



# Understanding Alzheimer's Disease



Lora, diagnosed in 2004,  
with her daughter, Jill.



## What Is Alzheimer's Disease?

Alzheimer's disease is a neurologic disorder that affects the brain. It causes dementia. Its earliest and main symptom is steadily increasing memory loss. Problems with getting lost, language, and emotional control are also common. These deficits may worsen over five to 20 years. Treatments can help maintain thinking, memory, and speaking skills. No treatments can currently change or reverse the disease. But, there are many ways to help maintain quality of life.

## What Is the Difference Between Alzheimer's Disease and Dementia?

As the understanding of Alzheimer's disease has improved, researchers now recognize that it is a process that can occur in people who initially have no symptoms. When Alzheimer's disease causes very mild symptoms, the process is now referred to as **mild cognitive impairment due to Alzheimer's disease**. When the symptoms begin to interfere with daily functioning, that phase of the illness is referred to as **dementia due to Alzheimer's disease**. Dementia is a term that means the person has significant difficulty in daily life due to problems with thinking and memory. Alzheimer's disease is the most common type of dementia. Other types of dementia include frontotemporal dementia, vascular dementia, and dementia with Lewy bodies.

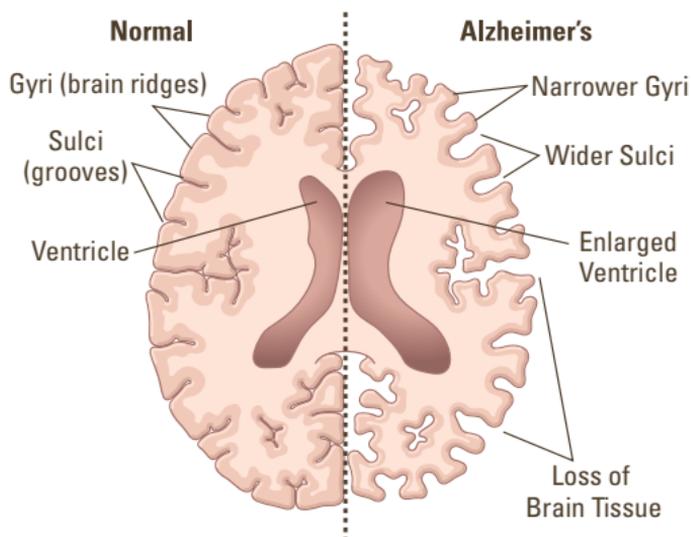
## What Causes Alzheimer's Disease?

The exact cause of Alzheimer's disease is not yet known. Some people may have genes that put them at higher risk for Alzheimer's. Genetics is the likely cause when the disease strikes people in their 40s or 50s. But most people who get Alzheimer's dementia are 60 or older. In these people, genes may play a role, but so might other factors, such as having type 2 diabetes, heart disease, or high blood pressure.

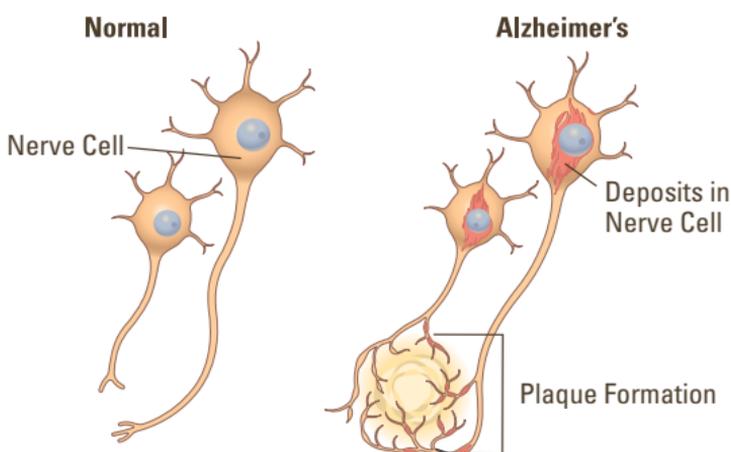
Alzheimer's occurs because brain cells are slowly dying. As the cells die, parts of the brain shrink and stop working normally. The brain shows three telltale signs of the disease:

- Amyloid plaques (clumps of material in the spaces between brain cells)
- Tangles (buildup of protein molecules inside brain cells)
- Loss of synapses (connections between brain cells)

## Cross Section of the Brain



## Nerve Cells in the Brain



## What Are the Symptoms of Dementia in Alzheimer's Disease?

The earliest symptoms of Alzheimer's disease are often loss of recent memories and trouble learning new information. For example, a person may repeat stories in the same conversation or forget recent events. In the later stages of the illness, people with Alzheimer's dementia forget how to perform even the simplest tasks. One of the most important aspects of Alzheimer's dementia is that the person often is unaware of the symptoms.

It is important that people suspected of having Alzheimer's dementia see their primary care physician or a neurologist. Usually a family member initiates the appointment. A family member should always accompany the person to the visit with the doctor. Only a health care professional can diagnose the condition correctly. Then the patient and family can seek treatment and start to plan for the future.

