Alzheimer's Disease Fact Sheet

Definition
Alzheimer's disease (pronounced Alz'-hi-merz) is a progressive, degenerative disease that attacks the brain and results in impaired memory, thinking and behavior. Alzheimer's disease (AD) is the most common form of dementia. Dementia is a loss of intellectual function (thinking, remembering and reasoning) so severe it interferes with an individual's daily functioning and eventually results in death. Alzheimer's is the fourth leading cause of death in adults, after heart disease, cancer and stroke. Men and women are affected almost equally. Dr. Alois Alzheimer first described the disease in 1906. Since, researchers have developed a deeper understanding of the changes in the brain (plaques and tangles) and behavioral changes that characterize the disease. Age and family history have been identified as potential risk factors. Most people diagnosed with Alzheimer's are older than age 65; however, Alzheimer's can occur in people in their 30's, 40s and 50s.

Symptoms
Symptoms of Alzheimer's can include gradual memory loss, decline in the ability to perform routine tasks, disorientation, difficulty in learning, loss of language skills, impairment of judgment and planning and personality changes. The time from the onset of symptoms until death ranges from 8 to 20 years. Eventually persons with Alzheimer's become totally incapable of caring for themselves.

Diagnosis
Early and careful evaluation is important because many conditions, including some that are treatable or reversible can cause dementia. Potentially reversible conditions include depression, adverse drug reactions, metabolic changes and nutritional deficiencies.

There is no single clinical test to identify Alzheimer's disease. A comprehensive evaluation to establish diagnosis will include a complete health history, physical examination, neurological and mental status assessments and other tests including analysis of blood and urine, electrocardiogram (EKG) and chest x-rays. Documenting symptoms and behaviors over time, in a diary fashion, will help physicians better understand the progression of the illness. The physician may order additional tests as needed including: computerized tomography (CT Scan), electroencephalograph (EEG), formal psychiatric assessment, and/or neuropsychological testing. While this evaluation may provide a diagnosis of possible or probable Alzheimer's, confirmation of the disease requires examination of brain tissue, which is done by an autopsy.
Treatment
Although no cure for Alzheimer’s disease is presently available, good planning, medical and social management can ease the burdens on the individual with Alzheimer’s and his/her family. Health care directives and decisions can be made while the individual has the mental capacity to do so. Physical exercise and social activity are important, as is proper nutrition. A calm and well-structured environment may help the person. Intervention strategies and (if necessary) appropriate medication can lessen symptoms such as agitation and anxiety while improving sleep and participation in activities. There is to date five FDA approved medications for the treatment of Alzheimer’s disease – Aricept, Exelon, Reminyl, Cognex and Namenda. These medications do not cure or stop Alzheimer’s disease but slow the progression of the symptoms.

Causes & Research
The causes of Alzheimer’s are not known and are currently receiving intensive scientific investigation. Suspected causes include diseased genes or a genetic predisposition, abnormal protein buildup in the brain and environmental toxins. Scientists are applying the newest knowledge and research techniques in molecular genetics, pathology, immunology, toxicology, neurology, psychiatry, pharmacology, biochemistry and epidemiology to find the causes, treatments and cures for Alzheimer’s disease.

Statistics
One in 10 people over 65 and nearly half of those over 85 have a diagnosis of probable Alzheimer’s disease. At some point in the later stages of the disease, a person with Alzheimer’s will require 24-hour care, including assistance with daily activities such as eating, grooming and toileting. The financing of care for Alzheimer’s disease—including costs of diagnosis, treatment, nursing home care and formal or paid care—is estimated to be more than $100 billion each year. The federal government covers $4.4 billion and the states another $4.1 billion. Much of the remaining costs are borne by individuals and their families. The average lifetime cost per patient is $174,000. More than 7 out of 10 people with Alzheimer’s disease live at home. Half of all nursing home residents suffer from Alzheimer’s or a related disorder.
WHAT IS DEMENTIA?
Dementia is a loss of cognitive abilities in two or more areas such as memory, language, visual and spatial abilities, or judgment, 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, Creutzfeldt-Jakob disease, Pick’s disease, and Lewy body dementia. Other physical conditions may cause or mimic dementia, such as depression, brain tumors, head injuries, nutritional deficiencies, hydrocephalus, infections (AIDS, meningitis, syphilis), drug reactions, and thyroid problems. Individuals experiencing dementia-like 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 both patients and their families more time to plan for the future.

