Alzheimer's Disease

Overview

What is Alzheimer's disease?
Alzheimer's disease is a type of dementia. Dementia is a word that doctors use to describe a wide range of symptoms linked to physical and functional changes in the brain. Dementia usually affects a person's memory, thinking abilities, and behavior. These mental changes make it hard for a person who has dementia to care for him- or herself.
Alzheimer's disease is the most common cause of dementia, but many other things can also cause dementia.

How common is Alzheimer's disease?
Alzheimer's disease is common in people older than 65 years of age. About 1 out of every 8 people who are 65 years of age or older have the disease. Nearly half of people 85 years of age and older have Alzheimer's.
People who are younger than 65 years of age can also have Alzheimer's disease. This is called early onset Alzheimer's. Early onset Alzheimer's is not very common. Approximately 200,000 people in the United States have early onset Alzheimer's.

Symptoms

Why is Alzheimer's disease called a "progressive" disease?
"Progressive" means that the symptoms of Alzheimer's disease usually start slowly and are mild, then get worse over time. The process of symptoms getting worse over time is called "cognitive decline." In the late stages of the disease, a person who has Alzheimer's is no longer able to communicate and depends entirely on other people for care.

How long does a person usually live with Alzheimer's disease?
It's different for each person. Alzheimer's disease is the fifth leading cause of death for Americans older than 65 years of age and the sixth leading cause of death for all people in the United States. Most people live 4 to 8 years after being diagnosed with Alzheimer's disease. Some live with the disease for up to 20 years.

What are the warning signs and symptoms of Alzheimer's disease?
The Alzheimer's Association has identified 10 warning signs and symptoms of Alzheimer's disease (see the list below). It's important to remember that every person is different and may not have all or even most of these warning signs. Talk to your family doctor if you notice 1 or more of these signs in
10 Alzheimer's Disease Warning Signs

- **Memory loss that affects daily life:** Examples include forgetting important dates or things you just learned; asking the same question over and over; or relying heavily on reminder notes, technology, or other family members to remember things.

- **Changes in the ability to follow a plan or solve a problem:** This may include having trouble concentrating on a problem, such as a math problem; following a plan, such as a recipe; or keeping track of regularly scheduled tasks, such as paying monthly bills.

- **Changes in the ability to complete familiar tasks:** Alzheimer's disease can make it hard to do the things that you used to do all the time. For example, it might be hard to do chores at home, run errands, or finish a routine task at work.

- **Becoming confused about time or place:** Examples include losing track of how much time has passed or the date or the day of the week and forgetting where you are and how you got there.

- **Problems with vision or understanding visual information:** Examples include trouble reading, identifying colors or judging distances, or getting confused about what you see.

- **Problems with words:** Examples include forgetting words in the middle of a conversation, repeating parts of a conversation, or problems with vocabulary, such as calling things by the wrong names.

- **Misplacing things:** Examples include putting things in unusual places, losing things often, being unable to retrace steps in order to find a lost object, and even accusing others of stealing.

- **Poor judgment:** Examples include paying less attention to appearance or cleanliness and using poor judgment with money, such as giving large amounts of money to solicitors.

- **Withdrawal from activities:** Examples include withdrawing from social activities, work projects, or family gatherings, or abandoning a hobby, sport, or favorite activity.

- **Changes in mood and personality:** Examples include
Causes & Risk Factors

What causes Alzheimer's disease?
Doctors don't know exactly what causes Alzheimer's disease. It appears that Alzheimer's disease develops when clumps of abnormal proteins grow in the brain. This growth likely begins with a series of many small changes in the brain that start long before any symptoms are noticeable. Over time, these changes add up. Eventually, brain cells become damaged and die.

What are the risk factors for Alzheimer's disease?
The risk factors for Alzheimer's disease include the following:

- **Age**: The older you are, the greater your risk of developing Alzheimer's disease. After age 65, your chance of developing Alzheimer's doubles every 5 years. People who are 85 years of age or older have a nearly 50% chance of having the disease.
- **Genetics and family history**: You are more likely to get Alzheimer's disease if you have a family history of Alzheimer's disease, meaning that one or more of your parents, siblings, or children has the disease. Scientists also think that certain genes in your DNA may increase your risk for Alzheimer's disease.
- **Down syndrome**: People who have Down syndrome have a much higher risk for Alzheimer's disease than the general population.
- **Environmental/lifestyle factors**: It is likely that your environment and your lifestyle habits also affect your risk for Alzheimer's disease. A history of head trauma, cardiovascular or heart problems, diabetes, and obesity appear to increase your risk for Alzheimer's disease. To help prevent these health problems, wear a helmet when riding a bicycle, always buckle your seat belt when in the car, establish a regular exercise routine, eat right, and avoid tobacco products.

Alzheimer's disease also appears to be more common in women than in men. Nearly two-thirds of people who have Alzheimer's disease are women.

Diagnosis & Tests

When should I see my doctor?
If you are worried that you or a loved one might have some of the warning signs of Alzheimer's disease, talk to your family doctor right away. Getting an early diagnosis of Alzheimer's will help you get treatment earlier and will give you time to address questions of care, finances, and legal issues with your family.

How does my doctor determine whether I have Alzheimer's disease?
The diagnosis of Alzheimer's disease may take some time. There is no test that can tell your doctor whether you have Alzheimer's disease. So, to make sure your doctor has plenty of information to help determine the cause of your symptoms, he or she may:

- Ask you questions about your current health and your medical history.
- Ask you questions about your daily routine and any changes in your behavior.
- Perform a mental exam to test your memory, problem-solving, attention, and language abilities.
Perform medical tests, such as blood or urine tests.
Perform brain scans to look for problems, such as stroke, that may be causing your symptoms.

