

Fact Sheet

Alzheimer's Disease & Related Dementias

What is dementia?

Dementia is the loss of mental function in two or more areas such as language, memory, visual and spatial abilities or severe enough to interfere with daily life. Dementia itself is not a disease but a broader set of symptoms that accompanies certain diseases or physical conditions. Well-known diseases that cause dementia include Alzheimer's disease, vascular dementia, Parkinson's disease, Huntington disease, Creutzfeldt-Jakob disease, Picks disease, and Lewy Body dementia. Other physical conditions may cause or mimic dementia, such as depression, brain tumors, head injuries, nutritional deficiencies, hydrocephalus, infections, drug interactions, and thyroid problems. Individuals experiencing dementia like decreased symptoms should undergo diagnostic testing as soon as possible. An early and accurate diagnosis helps to identify reversible conditions gives patients a greater chance of benefiting from existing treatments and allows them and their families more time to plan for the future.

Alzheimer's disease

Alzheimer's disease (A.D.) is the most common cause of dementia, affecting as many as 4 million Americans. A.D. is a degenerative disease that attacks the brain; it begins gradually progressing at a variable rate. A.D. results in impaired memory, thinking and behavior and can last from 3 to 20 years from the onset of symptoms. Warning signs of A.D. include memory loss that affects job/home skills, difficulty performing familiar tasks, problems finding the right words, disorientation as to time and place, poor judgment, difficulty with learning and abstract thinking, placing things in inappropriate places, changes in mood and personality, and marked loss of initiative. In the last stage of A.D., patients are unable to take care of themselves. Recent research has shown links between particular genes and Alzheimer's disease, but in about 90% of A.D. cases, there is no clear genetic link. With the help of standardized diagnostic criteria, physicians can now diagnose A.D. with an accuracy of 85-90% once the symptoms occur. However, a definitive diagnosis of Alzheimer's disease is possible only through the examination of brain tissue at autopsy.

Vascular Dementia

Vascular dementia is a deterioration of mental capacity caused by multiple strokes in the brain. These events are described as mini strokes, where small blood vessels in the brain become blocked by blood clots, causing the destruction of brain tissue. The onset of vascular dementia may seem relatively sudden, as it may take several strokes for the symptoms to appear. These strokes may damage areas of the brain responsible for a specific function as well as produce general symptoms of dementia. As a result, vascular dementia may be misdiagnosed as Alzheimer's disease. Vascular dementia is not reversible or curable, but detection of high blood pressure and other vascular risk factors can lead to a specific treatment that may modify vascular dementia's progression. Vascular dementia is usually diagnosed through neurological examination and brain scanning techniques, such as tomography scan or magnetic imaging (M.R.I.)

Parkinson's Disease

Parkinson's disease (P.D.) is a progressive disorder of the central nervous system that affects over one million Americans. In P.D., certain brain cells deteriorate for reasons not yet known. These cells produce a substance called dopamine, which helps control muscle activity. P.D. is often characterized by tremors, stiffness in limbs and joints, speech difficulties and slowing down of movement; some patients develop dementia and eventually Alzheimer's disease. Conversely, some Alzheimer's patients develop symptoms of

Parkinson's disease. Medications such as Levodopa, which converts to Dopamine inside the brain and Deprenyl which prevents degeneration of Dopamine-containing brain cells, are used to improve diminished or reduced motor symptoms in P.D. patients but do not correct the mental changes that occur.

Huntington Disease

Huntington disease (H.D.) is an inherited, degenerative brain disease that causes both physical and mental disabilities and usually begins in mid-life. Early symptoms can vary from person to person but includes involuntary movement of the limbs or facial muscles, difficulty concentrating and depression. Other symptoms include personality change, memory disturbance, slurred speech and impaired judgment. Children born to a person with H.D. have a 50% chance of inheriting the gene that causes H.D. Today there is a genetic test available to confirm the diagnosis of H.D. to identify the carriers of the H.D. gene. It is recommended that anyone considering genetic testing to talk first with family and the appropriate medical and counseling professionals. There is no treatment to stop the progression of H.D., but the involuntary movement and psychiatric symptoms are treated with medications.

Creutzfeldt-Jakob Disease

Creutzfeldt-Jakob Disease (CJD) is a rare, fatal brain disorder that causes rapid, progressive dementia and other neuromuscular disturbances. A transmissible agent causes CJD. Research suggests that the agent differs significantly from viruses and other conventional agents. This newly discovered pathogen is called a "prion" short for "proteinaceous infectious particle" because it consists of protein and transforms normal protein molecules into infectious ones. The disease can be inherited, but the majority of the cases are not. Early symptoms of CJD include failing memory, changes in behavior, and lack of coordination. As the disease advances, usually very rapidly, mental deterioration becomes pronounced, involuntary movements appear, and the patient experiences severe difficulty with sight, muscular energy and coordination. Like Alzheimer's disease, a definitive diagnosis of CJD can be obtained through examination of brain tissue at autopsy.

Picks Disease

Picks disease is also a rare brain disorder, characterized by shrinking of the tissues of the frontal and temporal lobes of the brain and by the presence of abnormal bodies (Pick's bodies) in the nerve cells of the infected areas of the brain. Pick's disease usually begins between the ages of 40-60. The symptoms are similar to Alzheimer's disease, with a loss of language abilities, skilled movement and the ability to recognize objects or others. The initial diagnosis is based upon family history, (Picks disease is inherited) symptoms, tests and ruling out other causes of dementia. A definitive diagnosis for Pick's disease can be obtained only at autopsy.

Lewy Body Dementia

Lewy body dementia (LBD) is an irreversible form of dementia associated with abnormal protein deposits in the brain called Lewy bodies. Symptoms of LBD are similar to Alzheimer's symptoms and include memory loss, confusion, and difficulty communicating. Hallucinations and paranoia also may become apparent in the earlier stages of the disease and often last through out the disease process. Although initial symptoms of LBD may be mild, affected individuals eventually develop severe cognitive impairment. At this time, there is no treatment available for Lewy body dementia.



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