ALZHEIMER’S DISEASE
Alzheimer’s disease (AD) is the most common cause of dementia, affecting as many as 4 million Americans. AD is a degenerative disease that attacks the brain, begins gradually, and progresses at a variable rate. In the late stage of AD, patients are unable to take care of themselves. AD results in impaired memory, thinking, judgment and behavior and can last 8 to 20 years from the time of onset of symptoms. Warning signs of AD are memory loss that affects job/home skills, difficulty performing familiar tasks, problems finding the right words, disorientation as to time and place, poor or decreased judgment, difficulty with learning and abstract thinking, placing things in inappropriate places, changes in mood and personality, and marked loss of initiative. Recent research has shown links between particular genes and Alzheimer’s disease, but in about 90% of AD cases, there is no clear genetic link. With the help of standardized diagnostic criteria, physicians can now diagnose AD with an accuracy of 85-90% once symptoms occur. However, a definitive diagnosis of Alzheimer’s disease is possible through the examination of brain tissue at autopsy.

VASCULAR DEMENTIA
Vascular dementia or multi-infarct dementia (MID), is a deterioration of mental capacity caused by multiple strokes (infarcts) in the brain. These events may be described as ministrokes, where small blood vessels in the brain become blocked by blood clots, causing the destruction of brain tissue. The onset may seem relatively sudden, as it may take several strokes for 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 is sometimes 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 it’s progression. Vascular dementia is usually diagnosed through neurological examination and brain scanning techniques, such as a computerized tomography (CT) scan or magnetic resonance imaging (MRI).
PARKINSON’S DISEASE
Parkinson’s disease (PD) is a progressive disorder of the central nervous system that affects over one million Americans. In PD certain brain cells deteriorate for reasons not yet known. These cells produce a substance called dopamine, which helps control muscle activity. PD is often characterized by tremors, stiffness in limbs and joints, speech difficulties, and difficulty initiating physical movement. Late in the course of the disease, some patients develop dementia and eventually Alzheimer’s disease. Conversely, some Alzheimer 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 PD patients but do not correct the mental changes that occur.

CREUTZFELDT-JAKOB DISEASE
Creutzfeldt-Jakob disease (CJD) is a rare, fatal brain disorder that causes rapid, progressive dementia and other neuromuscular disturbances. CJD is caused by a transmissible agent. Research suggests that the agent differs significantly from viruses and other conventional agents. This newly discovered pathogen is called a “prion,” short for “protease-resistant particle,” because it consists of protein and transforms normal protein molecules into infectious ones. The disease can be inherited, but the majority of 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 (especially muscle jerks) 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 only through examination of brain tissue at autopsy.

PICK’S DISEASE
Pick’s disease is also a rare brain disorder, characterized by shrinkage 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 affected areas of the brain. Pick’s disease usually begins between the ages of 40 and 60. The symptoms are similar to Alzheimer’s disease, with a loss of language abilities, skilled movement, and the ability to recognize objects or people. Initial diagnosis is based on family history (Pick’s disease may be inherited), symptoms, tests, and ruling out other causes of dementia. A definitive diagnosis of Pick’s disease is usually obtained 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 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 throughout 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.
Diagnosis Fact Sheet

Services and guidance physicians may offer to those with Alzheimer's Disease and their families

Evaluation and Diagnosis

- The physician needs a history from family member(s) about changes over time in the patient's personality, memory, mental functioning speech and language problems, good days and bad days. A journal is especially helpful to the physician.
- Several visits may be necessary if the patient tires easily and if different family members are available to offer their various views.
- Follow-up visits track the progression of the patient's condition over time.
- The initial diagnosis might be "dementia" until the physician is able to see the patient's progress over time and be fairly sure whether it is "Alzheimer's."

These laboratory tests can help exclude other disorders, which may look like Alzheimer's:
- Complete Blood Count
- Thyroid functions
- HIV – AIDS test
- B12 and folic acid levels
- Syphilis blood test
- Electrolytes
- Serum Calcium
- Kidney and liver function
- CT brain scan
- Chest X-Ray
- Medication levels
- EKG
- Sedimentation Rate – a test for inflammatory conditions such as Lupus

Detailed testing by a psychologist with puzzles, games and questionnaires measures brain function and changes over time, and helps distinguish between dementia, mild cognitive impairment (MCI), or other possible causes.

Care of the Alzheimer's Patient and Family

The physician should be able to:

- Give attention to associated problems (which may be treated) such as depression, Parkinson's, alcohol or drug abuse, nutritional problems, dehydration, strokes, bedsores, and falls.
- Discuss methods of communication.
- Offer suggestions about management of behavioral problems (wandering, aggression, hiding things, paranoia, etc.)
- Suggest changes/modifications to structure of living quarters (simplify, organize, label) and regular schedule for daily activities (eating, sleeping, exercise, medicine).
- Refer families to community resources (support groups, day care, respite care, companions, meals, transport).
- Refer families to legal and financial information (guardianship, durable power of attorney, and long term care insurance).
- Assist with the nursing home decision.
Caregiver's Checklist

Evaluation/Assessment - medical, neurological and psychological assessments will assist in determining an accurate diagnosis of the person’s symptoms. Find a good doctor you can trust and be sure to tell them about all symptoms and changes in the individual. A log or journal is helpful to track your observations and to communicate concerns with the doctor.

