

“Alzheimer’s Disease: What we know so far.” Lindsey Anne Vacek, April 23, 2007

Q: What is Alzheimer’s disease?

A: Alzheimer’s disease is a neurodegenerative disease, characterized by progressive cognitive deterioration, along with declining daily-life activities and some neuropsychiatric symptoms or behavioral changes.¹

Q: Why is it named “Alzheimer’s”?

A: Alzheimer's disease was named after a German physician, Alois Alzheimer, who first identified the condition in 1906 when he performed an autopsy on the brain of a woman who'd been suffering severe memory loss and confusion for years.²

Q: Do I have Alzheimer’s disease or am I just getting older?

A: The most common early symptom of Alzheimer’s disease is short-term memory loss, normally manifested as forgetfulness, as one often associates with old age. Thus, it can be difficult to diagnose Alzheimer’s disease early on. The later symptoms can make it easier to distinguish Alzheimer’s from normal aging and other forms of dementia.^{1,3}

Q: How is Alzheimer’s disease diagnosed?

A: The diagnosis is made primarily on the basis of history, clinical observation, memory tests and intellectual functioning over a series of weeks or months, along with physical tests, including blood tests and neuroimaging, being done in order to rule out alternative

diagnoses. No medical tests are available to diagnose Alzheimer's disease conclusively pre-mortem.^{4, 6, 12}

Q: Can do doctors diagnose Alzheimer's disease with certainty?

A: The only way to diagnose Alzheimer's disease with 100% accuracy after death, through an autopsy. However, with use of neurological examinations, an estimated accuracy of 90% can be achieved in diagnosis of Alzheimer's patients.^{4, 5, 6}

Q: What are the other symptoms of Alzheimer's disease?

A: As Alzheimer's progresses in patients, cognitive impairment extends beyond the realm of memory. Some of the areas most likely to be affected next are language, skilled movement, recognition of others, and functions we normally do not think about, but do, such as decision-making and planning.³

Q: What is the most common progression of symptoms?

A: Stages and Symptoms

The stages and symptoms of Alzheimer's disease are sometimes grouped together: mild, moderate, and severe.

Mild: This is during the early stage of the disease. Changes in patients' behavior often go unnoticed, and tend to be mainly described as "forgetfulness."

Moderate: At the middle stage of Alzheimer's, patients may still be able to perform tasks on their own, but may need assistance with more complicated activities. They may also require supervision as time passes.

Severe: From the middle to late stage of Alzheimer's, patients are frequently unable to perform even simple tasks on their own and need constant supervision. It is possible that they may lose abilities such as walking or eating, unless assisted in these actions. ^{3,4}

Q: I have heard Alzheimer's called "dementia." Are the two the same thing?

A: Alzheimer's disease is a form of dementia. Although all Alzheimer's patients have dementia, not all patients with dementia have Alzheimer's disease; there are other forms of dementia.

Q: What is dementia?

A: Dementia is defined as the "loss of intellectual abilities (medically called cognitive function) of sufficient severity to interfere with social or occupational functioning," according to the Diagnostic and Statistical Manual of the American Psychiatric Association. In other words, dementia is a decline in normal brain function, due to damage or disease beyond what one might normally expect with aging. The definition of the word itself comes from latin: "de-" + "mens-" mean "away from the mind."

Q: What causes Alzheimer's disease?

A: Quite simply, no one knows the ultimate cause of Alzheimer's disease. It is known that the pathological process involves atrophy and loss of brain tissue, but the cause of this is unknown.

Q: What exactly is the pathological process of Alzheimer's disease?

A: Research suggests that the impairment seen in Alzheimer's patients is closely related to the frontal and temporal lobes of the brain as they become disconnected from the limbic system, which seems to be an extension of the underlying pathological process. This pathological process consists principally of the loss neurons, or atrophy of neurons. This occurs principally in the temporoparietal cortex, but also in the frontal cortex, together with an inflammatory response to the deposition of amyloid plaques and neurofibrillary tangles. ^{6,9}

Q: If my relatives had Alzheimer's, will I get it?

A: It is possible that the cause of Alzheimer's is related to genetic factors, but it has not yet been determined how many cases are actually due to genetic factors. Mutations in three different genes have been identified, but these only account for a small number of cases of familial, early-onset Alzheimer's disease. ^{11,13}

Q: Can you catch Alzheimer's disease?

A: No, Alzheimer's disease is not contagious. Although you may have read or heard that it is linked to deodorant or aluminum pans or cans, these are myths; the pathway of Alzheimer's is neither acquired from the environment nor transmissible from person to person. ¹¹

Q: What can I do to prevent Alzheimer's disease?

A: Although nothing is certain, it is believed that several factors related to physical and mental health may help reduce your risk of Alzheimer's. Among these are: intellectual

stimulation, such as crosswords or games of skill like chess⁷; regular physical exercise⁸; regular social interaction⁹; and a diet high in fruits and vegetables, and low in saturated fat.¹⁰

Q: Where can I find more information on Alzheimer's disease?

A: Alzheimer's Association, <http://www.alz.org> is the best resource if you are looking for facts and figures, as well as the latest developments in information regarding Alzheimer's disease. The Centers for Disease Control and other government organizations also publish information on the topic, and their websites are easily accessible places to find reliable information on Alzheimer's disease.^{11, 12}

Q: Is Alzheimer's just part of getting older? Is it something that everyone gets if they live long enough?

A: No, Alzheimer's is not "just part of getting older;" it isn't part of the natural aging process. Along the same lines, it is not inevitable if you live long enough; many people live long lives without Alzheimer's disease or other forms of dementia.¹³

Q: How widespread is Alzheimer's disease?

A: It is estimated that over 5 million Americans have Alzheimer's disease.¹¹ In 2004, with 65,829 deaths attributable to Alzheimer's disease, it was the 7th leading cause of death in America.¹²

Sources:

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