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Alzheimer's Disease: What is it and How Do You Know If You have It?

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Your Life Your Health

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Alzheimer's disease is a common degenerative brain disease that impairs mental and emotional function in older adults, causing them to lose their memory and ability to care for themselves. Although there is extensive ongoing research, no cure has yet been found for Alzheimer's. There is no recovery from Alzheimer's Disease.

When German physician Alos Alzheimer first described Alzheimer's disease in 1907 the disease was considered rare. Today, Alzheimer's disease is the most common form of dementia in developed countries. Dementia derives from the Latin *de mens*, which means "out of mind." It has come to imply a deterioration of a person's intellectual, emotional and cognitive abilities, causing difficulty with daily functioning. There are many causes of dementia and it requires a healthcare professional to determine if a patient's dementia is due to Alzheimer's disease or another cause. Most forms of dementia have similar symptoms of impaired short-term memory, thinking and behavior. It is important that if you suspect someone of having dementia that they get correctly diagnosed so that the best possible care can be offered.

Most doctors describe Alzheimer's disease as an "insidious, progressive, degenerative, irreversible disease of the cerebral cortex causing dementia." In simple terms this means that:

- the disease may occur throughout life, but the symptoms don't appear till later.
- the amount of damage done by the disease increases over time.
- the disease is a breakdown of brain cells (neurons in the cerebral cortex).
- damage to the brain can't be repaired, i.e., there is no known cure for this damage yet.
- the disease results in dementia.

Alzheimer's Disease often progresses through identifiable states:

- Stage One - The first stage often passes unnoticed as the symptoms can be ignored or written off as unimportant. The person becomes increasingly forgetful,

finds it difficult to take in new information, loses his or her way or sense of time occasionally and becomes less spontaneous.

- Stage Two - Their memory and ability to take in new information continue to deteriorate. This may lead to serious mistakes, such as turning on the gas and forgetting to light it, and the person may need supervision. A sufferer may forget what they were saying mid-sentence, forget the meaning of words, have trouble calculating or making plans or decisions, and become much slower in speaking and understanding. Other problems in this stage may include changes in personality, such as becoming paranoid, obsessional or even violent; wandering and becoming lost; and difficulties with personal hygiene.
- Stage Three - Sufferers become apathetic, fail to recognize people or even their own reflection and can no longer control their bladder and bowel functions.

Finally, patients seem unable to make any sense of the world or to manage even simple tasks such as dressing or washing. By stage three professional care is required.

The final outcome of Alzheimer's disease is death. People with Alzheimer's tend to be elderly so many have other diseases and may die from the common causes of terminal illness (heart disease, cancer and respiratory disorders) before Alzheimer's. Those who do not succumb to an incidental death tend to die of pneumonia. In the last days a person with Alzheimer's may have problems eating, drinking and swallowing so aspirating food results in pneumonia. Strangely, it seems that most people with Alzheimer's are fit and so many die in accidents due to the person's agility combined with impaired judgment of risk.

Facts About Alzheimer's:

1. About half of the people in nursing homes and almost half of all people over 85 have Alzheimer's disease.
2. It is now the fourth leading cause of death in adults.
3. Almost 2 million Americans have Alzheimer's disease, and unless effective methods for prevention and treatment are developed, it will reach epidemic proportions by the middle of the next century, afflicting over 8 million people.
4. People at higher than average risk for developing Alzheimer's Disease are those who have a family history of the disease. As an extreme example, nearly all patients who inherit Down's syndrome develop Alzheimer's if they live into their 40s. Women under the age of 35, but not older mothers, who give birth to children with Down's syndrome are also at much higher risk for Alzheimer's.
5. The disease is rare in West Africa, but African-Americans have four times the risk as white Americans.
6. Hispanics have over twice the risk as whites.
7. Alzheimer's disease occurs less in the Native American Creeks and Cherokees and in Asians than in the general American population.

8. A study of Japanese men, however, showed that their risk increased if they emigrated to America.
9. Chronic high blood pressure is associated with mental deterioration in older people, including reduced short-term memory and attention, Alzheimer's disease, and dementia. The higher the blood pressure the greater the risk for mental impairment. Studies indicate, however, that controlling blood pressure may help ward off memory loss to begin with and treating blood pressure in older patients can reduce the risk of dementia in elderly patients with elevated systolic pressure.

Differences Between Normal Signs of Aging and Dementia

Normal Dementia

Memory and concentration

Periodic minor memory lapses or forgetfulness
 Misplacement of important items
 of part of an experience
 Confusion about how to perform simple tasks

Occasional lapses in attention or lapses in concentration
 Difficulty making routine decisions

Confusion about month or season

Mood and Behavior

Temporary sadness or anxiety based on
 Unpredictable mood changes
 appropriate and specific cause
 Depression, anger, or confusion in response to change

Changing interests Denial of Symptoms

Increasingly cautious behavior

The early symptoms of Alzheimer's disease may be overlooked because they resemble signs of natural aging. These symptoms include forgetfulness, loss of concentration, unexplained weight loss, and motor problems, including mild difficulties in walking. In healthy individuals, similar symptoms can result from fatigue, grief or depression, illness, vision or hearing loss, the use of alcohol or certain medications, or simply the burden of too many details to remember at once.