Educate yourself about Alzheimer's disease through books, websites, workshops, and your local Alzheimer's Resource Agency.

Hold a family conference. Everyone who will be involved in caregiving and planning for the future should attend the conference. E-mail is a useful tool to keep everyone informed on a regular basis.

Assess your support system - as a caregiver, you will need a good support system. Join a caregiver support group. Accept help from friends. Talk about what is going on at home with someone you trust.

Your health is just as important as your loved one’s health. Try to get enough rest. Exercise regularly. Eat well-balanced meals. Be kind to yourself! Remember that it is OK to have fun.

Home Safety
Assess the need for wandering safety devices such as door and window alarms and a Safe Return bracelet.
Remove dangerous items from within easy reach (hide car keys if patient can no longer drive, lock up poisons, sharp knives, power tools, etc.).
You may need to move furniture and slippery rugs if patient develops a shuffling gait. Remove distracting paintings or wall hangings if they start to confuse the individual.

Legal & Financial
Is there a Durable Power of Attorney, Guardian, or Conservator?
Is there a Living Will?
What kinds of insurance does the individual have? What does it cover?
What are the individual's sources of income - social security, pensions, etc.?
Be sure you know about all bank accounts, safe deposit boxes, etc. the individual has in his/her name.
Check out eligibility of Medicare and Medicaid to see if they are an option.

Relief for Caregivers - caring for yourself involves taking a break from the caregiving role. Find out from your local Alzheimer's Resource Agency regarding Adult Day Care, Respite care, and Senior Companions.

Alzheimer's Disease Resource Agency of Alaska
1750 Abbott Rd.
Anchorage, AK 99507
907-561-3313 or
toll-free within Alaska 1 (800) 478-1090

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Stages & Symptoms of Alzheimer’s Disease

I. EARLY STAGE—FORGETFULNESS
Memory Loss Causes Small Problems
- Memory problems affect job performance
- Word loss becomes noticeable
- Problems telling time, relaying messages
- Items are misplaced and blame placed on others

Cognitive Loss Impairs Thinking
- Abstract thought and math skills are impaired
- Money management and paying bills is difficult
- Difficulty in learning new things
- Tasks are left unfinished and hobbies drop away
- Decisions become erratic and unreliable
- Judgment becomes noticeably impaired

Personality Changes
- Person loses sparkle, spontaneity, ambition
- Mild depression becomes noticeable
- Withdrawal from social activities
- Mood swings become alarming
- Angers easily and may lose impulse control
- Plays "games" to conceal losses

II. MIDDLE STAGE—CONFUSION
Memory Loss Increases—Both Short Term and Long Term
- Forgets to take medications or turn off appliances
- Repeats the same question many times within a short period
- Gets lost in familiar surroundings
- Recognizes close family members but has trouble recognizing friends & acquaintances

Cognitive Loss Increases
- Attention span decreases
- Calculation skills are lost
- Speech and understanding are slow—difficulty following the story line
- Reading and comprehension become difficult

Personality Changes Become a Problem
- Frustration increases easily to aggression
- Sleep disturbances lower the agitation flash point
- Seems self-centered, insensitive, jealous
- As depression increases, self-esteem decreases
- May refuse to wash or bathe, does not change clothes
- Social skills are strained
III. ADVANCED STAGE—DISORIENTATION
Memory Loss Becomes Severe
• Person becomes disoriented to time and place, address and phone number
• Person does not recognize family members and daily caregivers
• Unaware of recent events, sketchy recall of own life
• Repetition becomes an annoyance to caregivers

Cognitive Losses
• Can no longer manage most simple task without assistance
• Invents and uses inappropriate words; uses gibberish
• Needs assistance with dressing and bathing

Personality Changes
• Person may not respond to affection
• Person is emotional—cries easily or may become aggressive
• Person becomes suspicious and fearful
• Delusions and hallucinations common
• May engage in sexually inappropriate behavior
• Loss of most social skills

Physical Changes
• Stooped appearance and shuffling gait
• Walks with hands slightly extended, palms down
• Incontinence of bladder and sometimes bowel
• Hyper-motor phase; incessant walking
• Sleep disturbances

IV. FINAL STAGE—ABSENCE
Memory Loss Complete
• Complete disorientation
• Recognition of family is gone

Cognition Absent
• Complete disorientation
• Compulsively puts things in mouth and touches things
• Requires total care

Personality Absent
• Affect and expression are flat
• Total deterioration

Physical Changes
• Unable to speak and walk
• Chewing and swallowing difficult
• May develop seizures
• Constant chewing and smacking lips
• Becomes bedridden and lapses into a coma

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