

What To Know About Alzheimer's Disease

Summary

Alzheimer's disease is a neurological condition in which the death of brain cells causes a decline in thinking skills and memory. There is currently no cure, but there are ways to support a person through medication and other strategies.

It is the most common type of dementia, accounting for around 60–80% of cases of dementia in the United States.

Alzheimer's disease affects around 5 million people Trusted Source in the U.S. Estimates suggest that this number will nearly triple by 2060.

The condition usually affects people aged 65 years and over, with only 10% Trusted Source of cases occurring in people younger than this.

This article provides an overview of Alzheimer's disease, including its symptoms, causes, and possible treatment options.

What is Alzheimer's disease?

Alzheimer's disease is a condition that affects the brain. The symptoms are mild at first and become more severe over time. It is named after Dr. Alois Alzheimer, who first described the condition in 1906 Trusted Source.

Common symptoms of Alzheimer's disease include memory loss, language problems, and impulsive or unpredictable behavior.

One of the main features of the condition is the presence of plaques and tangles in the brain. Another feature is a loss of connection between the nerve cells, or neurons, in the brain.

These features mean that information cannot pass easily between different areas of the brain or between the brain and the muscles or organs.

As the symptoms worsen, it becomes harder for people to remember recent events, to reason, and to recognize people they know. Eventually, a person with Alzheimer's disease may need full-time assistance.

According to the National Institute on Aging, Alzheimer's disease is the sixth leading cause of death Trusted Source in the U.S. However, other recent estimates suggest that it may be the third trusted Source leading cause of death, just behind heart disease and cancer.

Symptoms

Alzheimer's disease is a progressive condition, meaning that the symptoms get worse over time. Memory loss is a key feature, and this tends to be one of the first symptoms to develop.

The symptoms appear gradually, over months or years. If they develop over hours or days, a person may require medical attention, as this could indicate a stroke.

Symptoms of Alzheimer's disease include:

Memory loss: A person may have difficulty taking in new information and remembering information. This can lead to:

- repeating questions or conversations
- losing objects
- forgetting about events or appointments
- wandering or getting lost

Cognitive deficits: A person may experience difficulty with reasoning, complex tasks, and judgment. This can lead to:

- a reduced understanding of safety and risks
- difficulty with money or paying bills
- difficulty making decisions
- difficulty completing tasks that have several stages, such as getting dressed

Problems with recognition: A person may become less able to recognize faces or objects or less able to use basic tools. These issues are not due to problems with eyesight.

Problems with spatial awareness: A person may have difficulty with their balance, trip over, or spill things more often, or they may have difficulty orienting clothing to their body when getting dressed.

Problems with speaking, reading, or writing: A person may develop difficulties with thinking of common words, or they may make more speech, spelling, or writing errors.

Personality or behavior changes: A person may experience changes in personality and behavior that include:

- becoming upset, angry, or worried more often than before
- a loss of interest in or motivation for activities they usually enjoy
- a loss of empathy
- compulsive, obsessive, or socially inappropriate behavior

In 2016, researchers published findings suggesting that a change in the person's sense of humor might also be an early symptom of Alzheimer's.

Stages

Alzheimer's disease can range from mild to severe. The scale ranges from a state of mild impairment through to moderate impairment before eventually reaching severe cognitive decline.

The sections below will discuss the stages of Alzheimer's Trusted Source and some of the symptoms that characterize them.

Mild Alzheimer's disease

People with mild Alzheimer's disease develop memory problems and cognitive difficulties that may include the following:

- taking longer than usual to perform daily tasks
- difficulty handling money or paying the bills
- wandering and getting lost
- experiencing personality and behavior changes, such as getting upset or angry more easily, hiding things, or pacing

Moderate Alzheimer's disease

In moderate Alzheimer's disease, the parts of the brain responsible for language, senses, reasoning, and consciousness are damaged. This can lead to the following symptoms:

- greater memory loss and confusion
 - difficulty recognizing friends or family
 - an inability to learn new things
 - difficulty performing tasks with several stages, such as getting dressed
 - difficulty coping with new situations
 - impulsive behavior
 - hallucinations, delusions, or paranoia
- Severe Alzheimer's disease

In severe Alzheimer's disease, plaques and tangles are present throughout the brain, causing the brain tissue to shrink substantially. This can lead to:

- an inability to communicate
- dependency on others for care
- being unable to leave bed all or most of the time

Early onset Alzheimer's disease

Although age is the main risk factor for Alzheimer's disease, this is not just a condition that affects older adults.

According to the Alzheimer's Association, early onset Alzheimer's disease affects around 200,000 U.S. adults under the age of 65 years. Many people with this condition are in their 40s or 50s.

In many cases, doctors do not know why younger people develop this condition. Several rare genes can cause the condition. When there is a genetic cause, it is known as familial Alzheimer's disease.

What's the difference between dementia and Alzheimer's?

Dementia is an umbrella term for a range of conditions that involve a loss of cognitive functioning.

Alzheimer's disease is the most common type of dementia. It involves plaques and tangles forming in the brain. Symptoms start gradually and are most likely to include a decline in cognitive function and language ability.

Other types of dementia include Huntington's disease, Parkinson's disease, and Creutzfeldt-Jakob disease. A person can have more than one type of dementia.

Diagnosis

To receive a diagnosis of Alzheimer's, a person will be experiencing memory loss, cognitive decline, or behavioral changes that are affecting their ability to function in their daily life.

Friends and family may notice the symptoms of dementia before the person themselves.

There is no single test for Alzheimer's disease. If a doctor suspects the presence of the condition, they will ask the person — and sometimes their family or caregivers — about their symptoms, experiences, and medical history.

