

## **Alzheimer's Disease**

### **What is Alzheimer's disease?**

Alzheimer's disease is the most common cause of dementia and accounts for 50% - 60% of all cases. Alzheimer's disease was first described by a German Physician Alois Alzheimer in 1906. This disease causes a heavy burden both emotionally and financially and the consequences can be quite devastating.

Alzheimer's disease is a condition in which nerve cells in the brain die, making it difficult for the brain's signals to be transmitted properly. A person with Alzheimer's disease has problems with memory, judgment, and thinking, which makes it hard for the person to work or take part in day-to-day life. The death of the nerve cells occurs gradually over a period of years.

During the course of Alzheimer's disease, nerve cells die in particular regions of the brain. The brain shrinks as gaps develop in the temporal lobe and hippocampus, which are responsible for storing and retrieving new information. This in turn affects people's ability to remember, speak, think and make decisions. The production of certain chemicals in the brain, such as acetylcholine is also affected. It is not known what causes nerve cells to die but there are characteristic appearances of the brain after death. In particular, 'tangles' and 'plaques' made from protein fragments are observed under the microscope in damaged areas of brain. This confirms the diagnosis of Alzheimer's disease.

### **Causes of Alzheimer's disease**

The cause of Alzheimer's dementia is not fully understood, but advancing age and a family history of Alzheimer's dementia increases one's risk of developing it. The number of persons with Alzheimer's dementia doubles every 5 years beyond the age of 65 and by the age of 85, one in 4 can develop this illness, which is about 25% of the population above the age of 85 years. Thus age plays a crucial part in policy and decision making for care of the elderly, this is an alarming figure more so as the baby boomers will be reaching this age soon.

### **Symptoms**

Most patients' symptoms progress slowly over a number of years. Symptoms may not be noticed early on. Sometimes, it is only when family members look back that they realize when the changes started to occur.

*Common symptoms of Alzheimer's disease include:*

- a) Impaired memory and thinking. The person has difficulty remembering things or learning new information. In the later stages of the disease, long-term memory loss occurs, which means that the person can't remember personal information, such as his or her place of birth or occupation, or names of close family members.
- b) Disorientation and confusion. People with Alzheimer's disease may get lost when out on their own and may not be able to remember where they are or how they got there. They may not recognize previously familiar places and situations. They also may not recognize familiar faces or know what time of the day it is, or even what year it is.
- c) Misplacing things. The person forgets where he or she put things used every day, such as glasses, a hearing aid, keys, etc. The person may also put things in strange places, such as leaving their glasses in the refrigerator.
- d) Abstract thinking. People with Alzheimer's disease may find certain tasks -- such as balancing a checkbook -- more difficult than usual. For example, they might forget what the numbers mean and what needs to be done with them.
- e) Trouble performing familiar tasks. The person begins to have difficulty performing daily tasks, such as eating, dressing, and grooming. Planning for normal day-to-day tasks is also impaired.
- f) Changes in personality and behavior. The person becomes unusually angry, irritable, restless, or quiet. At times, people with Alzheimer's disease can become confused, paranoid, or fearful.
- g) Poor or decreased judgment. People with Alzheimer's disease may leave the house on a cold day without a coat or shoes, or could go to the store wearing their pajamas.
- h) Inability to follow directions. The person has difficulty understanding simple commands or directions. The person may get lost easily and begin to wander.
- i) Problems with language and communication. The person can't recall words, name objects (even ones that are very familiar to them -- like a pen), or understand the meaning of common words.

- j) Impaired visual and spatial skills. The person loses spatial abilities (the ability to judge shapes and sizes, and the relationship of objects in space) and can't arrange items in a certain order or recognize shapes.
- k) Loss of motivation or initiative. The person may become very passive and require prompting to become involved and interact with others.
- l) Loss of normal sleep patterns. The person may sleep during the day and be wide-awake at night.

## **Diagnosis**

It is important to visit a doctor if you or a loved one experiences any of these symptoms so you can receive the proper evaluation and diagnosis. There are other conditions -- such as depression, a head injury, certain chemical imbalances, or the effects of some medications --that can produce symptoms that are similar to Alzheimer's disease. Many of these conditions are treatable.

Your doctor can only determine if the symptoms are probably due to Alzheimer's disease after a thorough medical, psychiatric, and neurological evaluation. He will evaluate other possible causes of dementia to rule out all other factors before settling on Alzheimer's disease as a diagnosis.

Currently, no definitive diagnostic test for Alzheimer's exists. A definite diagnosis of Alzheimer's disease is possible only after death, when a pathologist can more closely examine a patient's brain for the telltale changes associated with Alzheimer's disease.

## **Prognosis**

The course of Alzheimer's disease varies widely from person to person. The duration of the illness could be short (2-3 years) or long (up to 20 years). Usually the parts of the brain that control memory and thinking are affected first, but over time, cells die in other areas of the brain.

Eventually, a person with Alzheimer's will need complete care. If the person has no other serious illnesses, the loss of brain function itself will eventually cause death.