

Alzheimer's Disease: Understanding, Impact, and Approaches to Care.

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Introduction

Alzheimer's disease is a progressive neurodegenerative disorder that primarily affects memory, thinking, and behaviour. It is the most common cause of dementia, accounting for 60-80% of dementia cases. While the exact cause of Alzheimer's is still not fully understood, it involves the gradual accumulation of abnormal protein deposits in the brain, leading to the destruction of nerve cells and their connections [1]. As a result, individuals with Alzheimer's experience a decline in cognitive functions, which severely impacts their ability to carry out daily activities. With the aging global population, the prevalence of Alzheimer's disease is on the rise, making it one of the most pressing public health concerns today. Understanding the causes, symptoms, and potential treatment options for Alzheimer's is crucial for improving outcomes and providing effective support for both those affected and their families [2].

Alzheimer's disease occurs when abnormal proteins—amyloid plaques and tau tangles—accumulate in the brain, disrupting communication between neurons and ultimately leading to cell death. The exact reason for the formation of these plaques and tangles remains unclear, but it is believed to involve a combination of genetic, environmental, and lifestyle factors [3].

The primary risk factor for Alzheimer's is age. The likelihood of developing Alzheimer's increases significantly after the age of 65, with individuals over the age of 85 at the greatest risk. However, Alzheimer's is not a normal part of aging, and many older adults do not develop the disease [4].

Genetics also plays a role in Alzheimer's. One key genetic risk factor is the presence of the apolipoprotein E (APOE) gene, which has been shown to increase the risk of Alzheimer's. People who inherit one copy of the APOE ϵ 4 allele have a higher risk, while those with two copies are at an even greater risk. However, the presence of the APOE ϵ 4 gene does not guarantee that an individual will develop Alzheimer's, and many people with the gene may never experience the disease [5].

In addition to genetic factors, other risk factors for Alzheimer's include family history, cardiovascular health, and lifestyle choices. Conditions such as hypertension, diabetes, and high cholesterol can increase the likelihood of developing Alzheimer's. Lifestyle factors such as physical inactivity, smoking, poor diet, and lack of mental stimulation have also been linked to a higher risk of cognitive decline [6].

Alzheimer's disease develops slowly and its symptoms can vary in intensity over time. The early signs are often subtle and may be mistaken for normal age-related changes. However, as the disease progresses, the symptoms become more pronounced and debilitating [7].

The most common early symptom of Alzheimer's is memory loss, particularly difficulty remembering recent events or conversations. As the disease advances, individuals may struggle to recognize familiar faces, places, or objects. Difficulty with language, such as forgetting words or having trouble understanding complex instructions, is another hallmark symptom [8].

Individuals may become easily lost, even in familiar places, and may struggle with time and date awareness. People with Alzheimer's may exhibit poor judgment, make risky decisions, or fail to recognize social norms. Depression, anxiety, irritability, and agitation are common emotional changes, and some individuals may exhibit uncharacteristic behaviours, such as aggression or paranoia. Alzheimer's can lead to personality shifts, including increased withdrawal from social activities or a decline in personal hygiene [9].

Diagnosis of Alzheimer's disease involves a thorough evaluation by a healthcare provider, including a review of medical history, physical and neurological exams, cognitive tests, and brain imaging (such as MRI or CT scans). While there is no definitive test for Alzheimer's, these assessments can help rule out other conditions and determine if the symptoms are consistent with Alzheimer's [10].

Conclusion

Alzheimer's disease is a devastating condition that affects millions of individuals and families worldwide. Despite the challenges it presents, ongoing research, early diagnosis, and comprehensive care approaches offer hope for improving outcomes. While there is no cure for Alzheimer's, treatments and strategies to manage symptoms can help individuals maintain a higher quality of life for as long as possible. As our understanding of Alzheimer's advances and new therapies are developed, society must continue to provide support for those affected by the disease and their caregivers. With increased awareness, better resources, and a more coordinated approach to care, we can ensure that individuals with Alzheimer's disease receive the support they need to navigate this challenging journey.

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