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Alzheimer's Disease: Facts, Risks and Related Information

An estimated five million Americans are thought to have Alzheimer's disease, and as our population ages, the numbers will continue to grow at an alarming rate. This devastating disease takes a terrible toll on those who suffer from it, as well as their families and friends. The financial burden of long-term care is enormous and draining, whether the person lives at home or is taken care of in a facility. Caregivers suffer from depression, grief over loss of the person they once knew, stress and isolation. Initially, those with Alzheimer's may become frustrated by their loss of memory and function, and later, totally dependent on others for care. In the future, the healthcare system in the U.S. could well become completely overwhelmed by the costs of Alzheimer's disease. Current treatments for this brain disorder only temporarily slow the loss of cognition. Scientists continue to learn more about the causes, processes and progression of this complex disease. These discoveries build the foundation for an eventual cure, but only continued investment in research will move us closer to effective treatments to significantly slow, and one day perhaps prevent, development of Alzheimer's disease.

Through generous private donations to its Alzheimer's Disease Research program, the American Health Assistance Foundation,

funds the most innovative research worldwide seeking a cure for this age-related, degenerative disease. We also believe that an informed public is of paramount importance, and we are committed to helping people who are currently affected. To carry out our mission, we disseminate print publications, as well as TV and radio public service announcements (PSAs). Our newly enhanced website (www.ahaf.org) contains a wealth of up-to-date, accurate information on all aspects of Alzheimer's from treatment options to planning for the future.

We urge you to publish the following information for your readers. The material may be reprinted in full or part without prior approval, but please credit Alzheimer's Disease Research, a program of the American Health Assistance Foundation as the source. The back of this publication contains information for your readers on ordering our brochures and booklets.

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Information for the public: Alzheimer's Disease Research, a program of the American Health Assistance Foundation, **1-800-437-2423, www.ahaf.org**
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The information in this publication should not in any way substitute for the advice of a qualified healthcare professional and is not intended to constitute medical advice.

Basic Alzheimer's Disease Facts*

- Alzheimer's disease is a progressive, incurable and terminal disorder in which beta amyloid protein plaques and tau protein tangles in the brain disrupt nerve cell communication and eventually lead to cell death. Those with the disease lose their mental ability to remember, communicate and reason.
- One in seven Americans age 71 and older has some type of dementia. Nearly half of all people age 85 and older have some form of dementia.
- According to the U.S. Census Bureau, approximately 1.5% of the U.S. population has Alzheimer's disease.
- Healthcare expenses and lost wages for patients and caregivers are thought to be \$100 billion annually.
- Approximately 70% of Alzheimer's patients live at home where families care for them. The total national cost for caregiving in the home for older adults with cognitive impairment is estimated to be \$18 billion.
- The cost of long-term care for an Alzheimer's patient is not covered by Medicare.

**Statistics obtained from the Alzheimer's Disease Education and Referral Center (ADEAR) of the National Institute on Aging (NIA) (National Institutes of Health), the U.S. Census Bureau, NIA and Medicare.*

Do Physical Conditions Increase the Risk of Developing Alzheimer's Disease?

Some study results published in the last year have associated various physical conditions with a higher risk of developing Alzheimer's disease. Various studies have linked a large belly in mid-life, high cholesterol, low levels of good cholesterol, deficiencies of folate, vitamins B1 and B12 in the diet, excessive drinking of alcohol, and smoking, to the development of Alzheimer's disease and dementia. Many experts also believe that diabetes, high blood pressure and high cholesterol contribute to a greater risk of developing Alzheimer's or may worsen its symptoms. Since most studies involved a limited number of participants, scientists cannot state with complete certainty that these are direct connections without further research and analysis. However, it is clear that a healthy lifestyle helps protect against the onset of some serious medical problems.

Good habits might help stave off Alzheimer's disease. For example, recent studies have linked eating fruit (in one study, apples, banana and oranges) and foods with omega-3 fatty acids (salmon, tuna and other "oily" fish, walnuts and flaxseed, among others) with possibly protecting the brain's nerve cells against Alzheimer's. There are likely no miracle foods that will prevent the onset of this disorder. However, a balanced, nutritious diet high in vegetables, especially leafy greens, fruits and complex carbohydrates and low in fat will definitely contribute to overall health. Add to this the benefits of regular exercise, mental activity and social

interaction, and while you are protecting your physical well-being, you could be saving your brain.

Dementia and its Causes

Dementia is not a disease, but a symptom caused by damage to the nerve cells of the brain. This damage results in memory loss, changes in personality and behavior, and problems with cognition, that is, reasoning, thinking, speaking and judging. People who experience these symptoms are incapable of carrying out day-to-day tasks without assistance. Alzheimer's disease is the most common cause of dementia, but there are many other conditions that can lead to severe cognitive decline and interfere with daily living. Some dementias can be halted or reversed, but progressive dementia, such as Alzheimer's, will continue to worsen until the person is totally dependent on others for care.

