

A brief study on Alzheimer's disease, Symptoms, Stages and Diagnosis

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Introduction

Alzheimer's disease may be a neurological disorder in which the passing of brain cells causes memory loss and cognitive decrease. Alzheimer's is a neurodegenerative disease. At first, symptoms are mild, but they become more severe over time.

Symptoms

To receive a diagnosis of Alzheimer's, the person must have experienced a decline in cognitive or behavioral function and performance compared with how they were previously. This decline must interfere with their ability to function at work or in usual activities [1].

The cognitive decline must be seen in at least two of the five symptom areas listed below:

1. Reduced ability to take in and remember new information, which can lead, for example, to:
 - Repetitive questions or conversations
 - Misplacing personal belongings
 - Forgetting events or appointments
 - Getting lost on a familiar route
2. Impairments to reasoning, complex tasking, and exercising judgment, for example:
 - Poor understanding of safety risks
 - Inability to manage finances
 - Poor decision-making ability
 - Inability to plan complex or sequential activities
3. Impaired visuospatial abilities that are not, for example, due to eye sight problems. These could be:
 - Inability to recognize faces or common objects or to find objects in direct view
 - Inability to use simple tools, for example, to orient clothing to the body
4. Impaired speaking, reading and writing, for example:
 - Difficulty thinking of common words while speaking, hesitations
 - Speech, spelling, and writing errors
5. Changes in personality and behavior, for example:
 - Out-of-character mood changes, including agitation, apathy, social withdrawal or a lack of interest, motivation, or initiative
 - Loss of empathy
 - Compulsive, obsessive, or socially unacceptable behavior

If symptoms begin or worsen over the course of hours or days, you should seek immediate medical attention, as this could indicate an acute illness [2].

Alzheimer's is most likely when memory loss is a prominent symptom, especially in the area of learning and recalling new information. Language problems can also be a key early symptom, for example, struggling to find the right words. If visuospatial deficits are most prominent, these would include:

- Inability to recognize objects and faces
- Difficulty comprehending separate parts of a scene at once
- Difficulty with reading text, known as alexia

The most prominent deficits in executive dysfunction would be to do with reasoning, judgment, and problem-solving.

Stages

The progression of Alzheimer's can be broken down into three main stages:

- Preclinical, before symptoms appear
- Mild cognitive impairment, when symptoms are mild
- Dementia

Alzheimer's is the most common type of dementia. It involves plaques and tangles forming in the brain. Symptoms start gradually and are most likely to include a decline in cognitive function and language ability [3].

Diagnosis

There is no single test for Alzheimer's disease, so doctors will look at the signs and symptoms, take a medical history, and rule out other conditions before making a diagnosis. They may also check the person's neurological function, for example, by testing their balance, senses, and reflexes. Other assessments may include a blood or urine test, a CT or MRI scan of the brain, and screening for depression. Sometimes the symptoms of dementia are related to an inherited disorder such as Huntington's disease, so genetic testing may be done. After ruling out other possible conditions, the doctor will carry out cognitive and memory tests, to assess the person's ability to think and remember [4].

Reference

1. Mattson MP. Pathways towards and away from Alzheimer's disease. *Nature*. 2004 Aug;430(7000):631-9.
2. Litvan I, Goldman JG, Tröster AI, Schmand BA, Weintraub D, Petersen RC, Mollenhauer B, Adler CH, Marder K, Williams-Gray CH, Aarsland D. Diagnostic criteria for mild cognitive impairment in Parkinson's disease: Movement Disorder Society Task Force guidelines. *Movement disorders*. 2012 Mar;27(3):349-56.
3. Delacourte A, David JP, Sergeant N, Buee L, Wattez A, Vermersch P, Ghzali F, Fallet-Bianco C, Pasquier F, Lebert F, Petit H. The biochemical pathway of neurofibrillary degeneration in aging and Alzheimer's disease. *Neurology*. 1999 Apr 1;52(6):1158-.
4. Knopman DS. The initial recognition and diagnosis of dementia. *The American journal of medicine*. 1998 Apr 27;104(4):2S-12S.

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