

Alzheimer's Disease

Learning Guide



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What it is

Alzheimer's disease (AD) is the most common form of dementia. More than 4 million Americans have AD. The disease is characterized by memory loss, language deterioration, poor judgment, and an indifferent attitude.

Dementia is a brain disorder that seriously affects a person's ability to carry out daily activities. It involves the parts of the brain that control thought, memory, and language. Healthy brain tissue dies or deteriorates, causing a steady decline in memory and mental abilities.



AD is not the only form of dementia. Doctors diagnose Alzheimer's disease by doing tests to eliminate all the other possible reasons for the person's symptoms. If no other cause is found, usually a diagnosis of Alzheimer's is given.

AD causes progressive degeneration of the brain. It may start with slight memory loss and confusion, but eventually leads to severe, irreversible mental impairment that destroys a person's ability to remember, reason, learn, and imagine. Usually, family members notice gradual—not sudden—changes in a person with AD.

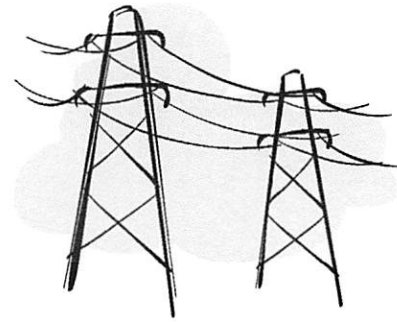


As AD progresses, symptoms become serious, and family members usually seek medical help. Progression from simple forgetfulness to severe dementia might take five to ten years or longer.

People with mild AD may live alone and function fairly well. People with moderate AD may need some type of assistance. People with advanced AD generally require total care.

Causes

Think of the way electricity travels along wires from a power source to the point of use. Messages travel through the brain in a similar way, but they are carried by chemicals instead of wires. Information travels through the nerve cells in the brain so we can remember, communicate, think, and perform activities.



Researchers have found that people with AD have lower levels of the chemicals that carry these important messages from one brain cell to another. In addition, people with AD have many damaged or dead nerve cells in areas of the brain that are vital to memory and other mental abilities. Although the person's mind still contains memories and knowledge, it may be impossible to find and use the information in the brain because of AD.

Abnormal structures called plaques and tangles are another characteristic of AD.

- Plaques. It is believed that plaque deposits form between brain cells early in the disease process.
- Tangles. This refers to the way that brain cells become twisted, causing damage and nerve cell death.

These structures block the movement of messages through the brain, causing memory loss, confusion, and personality changes.

The person with AD has no control over these symptoms and cannot be held responsible for behavior problems.



Complications

Most people with AD die from another illness, not from AD. In advanced AD people lose the ability to do normal activities and care for their own needs. They may have difficulty eating, going to the bathroom, or taking care of their personal hygiene. They may wander away, get lost, or become injured. They may develop complicating health problems such as pneumonia, infections, falls, and fractures.

Treatment

There is no cure. Medications are available that may slow AD, lessening the symptoms, but they are unable to stop or reverse the disease. These include tacrine (Cognex), donepezil (Aricept), rivastigmine (Exelon), and galantamine (Reminyl).

Medicines are sometimes ordered to help with symptoms such as sleeplessness, wandering, anxiety, agitation, and depression.

Prevention and research

There is no known way to prevent AD. Researchers continue to look for ways to reduce the risk of this disease.



It is believed that lifelong mental exercise and learning may create more connections between nerve cells and delay the onset of dementia. People should be encouraged to learn new things and stay mentally active as long as possible.