

About Alzheimer's disease

Alzheimer's disease is the leading cause of dementia, a group of conditions that gradually destroy brain cells and lead to progressive decline in mental function. Although there is currently no cure for Alzheimer's, new treatments are on the horizon as a result of accelerating insight into the biology of the disease.

Symptoms

The symptoms of Alzheimer's disease are more than simple lapses in memory or age-related changes. People with Alzheimer's disease experience memory loss as well as difficulties communicating, learning, thinking and reasoning. These are problems severe enough to impact an individual's work, social activities and family life.

As the disease progresses, individuals may also experience changes in personality and behavior, such as anxiety, suspicion or agitation, as well as delusions or hallucinations.

The Alzheimer's Association has a list of 10 Warning Signs for Alzheimer's disease. Different individuals may experience one or more of these signs to different degrees. If you notice any of them, consult a doctor.

Diagnosis

A physician should be consulted about concerns with memory, thinking skills and changes in behavior so the cause can be determined. This is especially important because some dementia-like symptoms can be reversed if they are caused by treatable conditions, such as depression, drug interactions, thyroid problems, excess use of alcohol or certain vitamin deficiencies.

For people with dementia and their families, an early diagnosis allows individuals to take advantage of available treatments as soon as possible. An early diagnosis also allows time to plan for the future (including decisions about health care and finances), enroll in clinical studies and maximize quality of life.

There is no single diagnostic test that can determine if a person has Alzheimer's disease. The diagnostic process involves several kinds of tests and may take more than one day. Diagnostic tools and criteria make it possible for physicians to make a diagnosis of Alzheimer's with an accuracy of about 90 percent.

Standard prescription treatments

The U.S. Food and Drug Administration (FDA) has approved six drugs to treat cognitive symptoms of Alzheimer's disease. Four of these are in a class of drugs called **cholinesterase inhibitors**, which are prescribed to treat symptoms related to memory, thinking, language, judgment and other thought processes:

- Donepezil (Aricept®) is approved to treat all stages of Alzheimer's.
- Rivastigmine (Exelon®) is approved to treat mild-to-moderate Alzheimer's.
- Galantamine (Reminyl®) is approved to treat mild-to-moderate Alzheimer's.
- Tacrine (Cognex®) is rarely prescribed today because of associated side effects.

The fifth drug is an **NDMA** (*N-methyl-D-aspartate*) **receptor antagonist**. It is prescribed to improve memory, attention, reason, language and the ability to perform simple tasks. It can be used alone or with cholinesterase inhibitors.

- Memantine (Namenda®) is for the treatment of moderate-to-severe Alzheimer's disease.

The sixth drug is a combination of a cholinesterase inhibitor and an NDMA receptor antagonist.

- Memantine+donepezil (Namzaric®) is for the treatment of moderate-to-severe Alzheimer's disease.

Risk factors

Experts believe that Alzheimer's develops as a complex result of multiple factors rather than any one overriding cause. The only exception to this is inheriting one of three rare genes that directly cause the disease. These genes account for about 1 percent of all cases. The other 99 percent of Alzheimer's cases are believed to be caused by a wide range of risk factors. These include, but are not limited to, advanced age, family history of Alzheimer's and lifestyle factors such as diet, exercise and smoking.

Progression

Alzheimer's disease advances at widely different rates. On average, people age 65 and older live four to eight years after diagnosis, while some live with the disease for as long as 20 years. Outside of co-existing health problems such as heart disease or diabetes that can shorten lifespan, researchers do not know why some people live longer than others.

The thinking, memory, behavioral and functional problems associated with Alzheimer's reflect the areas of the brain affected by the disease. Areas involved with learning and memory are usually affected first. Later, regions involved in planning and carrying out tasks are affected. Ultimately, the brain regions involved in carrying out basic bodily activities such as walking and swallowing are impaired.

In general, those diagnosed when problems with thinking and memory are still quite mild are likely to live with the disease for many years. Those diagnosed when problems are more pronounced, such as when the individual struggles to remember where they are or to dress correctly for the season, are likely to live with the disease for fewer years. Those diagnosed when problems are severe, such as needing help with dressing and eating, generally live for the shortest period. Eventually, the person with Alzheimer's will need around-the-clock care. Alzheimer's disease is ultimately fatal.

Alzheimer's statistics

More than 5 million Americans have Alzheimer's disease.

- Alzheimer's is the sixth-leading cause of death in the United States.
- One-third of people age 85 or older have Alzheimer's or another dementia.
- Middle-aged individuals can develop Alzheimer's as well; approximately 200,000 Americans younger than 65 have Alzheimer's disease.