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PATHOPHYSIOLOGICAL ASPECTS OF ALZHEIMER'S DISEASES
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Alzheimer's disease (AD) is an irreversible and the most common and fast progressive neurodegenerative disorder associated with impaired cortical function and impaired cognitive skills. It is an age-specific disease, which is associated with neural loss thus involving a downturn in memory and executive function, and personality change.

One in three seniors dies with Alzheimer's diseases. It is the fifth-leading cause of death among elderly people age 65 and more. It has been estimated that by 2050 there will be 12.7 million elderly people aged 65 years will have Alzheimer's dementia. Among 50 million people with dementia, around two-thirds of them will suffer from AD. The main risk factor for Alzheimer's disease is age (>65 age). The occurrence of this disease doubles every 5 years after the age of 65 years, with the diagnosis of 1275 new cases per year, per 100,000 people older than 65 years of age. Other risk factors of AD can be family history of the disease, inherited genes that are responsible for AD, existing mild congestive impairment, down syndrome, unhealthy lifestyle, previous head trauma, obesity and diabetes. Risk of developing Alzheimer's in women is more than men because of hormones and their lifestyle. Almost two-third of Americans with Alzheimer's diseases are women.

Alzheimer's disease was discovered by a German physician Alois Alzheimer in 1906. Alzheimer's disease is a neurological disorder that cause the brain cells to shrink (atrophy). In AD neurons are damaged and loses connection with each other thus reducing neural mass, which results in death of the brain cells. AD is associated with an accumulation of senile plaque and neurofibrillary tangles in the brain. The most obvious regions of the brain to be affected in AD is hippocampus as it is responsible for creating memories and other areas of cerebral cortex that are involved in thinking and making decisions. Stages of AD are Mild stage, Moderate stage and Advanced stage. Mechanism of development of AD is explained by following theories: amyloid-Beta cascade; genetic factor; neuronal loss; cholinergic hypothesis; excitotoxicity.

Till now, there has been no specific diagnosis and cure found by the researches for Alzheimer's disease. Anyhow to diagnose Alzheimer's disease we go through some tests and procedures such as physical and neurological examinations, CBC, MRI, EEG and PET. Since there is no evidence supporting the measures of preventing AD, we can just delay the early onset of AD through some medications such as cholinesterase inhibitors – Rivastigmine and NMDA-antagonists - Memantine and by adopting a healthy lifestyle including a healthy diet.