traffic
- Getting scrapes or dents on the car
- Having trouble parking

Steps to Take

It may help to set limits when driving problems start. Stay off busy roads, or do not drive at times of the day when traffic is heaviest.

Do not drive when the weather is bad. Do not drive long distances. Drive only on roads the patient is used to.

Caregivers should try to lessen the person's need to drive without making them feel isolated. Have someone deliver groceries, meals, or prescriptions to their home. Find a barber or hairdresser who will make home visits. Arrange for family and friends to visit and take them out for a few hours at a time.

Plan other ways to get your loved one places. Family members or friends, buses, taxis, and senior transportation services may be possibilities.

As danger to others or to your loved one increases, you may need to prevent to them from being able to use the car. Some ways to do this are:

- Hiding the keys
- Leaving out car keys that will not start the car
- Disabling the car so it will not start

- Selling the car
- Storing the car away from the home

DEMENTIA- KEEPING SAFE AT HOME

It is important to make sure the home of someone who has dementia is safe for them.

SAFETY TIPS FOR THE HOME

Wandering can be a serious problem in people who have more advanced dementia. These tips may help prevent wandering:

- Place alarms on all doors and windows that will sound if the doors are opened.
- Place a "Stop" sign on doors to the outside.
- Keep car keys out of sight.

To prevent harm when someone with dementia does wander:

- Have the patient wear an identification bracelet or necklace with their name, address, and phone number.
- Tell neighbors and others in the area that the person who has dementia may wander. Ask them to call you or to help them get home.
- Fence and close off any areas that may be dangerous, such as a stairwell or deck, or a hot tub or swimming pool.
- Consider giving the person a GPS device or a cell phone (which will have a GPS locator embedded in it).

Inspect the person's house, and remove or reduce hazards for tripping and falling. See also: Preventing falls

Do not leave a person who has advanced dementia alone in the home.

Lower the temperature of the hot water tank. Remove or lock up cleaning products and other items that may be poisonous.

Make sure the kitchen is safe.

- Remove knobs on the stove when it is not in use.
- Lock up sharp objects.

Remove, or store in locked areas:

- All medicines, including the patient's medicines and any over-the-counter drugs and supplements
- All alcohol
- All guns. Separate ammunition from the weapons.

Dementia - daily care

People who have dementia may have trouble with language and communication, eating, memory, and basic care for themselves.

Help with Memory Loss

People who have early memory loss can give themselves reminders to help them function each day. Some of these are:

- Ask the person you are talking with to repeat what they said, or repeat what they said to yourself 1 or 2 times. This will help you remember it better.
- Write down your appointments and other activities in a planner book or calendar. Keep it in an obvious place, such as beside your bed.
- Post messages around your home where you will see them, such as the bathroom mirror, next to the coffee pot, or on the phone.
- Keep a list of important phone numbers next to every phone.
- Have clocks and calendars around the house so that you stay oriented to time and the date.
- Label important items.
- Develop habits and routines that are easy to follow.
- Plan activities that improve thinking, such as puzzles, games, baking, or indoor gardening. Be sure to supervise any task that may have a risk of injury.

Eating and Nutrition

Some people who have dementia may refuse food or not eat enough to stay healthy. Some tips that may help are:

- Help the person get enough exercise. Ask them to go outside with you for a walk.
- Have someone the patient likes, such as a friend or relative, prepare and serve them food.
- Reduce distractions around the eating area, such as the radio or TV.
- Do not give them foods that are too hot or too cold.
- Give the patient finger foods if they have problems using utensils.
- Try different foods. It is common for people who have dementia to have decreased smell and taste, and this will affect their enjoyment of food.

In later stages of dementia, the person may have trouble chewing or swallowing. Talk with their health care provider about a proper diet. At some point, the patient may need a diet of only liquid or soft foods, to prevent choking.

Tips for Talking with Someone with Dementia

Keep distractions and noise down:

- Turn off the radio or TV.
- Close the curtains.
- Move to a quieter room.

To avoid surprising the patient, try to make eye contact before touching or speaking to them.

Use simple words and sentences, and speak slowly. Speak in a quiet voice. Talking loudly, as if the person is hard of hearing, will not help. Repeat your words, if needed. Use names and places the person knows. Try not to use pronouns, such as "he," "she," and "them." This can confuse someone with dementia. Tell them when you are going to change the subject.