When memory loss worsens, family and friends perceive that more serious problems exist. One clue to differentiating Alzheimer's from normal aging may be the patient's inability to understand the meaning of words. Accompanying sensory problems, such as hearing loss and a decline in reading ability, as well as general physical debility in newly diagnosed Alzheimer's patients indicate shorter survival time. A number of other

disorders may be causing these extreme symptoms and must be ruled out before a diagnosis of Alzheimer's disease can be certain. About 20% of suspected Alzheimer's cases turn out to be some other disorder, half of which are potentially treatable or controllable. Strictly speaking, a definitive diagnosis of Alzheimer's can only be made at autopsy after death.

Ruling Out Other Causes Memory Loss or Dementia.

A definitive test to diagnose Alzheimer's disease even in patients showing signs of dementia has not yet been devised, so the first step is to rule out other conditions that might be causing memory loss or dementia. Some elderly people have a condition called mild cognitive impairment, which involves more severe memory loss than normal but no other symptoms of Alzheimer's.

There are two major causes for dementia in the elderly: Alzheimer's disease and vascular dementia (abnormalities in the vessels that carry blood to the brain). Experts currently believe that 60% of cases of dementia are due to Alzheimer's, 15% to vascular injuries, and the rest are a mixture of the two. Vascular dementia is primarily caused by multiple small strokes (called multi-infarct dementia) or Binswanger's disease, which affects tiny arteries in the midbrain.

In general, dementia, whether caused by Alzheimer's or stroke, is rarely reversible. Parkinson's disease may also cause dementia. Other disorders that cause reversible delirium, which might account for symptoms of dementia, include severe depression, drug abuse, or certain medications. Less common conditions that cause dementia or delirium are:

1. Thyroid disease,
2. Severe vitamin B12 deficiency,
3. Blood clots,
4. Hydrocephalus (excessive accumulation of spinal fluid in the brain),
5. Syphilis,
6. Huntington's disease,
7. Creutzfeldt-Jakob disease, and
8. Bbrain tumors.

It is important that the physician recognize any treatable conditions that might be causing symptoms or worsening existing dementia caused by Alzheimer's or vascular abnormalities.

Tests Useful in Assessing Patients with Dementia:

- There is a simple psychological test which can be administered at the annual physical examination in patients over 70 or in patients who are beginning to show signs of mental deterioration. This test is called the Mini-Mental Status Examination. A simple numerical score is produced which can be compared from

- year to year or examination to examination to show the deterioration or retention of mental prowess.
- Electroencephalography (EEG) traces brain-wave activity; in some Alzheimer's patients this test reveals "slow waves". Although other diseases may evidence similar abnormalities, EEG data helps distinguish a potential Alzheimer's patient from a severely depressed person, whose brain waves are normal.
 - Computerized tomography (CAT Scan) or magnetic resonance imaging (MRI) scans can detect the presence of multi-infarct dementia, stroke, blood clots, tumors, or hydrocephalus. Vascular dementia is more likely if the onset of dementia was abrupt and if the physician finds signs that abnormalities exist in specific locations in the brain. MRI and PET (positron emission tomography) scans and other advanced imaging techniques may eventually be able to diagnosis Alzheimer's by identifying changes in the brain or predict severity of existing disease.
 - A blood test for the ApoE4 gene may be useful for confirming a diagnosis in patients who have symptoms and other indications of Alzheimer's, although finding evidence of ApoE4 is still not definitive. Other blood tests may also rule out metabolic abnormalities.

Determining Severity of Existing Alzheimer's Disease:

Once a diagnosis has been made, some experts observe that certain factors at the time of diagnosis indicate a higher risk for a more rapid decline:

- older age;
- being male;
- high blood pressure;
- signs of loss of motor control and coordination;
- tremor;
- social withdrawal;
- loss of appetite; and
- problems walking

If you are concerned that you or a loved one may have Alzheimer's, contact your healthcare provider for an evaluation. You may also call the Alzheimer's Association at the Beaumont Regional Office at (409) 833-1613 or at 1 (800) 449-1613. The Association's FAX number is (409) 833-9758 and their e-mail address is www.alztx.org/beaumont. Their address is 780 South 4th Street, Beaumont, Texas 77701.

Next week, we'll discuss suspected causes of Alzheimer's, treatments and what you can do to prevent Alzheimer's, if anything. Remember, it is your life and it is your health.