Alzheimer's Disease

Alzheimer's (AHLZ-high-merz) is a disease of the brain. It destroys brain cells, causing problems with memory, thinking and behavior. It is the most common form of dementia. There are currently more than 5 million Americans living with Alzheimer's — including as many as 500,000 individuals under the age of 65. By mid-century, as many as 16 million will be living with the disease.

Alzheimer's is not a normal part of aging; it gets worse over time, and it is fatal. Today it is the seventh-leading cause of death in the United States.

There is currently no cure for Alzheimer's, but new treatments are on the horizon as a result of accelerating insight into the biology of the disease. Research has also shown that effective care and support can improve quality of life for individuals and their caregivers over the course of the disease from diagnosis to the end of life.

10 Warning Signs of Alzheimer's Disease©
The Alzheimer's Association has developed a checklist of common symptoms to help recognize the warning signs of Alzheimer's disease.

1. Memory loss
2. Difficulty performing familiar tasks
3. Problems with language
4. Disorientation to time and place
5. Poor or decreased judgment
6. Problems with abstract thinking
7. Misplacing things
8. Changes in mood or behavior
9. Changes in personality
10. Loss of initiative

Every 72 seconds someone in America develops Alzheimer's. If you or someone you know is experiencing these symptoms, consult a doctor. Early and accurate diagnosis of Alzheimer's disease or other dementias is an important step to getting the right treatment, care and support.

Causes of Alzheimer's disease
In the vast majority of cases, the cause of Alzheimer's disease remains unknown. Most experts agree that Alzheimer's, like other common, chronic conditions, likely develops as a result of multiple factors rather than a single cause. The greatest risk factor by far is increasing age. Most Americans with Alzheimer's disease are age 65 or older.

A tiny percentage of Alzheimer's disease is caused by rare genetic variations found in a few hundred families worldwide. In these inherited forms of Alzheimer's, the disease tends to strike individuals in their 50s, 40s and even 30s. When Alzheimer's is first recognized in a person under age 65, this is referred to as "early-onset Alzheimer's."

How Alzheimer's disease affects the brain
Scientists believe that whatever triggers Alzheimer's begins to damage the brain years before symptoms appear. When symptoms emerge, nerve cells that process, store and retrieve information have already begun to degenerate and die.

Scientists regard two abnormal microscopic structures called "plaques" and "tangles" as the hallmarks of Alzheimer's disease. Amyloid plaques (AM-uh-loyd plaks) are clumps of protein fragments that accumulate between the brain's nerve cells. Tangles are twisted strands of another protein that form inside brain cells. Scientists have not yet determined the exact role that plaques and tangles may play. To learn more about how Alzheimer's affects the brain, see our online Brain Tour: www.alz.org/braintour

Diagnosing Alzheimer's disease

Experts estimate that a doctor experienced in diagnosing Alzheimer's can make a diagnosis with more than 90 percent accuracy. Because there is no single test for Alzheimer's, diagnosis usually involves a thorough medical history and physical examination as well as tests to assess memory and the overall function of the mind and nervous system. The doctor may ask a family member or close friend about any noticeable change in the individual's memory or thinking skills.

Most diagnostic uncertainty arises from occasional difficulty distinguishing Alzheimer's disease from a related dementia. Dementia is a general term for a group of brain disorders that affect memory, judgment, personality and other mental functions. Alzheimer's disease is the most common type of dementia, accounting for 50 to 70 percent of cases.

Vascular dementia, another common form, results from reduced blood flow to the brain's nerve cells. In some cases, Alzheimer's disease and vascular dementia can occur together in a condition called "mixed dementia." Other causes of dementia include frontotemporal dementia, dementia with Lewy bodies, Creutzfeldt-Jakob disease and Parkinson's disease.

One important goal of the diagnostic workup is to determine whether symptoms may be due to a condition other than Alzheimer's. Depression, medication side effects, certain thyroid conditions, excess use of alcohol and nutritional imbalances are all potentially treatable disorders that may sometimes impair memory or other mental functions. Even if the diagnosis is Alzheimer's disease, timely identification enables individuals to take an active role in treatment decisions and planning for the future.

Treatment and prevention of Alzheimer's disease

Medications approved by the U.S. Food and Drug Administration (FDA) may temporarily delay memory decline and treat Alzheimer symptoms for some individuals, but none of the currently approved drugs is known to stop or prevent the disease. Certain drugs approved to treat other illnesses may sometimes help with the emotional and behavioral symptoms of Alzheimer's.

One important part of treatment is supportive care that helps individuals and their families come to terms with the diagnosis; obtain information and advice about treatment options; and maximize quality of life through the course of the illness.

Many scientists consider the emerging field of prevention one of the most exciting recent developments in dementia research. Some of the most exciting preliminary evidence suggests that strategies for general healthy aging may also help reduce the risk of developing Alzheimer's. These measures include controlling blood pressure, weight and cholesterol levels;

exercising both body and mind; eating a brain-healthy diet that is low in fat and includes fruits and vegetables; and staying socially active.

Impact on people living with Alzheimer's disease
Due to changes in the brain, people with Alzheimer's will eventually lose sense of who they are and the ability to care for themselves. The disease affects independence, relationships and the ability to express oneself.

Younger individuals with the disease can also face other issues. If they are employed, they may have to reduce work hours or quit, leaving a gap in the family income. Kids may still be living at home. Insurance and other benefits may be more difficult to get to help pay for care.

Impact on caregivers
Millions of family members are currently facing the enormous physical, emotional and financial impact of caring for a loved one. Seventy percent of people with Alzheimer's live at home, where family and friends provide most of their care and pay for it out of their own pockets.

Impact on society
Alzheimer's takes an enormous toll on society. The Alzheimer's Association estimates that current direct and indirect costs of caring for the more than 5 million Americans with Alzheimer's disease amount to more than $148 billion annually. By 2030, when the baby boom generation is over 65, the number of Americans with Alzheimer's will soar to levels that may exceed our ability to absorb the added cost and bankrupt our health care system.

Hope for the future
As the pace of research accelerates, scientists funded by the Alzheimer's Association, the pharmaceutical industry, universities and our federal government have gained detailed understanding of basic disease processes at work in the Alzheimer brain. Experts believe that several of these processes may offer promising targets for a new generation of treatments to prevent, slow or even reverse damage to brain cells.

The Alzheimer's Association is the leading voluntary health organization in Alzheimer care, support and research.

Updated October 2007