

Alzheimer's Disease

The Alzheimer's Association estimates that in 2007, 5.1 million people in the U.S. have Alzheimer's disease. Of those 4.9 million are over 65 years of age and 200,000 are less than 65 years old (early-onset Alzheimer's disease). The prevalence of Alzheimer's disease increases with increasing age.

- 13 percent, or one in eight, people 65 years and older have Alzheimer's disease.
- Almost half of those over age 85 are affected.
- Many people with Alzheimer's disease have not been diagnosed.
- In Minnesota, it was estimated that 88,000 people had Alzheimer's disease in 2000, and that by 2010 that number will increase by 7% to 94,000 people.
- The direct and indirect costs of Alzheimer's and other dementias including Medicare and Medicaid costs and the indirect cost to business for employees who are caregivers of people with Alzheimer's are estimated at more than \$148 billion annually.

As the numbers of older Americans increases in coming years, the number of people with Alzheimer's disease is also likely to increase. The number of people age 65 plus affected by Alzheimer's disease is estimated to increase to 7.7 million in 2030.

Alzheimer's is the most common form of dementia in older people, and is estimated to account for 50% to 70% of dementia cases. Dementia is the general term for a group of disorders that cause irreversible cognitive decline resulting from various mechanisms that damage brain cells.

To be diagnosed as dementia, the condition must cause decline in at least two of the following four essential cognitive functions and be severe enough to interfere with day-to-day life:

- Memory
- Ability to speak coherently and to understand others speaking or understand written information
- Ability to plan, make good judgments and carry out complex tasks
- Ability to understand visual information.

Symptoms

The common symptom pattern of Alzheimer's disease begins with memory loss for recent events. As the disease progresses, increasing numbers of brain cells die. As these cells die, the ability of the brain to process and transfer information decreases and results in memory loss and decreasing abilities to speak and understand. Individuals experience confusion, disorientation and trouble expressing themselves. In advanced Alzheimer's disease, people need help with day-to-day activities including eating, dressing, and bathing.

Cause

In the majority of cases, scientists do not yet know what causes Alzheimer's disease. Most researchers agree that like other chronic conditions, Alzheimer's disease results from multiple factors rather than a single cause. Biologically, the two key abnormalities seen are plaques - deposits of a protein fragment called beta-amyloid, and tangles - twisted strands of another protein, tau. In Alzheimer's disease, the beta-amyloid accumulates in the brain either because of excess production of beta-amyloid or a decreased ability to dispose of it. The beta-amyloid fragments accumulate in microscopic plaques. Tangles are formed when the protein tau twists into strands inside the dead brain cells.

Prevention

There is increasing evidence that good blood circulation is key to maintaining brain health and the factors that affect the health of the heart and blood vessels may also affect the health of the brain. The evidence suggests that a low-fat diet rich in fruits and vegetables and whole grains and regular physical activity will promote lifelong brain health. Managing high blood pressure and high blood cholesterol levels may also be important. Additional evidence points to the importance of maintaining social connections and mental stimulation.

Treatment

At this time there is no treatment that can delay or stop the deterioration of brain cells in people with Alzheimer's disease. Drugs currently approved by the U.S. Food and Drug Administration (FDA) slow the worsening of symptoms for about 6 to 12 months for about half the people who take them. Researchers are actively pursuing potential new treatment strategies based on increasing knowledge of the biology of the disease.

Caring for People with Alzheimer's Disease

Even though we have no treatments that can modify the disease, active management of Alzheimer's disease using current treatment options can improve quality of life for those affected. It is important to develop a care plan for a person with Alzheimer's disease. In care of the person with Alzheimer's disease, a team of health care providers can be helpful. In addition to the physician, pharmacists, psychologists, occupational therapists, clinical nurses and others may be helpful. Access to social resources, caregiver education and support may be helpful to family members caring for those with Alzheimer's disease.

Almost 10 million Americans are caring for someone with Alzheimer's disease or another dementia. This can be very stressful, particularly as the disease progresses. The Minnesota Board on Aging provides information about care-giver support on their website shown below.

Alzheimer's Association. *Alzheimer's Disease Facts and Figures*
http://www.alz.org/alzheimers_disease_alzheimer_statistics.asp

Caregiver Resources

Minnesota Board on Aging – Family Caregivers
<http://www.mnaging.org/advocate/caregiver.htm>

Additional Information

Administration on Aging Alzheimer's Resource Room
www.aoa.gov/alz/index.asp

Alzheimer's Association
<http://www.alz.org/>

Alzheimer's Association Minnesota-North Dakota
<http://www.alzmnndak.org/>

Mayo Clinic Alzheimer's Center
<http://www.mayoclinic.com/health/alzheimers/AZ99999>

Minnesota Board on Aging – Memory Care
<http://www.mnagingproviders.org/memorycare/>

National Institutes of Health Senior Health
<http://nihseniorhealth.gov/alzheimersdisease/toc.html>

University of Minnesota N. Bud Grossman Center for Memory Research and Care and the Memory Clinic
www.memory.umn.edu

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