The doctor may also carry out the following tests:

- cognitive and memory tests, to assess the person's ability to think and remember
 - neurological function tests, to test their balance, senses, and reflexes
 - blood or urine tests
 - a CT scan or MRI scan of the brain
 - genetic testing
- A number of assessment tools are available to assess cognitive function.

In some cases, genetic testing may be appropriate, as the symptoms of dementia can be related to an inherited condition such as Huntington's disease.

Some forms of the APOE e4 gene are associated with a higher chance of developing Alzheimer's disease.

Testing for relevant genes early could indicate the likelihood of someone having or developing the condition. However, the test is controversial, and the results are not entirely reliable.

Treatments

There is no known cure for Alzheimer's disease. It is not possible to reverse the death of brain cells.

Treatments can, however, relieve its symptoms and improve quality of life for the person and their family and caregivers.

The following are important elements of dementia care:

- effective management of any conditions occurring alongside Alzheimer's
 - activities and daycare programs
 - involvement of support groups and services
- The sections below will discuss medications and treatments for behavioral changes.

Medications for cognitive symptoms

No disease-modifying drugs are available for Alzheimer's disease, but some options may reduce the symptoms and help improve quality of life.

Drugs called cholinesterase inhibitors can ease cognitive symptoms, including memory loss, confusion, altered thought processes, and judgment problems. They improve neural communication across the brain and slow the progress of these symptoms.

Three common drugs with Food and Drug Administration (FDA) approval to treat these symptoms of Alzheimer's disease are:

- donepezil (Aricept), to treat all stages
- galantamine (Razadyne), to treat mild-to-moderate stages
- rivastigmine (Exelon), to treat mild-to-moderate stages

Another drug, called memantine (Namenda), has approval to treat moderate-to-severe Alzheimer's disease. A combination of memantine and donepezil (Namzaric) is also available.

Emotion and behavior treatments

The emotional and behavioral changes linked with Alzheimer's disease can be challenging to manage. People may increasingly experience irritability, anxiety, depression, restlessness, sleep problems, and other difficulties.

Treating the underlying causes of these changes can be helpful. Some may be side effects of medications, discomfort from other medical conditions, or problems with hearing or vision.

Identifying what triggered these behaviors and avoiding or changing these things can help people deal with the changes. Triggers may include changing environments, new caregivers, or being asked to bathe or change clothes.

Changing the environment to resolve obstacles and boost the person's comfort, security, and peace of mind is often possible.

The Alzheimer's Association offer a list of helpful coping tips for caregivers.

In some cases, a doctor may recommend medications for these symptoms, such as:

- antidepressants, for low mood

- antianxiety drugs

- antipsychotic drugs, for hallucinations, delusions, or aggression

Alzheimer's and dementia resources

To discover more evidence-based information and resources for Alzheimer's and dementia, visit our dedicated hub.

Causes

Like all types of dementia, Alzheimer's develops due to Trusted Source the death of brain cells. It is a neurodegenerative condition, which means that the brain cell death happens over time.

In a person with Alzheimer's, the brain tissue has fewer and fewer nerve cells and connections, and tiny deposits, known as plaques and tangles, build up on the nerve tissue.

Plaques develop between the dying brain cells. They are made from a protein known as beta-amyloid. The tangles, meanwhile, occur within the nerve cells. They are made from another protein, called tau.

Researchers do not fully understand why these changes occur. Several factors may be involved.

The Alzheimer's Association have produced a visual guide to show what happens in the process of developing Alzheimer's disease.

Risk factors

Unavoidable risk factors for Alzheimer's disease include:

- aging
- having a family history of Alzheimer's disease
- carrying certain genes

Other factors that increase the risk of Alzheimer's include Trusted Source severe or repeated traumatic brain injuries and having exposure to some environmental contaminants, such as toxic metals, pesticides, and industrial chemicals.

Modifiable factors that may help prevent Alzheimer's include:

- getting regular exercise
 - following a varied and healthful diet
 - maintaining a healthy cardiovascular system
 - managing the risk of cardiovascular disease, diabetes, obesity, and high blood pressure
 - keeping the brain active throughout life
- Frequently asked questions

Below are some commonly asked questions about Alzheimer's disease.

What age can Alzheimer's start?

Alzheimer's usually affects people aged 65 years and over, with only 10% Trusted Source of cases occurring in people younger than this.

What are the 7 stages of Alzheimer's?

The following are the 7 clinical stages of Alzheimer's disease:

Stage 1: A person appears cognitively normal, but pathological changes are happening in the brain.

Stage 2: Prodromal stage: mild memory loss, but generally this is indistinguishable from normal forgetfulness.

Stage 3: Progression into mild cognitive impairment (MCI). Individuals may get lost or have difficulty in finding correct wording.

Stage 4: Moderate dementia; poor short-term memory. Individuals forget some of their personal history.

Stage 5: Cognition continues to decline and, at this point, individuals need help in their daily lives. They suffer from confusion and forget many personal details.

Stage 6: Severe dementia. Requiring constant supervision and care. Patients fail to recognize many of their family and friends and have personality changes.

Stage 7: Individuals are nearing death. They show motor symptoms, have difficulty communicating, are incontinent, and require assistance in feeding.

What is the life expectancy for Alzheimer's?

According to the Alzheimer's Association, on average, a person with the condition will live four to eight years after diagnosis. Depending on other factors, though, they may live as long as 20 years.

Summary

Alzheimer's disease is a neurodegenerative condition. A buildup of plaques and tangles in the brain, along with cell death, causes memory loss and cognitive decline.

There is currently no cure, but drugs and other treatments can help slow or ease the cognitive, emotional, and behavioral symptoms and improve the person's quality of life.