## 10 Warning Signs of Alzheimer's Disease Dementia

1. Memory changes that disrupt daily life, such as forgetting important dates or events
2. Challenges in planning or solving problems, such as keeping track of bills
3. Difficulty completing familiar tasks, such as driving to a known location
4. Confusion with time or place
5. Vision difficulties, such as problems reading, judging distance, or determining color or contrast
6. New problems understanding or expressing words when speaking or writing
7. Misplacing things and losing the ability to retrace steps
8. Poor judgment, such as giving large amounts of money to strangers or not paying attention to personal grooming
9. Withdrawal from work or social activities
10. Mood or personality changes, such as feeling confused, suspicious, depressed, fearful, or anxious

*Credit: Alzheimer's Association*

## How Is Alzheimer's Disease Diagnosed?

No simple test can diagnose Alzheimer's disease, but this is an area of rapid development. New brain scans and lab tests to aid in early diagnosis may become available soon. Currently, to diagnose Alzheimer's disease dementia, a neurologist or doctor will conduct a complete examination that may include:

- Asking questions about health and medical history
- Asking about changes in memory, behavior, or personality
- Conducting tests of memory, problem solving, attention, and language
- Performing tests to rule out other possible causes
- Talking with family members or caregivers

## What Are the Treatment Options?

No cure has yet been found for Alzheimer's disease. Promising research to develop new treatments that slow or stop the progress of the disease—and uncover a cure—is

underway. Medications can help maintain thinking, memory, and speaking skills. Talk to your neurologist or doctor to find out whether any of these medications might be right for you. Medications for Alzheimer's disease symptoms work best when they are started early.

## **Living with Alzheimer's Disease Dementia**

In addition to medications, other changes can help maintain quality of life.

**Heart health.** Keeping the heart and blood vessels healthy may help slow the progression of Alzheimer's disease dementia. It is important to:

- Control high blood pressure
- Reduce high cholesterol levels
- Avoid smoking
- Keep type 2 diabetes well managed

**Physical exercise.** Some studies find that exercise can benefit both the body and brain of people with Alzheimer's disease dementia.

**Mental exercise.** Some studies show that people who challenge their brains are better able to hold off symptoms of Alzheimer's disease dementia. Activities that may help include:

- Social activities, such as book clubs or outings with friends or family
- Playing cards or board games
- Reading or doing crossword or number puzzles

**Support groups.** People with mild to moderate Alzheimer's disease may find it helpful to join a support group of others with Alzheimer's. It can be stimulating to be with peers. Alzheimer's disease is especially hard on caregivers and other family members. Many Alzheimer's disease support groups focus on caregivers.

## **Future Plans**

It is important to begin to plan for the future. This may include getting financial matters, advance care plans, and legal documents in order, or looking into long-term care options.

## **Partnering with Your Neurologist**

To provide the best care, your neurologist needs to know all about your symptoms and medical history. Likewise, you need to get answers to your questions. Keeping a notebook about your condition and bringing a few well-organized questions to your appointments can be helpful.

# For Family and Friends

The participation of family members is critical to successful care. However, Alzheimer's disease takes a toll on the main caregiver, too. Spouses can become overwhelmed. If you are caring for a family member or friend with Alzheimer's disease dementia, take care of yourself, as well. Get help from family, friends, and professionals. There are many support groups available for caregivers. Ask your neurologist or family physician to recommend a local support group, or see **Resources** for organizations to contact.

## Help Us Cure Brain Disease

### Make a Donation to Research

The American Brain Foundation supports vital research and education to discover causes, improved treatments, and cures for brain and other nervous system diseases. To learn more or to make a donation to support research, visit [www.CureBrainDisease.org](http://www.CureBrainDisease.org).

### Make Your Voice Heard

To keep research advancing toward future cures and treatments for brain disease, it is important for people affected by neurologic disorders to advocate for more research funding. Contact your members of Congress and ask them to support neurology research by increasing funding for the National Institutes of Health (NIH). Look up your Congressional representatives at [www.senate.gov](http://www.senate.gov) and [www.house.gov](http://www.house.gov). Your voice can make a difference.

### Take Part in Research

People are needed for clinical trials that can help find new treatments for neurologic disorders. Clinical trials are research studies. They help ensure that new drugs are both safe and effective. Ask your neurologist how to volunteer for a clinical trial. You can also find trials through patient organizations or the American Academy of Neurology website at [www.aan.com/view/clinicaltrials](http://www.aan.com/view/clinicaltrials).

## Resources

### **American Academy of Neurology**

[www.aan.com/patients](http://www.aan.com/patients)

(800) 879-1960

The American Academy of Neurology website for patients and caregivers offers a wealth of articles, information about events and resources, and links to support groups, clinical trial information, and more.

### **Neurology Now® magazine**

[www.neurologynow.com](http://www.neurologynow.com)

(800) 879-1960

Free magazine for patients and caregivers, courtesy of the American Academy of Neurology. Stories about people living with neurologic disorders, the latest information on resources and treatments, and more.

### **Alzheimer's Disease: A Guide for Patients and Families**

[www.aan.com/patients](http://www.aan.com/patients)

(800) 879-1960

Free DVD and guidebook from the Foundation for the American Academy of Neurology for people who are newly diagnosed.

### ***Alzheimer's Disease***

by Paul Dash, MD, and Nicole Villemarette-Pittman, PhD

A Quality of Life Guide published by the American Academy of Neurology as a useful resource for patients and their families and caregivers. Available from major booksellers.

### **Alzheimer's Association**

[www.alz.org](http://www.alz.org)

(800) 272-3900

### **Alzheimer's Disease Education and Referral Center**

[www.nia.nih.gov/Alzheimers](http://www.nia.nih.gov/Alzheimers)

(800) 438-4380

### **Alzheimer's Foundation of America**

[www.alzfdn.org](http://www.alzfdn.org)

(866) AFA-8484 (232-8484)

## Did you know?

Neurologists are medical doctors who specialize in disorders of the brain and nerves. They are the specialists who most often diagnose and treat people with Alzheimer's disease.



*www.aan.com*

**(800) 879-1960**

The American Academy of Neurology, an association of 25,000 neurologists and neuroscience professionals, is dedicated to promoting the highest quality patient-centered neurologic care. For more information about the American Academy of Neurology, visit *www.aan.com*.

*Cover photo by Kristine Walsh*