



# Fact Sheets

*Emory Alzheimer's Disease Research Center*  
Wesley Woods Health Center, 1841 Clifton Rd., Atlanta, GA 30329  
Grady Neurology Clinic, 80 Jesse Hill Jr. Drive SE, Atlanta, GA 30303  
404-728-6950 <http://med.emory.edu/ADRC/>

## Alzheimer's Disease

Alzheimer's disease (AD) is a progressive brain disease that has early (mild), middle (moderate) and late (severe) stages

In the early stage of AD people have problems with their recent memory such as where they put the car keys, remembering who called them on the phone, keeping track of appointments and remembering to take their medications. In the early stage of Alzheimer's long term memory is not impaired. People with early Alzheimer's disease can easily remember many details about their childhood and other earlier phases of their life.

With time other areas of thinking become affected. These may include new difficulty with:

- Planning or initiating activities
- Completing familiar tasks at home or work
- Keeping track of time and/or place
- Seeing or understanding visual information (e.g. reading)
- Recalling words or keeping up with a conversation
- Misplacing things
- Making good decisions and solving problems
- Participating in work or social activities as they have done during this lifetime
- changes in personality and/or mood

In the middle stage of Alzheimer's disease short term memory is significantly impaired and people become repetitive. Problems with long term memory become more evident. Families begin to notice changes in their loved ones ability to do daily activities such as grooming and dressing. While they are still physically capable of dressing they often begin to change clothes less frequently or wear the same clothes over and over again. At about the same time people with Alzheimer's disease may begin to bathe less frequently than has been their life long pattern. Sometimes these changes have been so gradual that families have been compensating without realizing the significance of these changes.

During the middle stage of AD people often begin to have changes in personality and behavior. Some of these changes present major challenges to the family and require the family to learn new skills to cope with the changes.

### **WHEN WAS ALZHEIMER'S DISEASE DISCOVERED?**

Alzheimer's was first described in 1907 by a German physician, Alois Alzheimer. He described a woman in her 50's with the disease and for many years Alzheimer's was diagnosed only in people under 65. Dr. Alzheimer found plaques and tangles in the brain of the woman he described and even today these are the hallmark signs of AD when brain autopsy is done after death. However researchers are working hard to learn The diagnosis of AD is still rare in people under 65, but becomes more prevalent with each decade of life. 10% of those over 65 and almost 50% of those over the age of 85 have Alzheimer's. It is estimated that 5 million Americans have Alzheimer's. Clearly you are not alone if you are facing this disease.

### **WHAT CAUSES ALZHEIMER'S?**

Scientists are trying hard to unravel the cause of Alzheimer's. They are hard at work trying to understand the biological events that cause the brain cell and tissue changes of AD. Although a great deal has been learned over the last 100 years, Dr. Alzheimer's discoveries in 1907 are still relevant. The two abnormal structures he described, plaques and tangles, continue to be studied. Amyloid plaques are clumps of protein fragments that accumulate outside of cells in the brain. Neurofibrillary tangles are clumps of altered proteins inside cells. Research about these structures has provided clues about why cells die, but scientists have not determined the exact role plaques and tangles play in the disease process.

### **WILL MY CHILDREN INHERIT ALZHEIMER'S DISEASE?**

Two types of Alzheimer's disease risk have been identified. Familial AD clearly follows an inheritance pattern. Most known Familial AD

has an early onset (occurring in people younger than 65). These families usually know from their family history that they may be at risk. The vast majority of AD cases are sporadic AD, with no obvious inheritance patterns.

### **CURRENT TREATMENTS FOR ALZHEIMER'S DISEASE**

Research has led to the development of treatments for Alzheimer's disease. Current treatments for Alzheimer's disease include a class of medications called cholinesterase inhibitors. There are three medications in this class: Aricept, Exelon and Razadyne. Your physician will determine which of these three medications may be appropriate for you. Although these medications do not stop the disease progression, brain functions, including memory, thinking, and behavior, may improve in many people who take these drugs.

A medication called Namenda (Memantine) became available January 2004. This medication can be taken along with one of the cholinesterase inhibitors and may benefit people in the moderate to severe stage of Alzheimer's disease.

### **WHAT IS THE DIFFERENCE BETWEEN ALZHEIMER'S DISEASE AND DEMENTIA?**

Many people use the terms dementia and Alzheimer's interchangeably however they have different meanings. Dementia is a general term and can refer to symptoms such as memory loss, confusion, problems thinking, etc. When someone has dementia symptoms they go to a physician to seek a diagnosis. Alzheimer's disease is a specific diagnosis. When a person receives a diagnosis of Alzheimer's disease the physician has ruled out reversible causes of the problem and has concluded that Alzheimer's is the cause of the dementia.

### **WHAT DOES AN EVALUATION INCLUDE?**

An evaluation of memory and thinking may take several appointments. Initially a complete history of the onset of the dementia symptoms is gathered from the person and their family. Cognitive tests are administered that take from 30 minutes to three hours. Blood work is completed to look for potential causes of the cognitive changes such as hormonal or metabolic problems. An MRI or CT scan is completed to look for structural changes in the brain such as strokes, brain tumors or hydrocephalus that could be causing the cognitive changes. After the neurologist has reviewed the results of all of the tests and completed the neurological exam s/he is able

diagnose the cause of the memory and cognitive changes.

### **WHAT ARE OTHER CAUSES OF DEMENTIA SYMPTOMS?**

Alzheimer's disease is found to be the cause of dementia 52% of the time after a complete evaluation. Other possible causes of dementia include vascular dementia (also called multi-infarct dementia), frontotemporal dementia, lewy body dementia and Creutzfeldt-Jakob disease to name a few possibilities.

### **ARE THERE REVERSIBLE CAUSES OF DEMENTIA?**

Yes, some causes of dementia are reversible if they are detected early. Some of the reversible causes of dementia include thyroid problems, dietary deficiencies, and B12 deficiencies. During an evaluation the physician always looks for reversible causes of dementia. Generally reversible dementia's begin rather suddenly. This is different than Alzheimer's and other neurodegenerative diseases which progress gradually over time.

Depression can also cause memory problems. Evaluation and treatment for depression may be recommended. Memory problems may be reversible if depression is the only cause of the symptom. However many people with Alzheimer's disease also have depression. When depression is treated mood may improve, however memory problems do not improve.

### **HOW FAST DOES ALZHEIMER'S DISEASE PROGRESS?**

Alzheimer's disease progresses at different rates in each person with the disease. Life expectancy from diagnosis to death can be from three to 20 years. There is no way to predict the life expectancy of a specific individual with the disease.

12.2010