Talk to people who have dementia as an adult. Do not make them feel as if they are a child. Do not pretend to understand them if you do not.

Ask questions in a way that they can answer with a simple "yes" or "no." Give the person clear choices, and a visual cue, such as pointing to something, if possible. Do not give them too many options.

When giving instructions:

- Break down instructions into small and simple steps.
- Allow time for the person to understand.
- If they get frustrated, consider changing to another activity.

Try to get them talking about something they enjoy. Many people with dementia like to talk about the past, and many can remember the distant past better than recent events Even if they remember something wrong, do not insist on correcting them.

Personal Grooming

People with dementia may need help with personal care and grooming.

Their bathroom should be nearby and easy to find. Consider leaving the bathroom door open, so they can see it. Suggest they visit the bathroom several times a day.

Make sure their bathroom is warm. Get them undergarments made for urine or stool leakage. Make sure they are cleaned well after going to the bathroom. Be gentle when helping. Try to respect their dignity.

Make sure the bathroom is safe. Common safety devices are:

- A tub or shower seat
- Handrails
- Antiskid mats

Do not let them use razors with blades. Electric razors are best for shaving. Remind the patient to brush their teeth at least 2 times a day.

A person with dementia should have clothing that is easy to put on and take off.

- Do not give them too many choices about what to wear.
- Velcro is much easier than buttons and zippers to use. If they still wear clothes with buttons and zippers, they should be in the front.
- Get them pullover clothes and slip on shoes, especially as their dementia gets worse.

Dementia - behavior and sleep problems

People with dementia often have certain problems when it gets dark at the end of the day and into the night. This problem is called "sundowning." The problems that get worse include increased confusion, anxiety, agitation, confusion, and not being able to get to sleep and stay asleep.

Tips for Behavior and Sleep Problems

Having a daily routine may help. Calmly reassuring and giving cues to orient the person who has dementia is also helpful in the evening and closer to bedtime. Try to keep them going to bed at the same time every night.

Doing calm activities at the end of the day and before bedtime may help the person with dementia sleep better at night. If they are active during the day, these calm activities can make them tired and more able to sleep.

Avoid loud noises and activity in the home at night, so the person does not wake up once they are asleep.

Do NOT restrain a person with dementia when they are in bed. If you are using a hospital bed that has guard rails in the home, putting the rails up may help keep the person from wandering at night.

Always talk with the health care provider before giving the patient store-bought sleep medicines. Many sleep aids can make confusion worse.

If the person with dementia has hallucinations (sees things that are not there):

- Try to decrease the stimulation around them. Avoid things with bright colors or bold patterns.
- Make sure there is enough light so that there are no shadows in the room. But do not make rooms so bright that there is a glare.
- Avoid movies or television shows that are violent or action-packed.

Take the person to places where they can move around and exercise during the day, such as shopping malls.

If the person who has dementia has an angry outburst, try not to touch or restrain them. Touch or restrain them only if you need to for safety. Instead, try to stay calm and distract them during outbursts. Do not take their behavior personally.

Try to prevent the person with dementia from getting hurt if they start wandering. See also: Dementia - safety in the home

Try to keep your home stress-free. These things can help:

- Keep lighting low, but not so low that there are shadows.
- Take down mirrors, or cover them.
- Do not use bare light bulbs.

When to Call the Doctor

Call your health care provider if:

- You think medicines may be the cause of changes in the behavior of someone who has dementia.
- You think the person may not be safe at home.

Caring for someone who has Alzheimer's disease (AD) can be stressful and overwhelming. It's important to take care of yourself. Ask for and accept help.

Talk to the doctor. Find out what treatments might help control symptoms or address behavior problems. Find a support group. Others who have "been there" may be able to help and will understand.

If there are times of day that the person is less confused or more cooperative, take advantage of that in daily routines. Consider using adult day care or respite services. These offer a break with the peace of mind that the patient is being taken care of. Begin to plan for the future. This may include

- Getting financial and legal documents in order
- Looking into assisted living or nursing homes
- Finding out what your health insurance and Medicare will cover