



## A Note on the Symptoms, Signs, and Causes of Alzheimer's Disease

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### Description

Alzheimer's Disease (AD) is a slowly evolving neurological disease that worsens over time. It is thought to be the cause of 60–70% of dementia cases. The most common early symptom is difficulty recalling recent events. Language difficulty, confusion, mood fluctuations, loss of motivation, self-neglect, and behavioral concerns are all possible signs as the condition progresses. When a person's health begins to worsen, they often withdraw from family and society. The body's functioning diminishes over time, finally leading to death. The usual life expectancy following diagnosis is three to nine years, despite the fact that the rate of progression varies.

Alzheimer's disease is a disease with no recognized cause. Its growth is influenced by a variety of environmental and genetic variables. The most potent genetic risk factor is an allele of the APOE gene. Risk factors include a history of brain injury, severe depression, and high blood pressure. Amyloid plaques, neurofibrillary tangles, and neuronal connection loss in the brain are all associated to the disease process. A probable diagnosis is based on the patient's medical history and cognitive testing with medical imaging and blood tests to rule out other possible causes. Early symptoms are sometimes misunderstood as natural indicators of ageing. Brain tissue must be analyzed for a conclusive diagnosis, but this can only be done after death. In 2019, scientific experiments to test these possibilities were ongoing. A healthy diet, physical activity, and social interaction are all known to help with ageing, and these factors may also help to been shown to lessen the risk of cardiovascular disease.

While certain treatments can temporarily alleviate lower the incidence of cognitive decline and Alzheimer's disease. No medications or supplements have symptoms; none can stop or reverse the disease's progres-

sion. People who are affected become more dependent on others for assistance, putting a pressure on carers. There could be social, psychological, physical, and financial strains. Exercise programmers may be beneficial in terms of day-to-day activities and can perhaps improve outcomes. Antipsychotics are widely used to treat behavioral problems or psychosis caused by dementia, but they're rarely recommended because they're ineffective and increase the risk of early death.

Alzheimer's disease has three stages, each marked by a gradual pattern of cognitive and functional decline. The condition is known to affect the hippocampus, which is linked to memory and is the source of the first signs of memory loss. The severity of memory loss increases as the disease advances.

Proteins stop working properly. This interferes with the work of the damaged brain cells, resulting in a toxic cascade that leads to cell death and later brain atrophy.

Alzheimer's disease is thought to develop when abnormal amounts of amyloid beta build up in the brain, either extracellularly as amyloid plaques and tau proteins or intracellularly as neurofibrillary tangles, affecting neuronal function and connectivity and leading to progressive loss of brain function. This decreased ability to remove proteins is age-related, controlled by brain cholesterol, and linked to other neurodegenerative illnesses.

Researchers can now witness the creation and spread of aberrant amyloid and tau proteins in the living brain, as well as alterations in brain structure and function, thanks to advances in brain imaging tools. A fragment of a larger protein, beta-amyloid, is found in the brain. When these pieces clump together, they have a toxic effect on neurons and cause cell-to-cell communication to be disrupted. As a result, larger deposits known as amyloid plaques form.