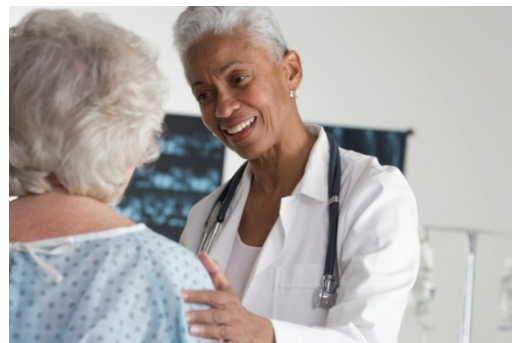
Alzheimer's disease accounts for approximately half of all dementia cases. In Alzheimer's, the buildup of beta amyloid protein around the brain's neurons (nerve cells) and tau protein tangles within the cells leads to loss of function and neuronal death. Although scientists have not determined the cause of Alzheimer's disease, age and genetics are known risk factors. Cardiovascular disease, oxidative damage from free radicals, type 2 diabetes and inflammation, among other conditions, may contribute to the development of Alzheimer's.

Vascular dementia is the second most commonly occurring type – about 10-20% of all dementia cases are caused by problems with blood vessels. Blocked arteries can impede blood flow to the brain causing multiple mini-strokes and multi-infarct vascular dementia. This type of dementia normally progresses slowly and in

steps, compared to the sudden onset of dementia that may follow a major stroke. Cardiovascular diseases (especially high blood pressure), diabetes, being overweight and smoking are among the factors that may increase the risk of developing vascular dementia.

Dementia is a symptom of degenerative neurological disorders such as Lewy Body Dementia and Parkinson's disease, and the more rarely occurring Pick's and Creutzfeldt-Jakob diseases. These are progressive and irreversible. Head injuries, infections, brain tumors and brain trauma can also cause irreversible dementia. Nutritional deficiencies, especially of folate and vitamins B1 and B12, dehydration, reactions to medication, hormone and metabolic disorders may all lead to dementia. In these cases, the person can return to normal if the conditions are corrected through medication and other treatment.

People experiencing persistent forgetfulness, confusion, mood swings or unusual behavior that is interfering with daily life should visit a doctor for a full evaluation.



Mild Cognitive Impairment

As we age the connections or synapses that transmit information between our brains' nerve cells deteriorate, and we lose

chemicals called neurotransmitters that also transfer information among cells. This can cause memory lapses and a decline in our ability to think, reason, judge and perceive. Of course, seniors can continue to learn and retain their memory – it may just take more time and attention.

Some older people develop persistent memory lapses or other cognitive problems more serious than the normal decline of aging. Scientists have identified this condition as mild cognitive impairment or MCI. Generally, people with the most common “amnesic” MCI experience memory lapses -- they may forget names and have difficulty following conversations, but they are able to perform routine tasks without assistance. People with MCI are usually aware of their problems, and can compensate by using memory devices like written reminders, planners and lists. Other types of MCI can affect cognitive abilities such as reasoning and judgment, or cause personality changes. MCI is not dementia, a more severe impairment that makes a person dependent on others for help with daily activities.

MCI can progress to dementia, often caused by Alzheimer’s disease, but not in every case. The symptoms of MCI may remain unchanged for years, and in some cases, can disappear altogether. However, knowing that MCI can degenerate may motivate people to plan ahead and better prepare for the future.

If you or someone close to you seems to have continuing memory problems, schedule an appointment with a doctor to discuss your concerns. The doctor or a specialist can perform some tests to determine cognitive ability levels. If the results of these tests and your discussions point to MCI, a healthcare professional may also recommend treatment or suggest ways to compensate for memory loss.

Some studies indicate that other medical conditions, such as diabetes and high blood pressure, may increase the risk of developing MCI. So, experts recommend regular exercise, a nutritious diet, proper sleep, mental activity and social interaction to keep the body healthy and the mind sharp. Seniors can continue to learn and improve their memories by trying different mental challenges from taking up a musical instrument to solving brain teasers and puzzles.

Geriatric Care Managers

Happily, our parents and other loved ones are living longer. But living longer also means that we will almost certainly need to help our relatives with everyday tasks, as well as try to ensure that they remain as productive and independent as possible. Age-related medical conditions and diseases can add to these responsibilities, straining everyone involved, physically and emotionally. The onset of Alzheimer’s disease brings new stresses. Fulfilling the needs of spouses, children and our parents can be overwhelming, particularly if we live far from our elderly loved ones. To help ease the burden, a family may consider hiring a geriatric care manager.

A geriatric care manager or GCM is a professional, usually someone with background and training in gerontology, nursing, social work or counseling, who can greatly assist the elderly and their families. To find out more or begin looking for a GCM, contact the local Area Agency on Aging office, the National Association of Professional Geriatric Care Managers (www.caremanager.org, 521-881-8008) or the Eldercare Locator, a service of the U.S. Administration on Aging (www.eldercare.gov, 1-800-677-1116).