Based on this information, your doctor can almost always tell whether you have dementia. Your doctor can tell whether Alzheimer's disease is the cause of your dementia about 90% of the time. But Alzheimer's disease can only be diagnosed with 100% accuracy after death, when the brain is examined under a microscope. The brain of a person who had Alzheimer's disease will show very distinct changes that only happen when Alzheimer's is the cause of dementia.

Treatment

Is there a cure for Alzheimer's disease?

No, there is no cure for Alzheimer's disease. Instead, treatment may focus on the following:

- Slowing the progression of symptoms such as memory loss.
- Addressing behavior changes such as depression and aggression.
- Helping to relieve other symptoms, such as sleep problems.

What medicines are used to treat the symptoms of Alzheimer's disease?

The different medicines your doctor may prescribe to treat Alzheimer's disease symptoms are listed below. It's important to remember that these medicines do not stop the disease. They may not work for every person or may help for only a short time.

Medicines for memory

- Cholinesterase inhibitors have been approved by the Food and Drug Administration (FDA) to treat all stages of Alzheimer's disease. Rivastigmine and galantamine can treat mild to moderate Alzheimer's. Donepezil is approved to treat mild to severe Alzheimer's. Typical side effects of these drugs include diarrhea, nausea, and vomiting. The FDA has also approved another cholinesterase inhibitor, tacrine, to treat Alzheimer's disease, but doctors don't often prescribe it because it can cause more serious side effects.

- Memantine is approved to treat moderate to severe Alzheimer's disease. It may be used alone or in addition to one of the cholinesterase inhibitors listed above. It may cause side effects such as dizziness and headaches.

Medicines for behavior

- Depending on the behavioral problems and the severity of the problems, your doctor may also choose to prescribe drugs such as pain relievers, antidepressants, anti-anxiety medicines, sleep medicines, or antipsychotics.

What should I know about clinical trials?
Clinical trials are research studies that help doctors and scientists determine whether a new drug or treatment is safe and effective. During a clinical trial, patients volunteer to receive the new treatment and give the researchers permission to study them. Right now, researchers are trying hard to find new ways to treat or cure Alzheimer's disease. If you think you might want to volunteer to be part of a clinical trial for Alzheimer's disease treatments, talk to your family doctor.

**What about non-drug treatments?**

Drugs don't always help relieve the symptoms of Alzheimer's disease. Non-drug treatments for a person who has Alzheimer's disease often include managing your loved one's environment and establishing a routine to help reduce stress and anxiety. Read "Caring for a Relative Who Has Dementia" to learn more.

**Complications**

**What are the complications of Alzheimer's disease?**

Complications of Alzheimer's disease usually are a result of the changes that take place in the brain as the disease progresses. These changes can cause additional health problems, including:

- **Depression:** Depression is common in people who have Alzheimer's disease. Many people become depressed when they recognize that their memories and abilities to function are getting worse. It can be hard to tell whether a person who has Alzheimer's is depressed. Many of the symptoms of depression are very similar to the symptoms of Alzheimer's disease, including withdrawal from daily activities, changes in mood, and sleeping problems.
- **Unreported pain, illness, or medicine side effects:** Alzheimer's disease may make it hard for a person to communicate. As such, a person who has Alzheimer's may not be able to tell caregivers if they're in pain, are sick, or are experiencing side effects from a medicine.
- **Falling:** Alzheimer's disease can cause changes in balance and coordination. This may cause an increased risk of broken bones, head trauma, or other injuries from falls.
- **Pneumonia or other infections:** Alzheimer's disease may cause a loss of control of certain body functions, such as swallowing or bladder control. Problems swallowing may cause the person to accidentally inhale food or drink. This can lead to pneumonia. If the person has problems with bladder control, he or she may need to have a urinary catheter. A catheter is a tube placed in the bladder to drain and collect urine. Having a catheter increases the risk of urinary tract and other serious infections.
- **Malnutrition or dehydration:** People who have Alzheimer's disease may not get enough food or water because they refuse food when they are confused or upset; they don't recognize or are unable to communicate that they are hungry or thirsty; or because it is difficult for them to swallow. It's important to watch for signs of malnutrition.

If you think that a loved one might be experiencing any of the complications listed above, talk to your loved one's doctor. He or she can provide medicine or other treatments to help keep your loved one comfortable.

**Other Organizations**

**Questions to Ask Your Doctor**

- Is it possible that my/my loved one's mental or behavioral changes are just a normal part of
aging, not a symptom of disease?

- Do I/Does my loved one have dementia? How can you tell?
- Do you think that my/my loved one’s symptoms might be caused by Alzheimer’s disease?
- What tests do I/does my loved one need?
- If it is Alzheimer's disease, what kind of care will I/my loved one need, now and in the future?
- What treatments do you recommend now? As the disease progresses?
- Should I/we think about participating in any clinical trials? What are the pros and cons of participating in a clinical trial?
- What lifestyle changes can I/my loved one make at home to help relieve symptoms?
- What can I, as a caregiver, do to make my loved one more comfortable?

**Bibliography**

**References**

3. American Health Assistance Foundation. Alzheimer’s Disease Research by American Health Assistance Foundation(04/01/12, http://www.ahaf.org/alzheimers/)