A GCM will first thoroughly assess and evaluate the person's physical and mental state, urgent and longer term needs, support system, financial and legal issues, and living arrangements. From this information, the GCM devises an individualized care plan and makes the appropriate connections to other professionals and services. The GCM should work with both the senior and his or her family, and be prepared to monitor and adjust the plan as necessary. This is especially true for those with Alzheimer's whose needs will inevitably change. A GCM's main goal is to help the elderly person retain his or her independence as long as possible. However, if necessary, the GCM can also help with the transition into an assisted living or long-term care facility.

GCMS generally charge an intake fee and an hourly rate depending on the level of services needed. Medicare and Medicaid do not cover these costs, but private insurance plans might. Non-profit or community service agencies may be able to help defray some of the cost.

If you are considering hiring a GCM, begin with an interview to get answers to the following:

- What type of education, background and training do you have?
- Are you certified? (GCMs are not licensed.) What organizations do you belong to?
- Do you have experience and references?
- What services do you provide and what are your fees?
- What will you consider in your assessment/evaluation?
- What connections do you have to doctors, lawyers and other professionals?
- What types of facilities are you connected to?

- How will you communicate with our relative and our family? Will you be available in emergencies?
- Will you monitor and regularly reassess the care plan?

A GCM may not be the right choice for every family, but a carefully considered decision to hire a professional could benefit both the elderly loved one and his or her relatives, and add to the quality of life.

Can Ginkgo Biloba and Vitamin E Help Prevent Alzheimer's Disease?

Some believe that ginkgo biloba, a leaf extract, might protect against Alzheimer's disease, improve memory and slow cognitive decline; others think the same about the antioxidant vitamin E. However, the scientific evidence is unclear. Although some study results have been promising, the current data does not support a definitive recommendation for either of these two supplements. Scientists generally agree that more research needs to be done, and that larger numbers of people must be tested.

Ginkgo biloba is extracted from the dried leaves of maiden hair trees, originally found in China. It contains both flavanoids which are antioxidants and terpenoids which improve blood flow. Ginkgo biloba has been used for many years to treat a variety of circulatory problems and other ailments. While some studies suggest that these flavanoids and terpenoids may improve memory, others have not supported these results. Data is still being analyzed from a five-year study with 3,000 participants investigating the effect of ginkgo biloba on delaying cognitive decline.

Vitamin E is an antioxidant that may protect the brain's nerve cells from damage by free radicals. Free radicals are unstable atoms

produced by processes in the body (for example, metabolism) and by environmental factors like smoking. Antioxidants are able to neutralize free radicals and prevent possible cell damage, such as that found in the brains of Alzheimer's patients. However, study results on vitamin E have been mixed. The National Institute on Aging is currently conducting a trial to look at the effect of vitamin E and selenium on preventing Alzheimer's disease, but the study will not be completed until 2012.

As a general precaution, before taking any extract, herb or supplement, always consult a healthcare professional. Ginkgo biloba can produce side effects including headache, nausea, dizziness and gastrointestinal upset, and it does interact with certain medications. High doses of vitamin E over the long term may be harmful, and there are potential adverse reactions such as bleeding, bruising, nausea and headache. Until the scientific data is more definitive, perhaps the best advice is to eat a healthy diet that includes good sources of vitamin E, like green leafy vegetables, certain vegetable oils (especially safflower and sunflower) and nuts (for example, almonds). Be sure to talk to your doctor about the potential benefits of supplements and extracts.

“Living with Alzheimer’s Disease” and Other Publications

Alzheimer's Disease Research, a program of the American Health Assistance Foundation (AHAF) has just produced a free, informative publication. This 35-page booklet, “Living with Alzheimer's Disease” includes a wealth of information for those with this degenerative brain disorder, as well as their caregivers. The first sections describe risk factors, diagnosis, stages and treatment. The booklet then focuses on post-

diagnosis aspects, including the emotional impact, planning for the future, home and driving safety, and financial and legal matters. Following these sections, there is more specific information aimed at caregivers, including recommendations for interacting with a loved one, coping with stress, support groups and options for long-term care. The end of the booklet contains a comprehensive list of resources and a reading list.

We believe that “Living with Alzheimer's Disease” is a valuable resource for those with this disorder, and their families and friends. “Living with Alzheimer's Disease” can be ordered at no cost from AHAF by calling 1-800-437-2423 or at www.ahaf.org. The booklet can be read or downloaded in PDF at the same website.

Other free, informative publications from Alzheimer's Disease Research, a program of AHAF, include “Understanding Alzheimer's Disease: It's Not Just Forgetfulness,” “Care for the Caregiver: Managing Stress,” “Staying Safe: Wandering and the Alzheimer's Patient” and “Safety and the Older Driver.” All of these brochures are available in Spanish and English. To order print copies of all publications call toll-free 1-800-437-2423 or order online at www.ahaf.org. Free electronic PDF versions may also be downloaded or read online at www.ahaf.org.