



# **ALZHEIMER'S DISEASE**

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# AIMS & OBJECTIVES

- ❑ The given research project aims to shed light on the definition of Alzheimer's disease, its major causes, symptoms, and the results of statistical data related to the disease.
- ❑ Much attention will be paid to the main stages of Alzheimer's disease that denote its progression, adverse effects on functional abilities, effective management and treatment strategies.
- ❑ Finally, the paper will evaluate various governmental policies and programs aimed to provide assistance to patients living with this health disorder.

# DEFINITION

- Alzheimer's disease that is commonly referred to as AD is a chronic, progressive, and neurodegenerative disorder that accounts for approximately 60-70% of cases of dementia (Morrison & Lyketsos, 2005).
- Alzheimers' disease is a health-threatening health disorder that negatively affects a human brain (Morrison & Lyketsos, 2005).
- This disease is progressive and, at the same time, irreversible (Morrison & Lyketsos, 2005).

## The Results of Statistical Data

- ✓ The researchers estimate that approximately 70% of the risk is recognized to be genetics as many genes are involved (Engelhardt & Laks, 2008).
- ✓ The percentage of Americans of all ages diagnosed with Alzheimer's disease is equal to 5,3 million.
- ✓ Above 5,1 million are Americans aged 65 or more (Engelhardt & Laks, 2008).
- ✓ The results of statistics prove that African-Americans and Hispanics are “risky groups” because these populations are more likely than many other people to be diagnosed with Alzheimer's disease (Engelhardt & Laks, 2008).

## The Results of Statistical Data

- ✓ Approximately two thirds of patients in America with Alzheimer's disease are female individuals.
- ✓ Alzheimer's disease is included to the list of ten leading causes of death in America (Engelhardt & Laks, 2008).
- ✓ Every 67 seconds one patient in the USA develops this progressive and irreversible disease.
- ✓ The researchers predicted that the amount of Alzheimer's patients aged 65 or older will die in 2006 (Engelhardt & Laks, 2008).
- ✓ More than two thirds of caregivers are females.
- ✓ It is proven that approximately 250,000 children under 18 provide assistance to people with Alzheimer's disease.
- ✓ Because the impact of Alzheimer's disease is devastating, approximately 40% of people suffer from emotional stress and depression (Engelhardt & Laks, 2008).

# Causes of Alzheimer's Disease

The researchers have come to conclusions that there is no particular factor that stimulates the development of Alzheimer's disease (Benoit, 2012). On the contrary, the researcher differentiate a combination of interconnected factors. The most common factors that influence the development of Alzheimer's disease are as follows (Benoit, 2012):

- ❖ genetic heritability of the disease;
- ❖ environmental factors, especially previous head traumas (Benoit, 2012);
- ❖ lifestyle factors, including continuous feeling of loneliness, sleep deprivation, poor eating habits, lack of physical exercise, and many others;
- ❖ negative biological processes that accelerate brain cell failure (Benoit, 2012).

## Diagnosis of the Disease

- ❖ Although it is very difficult to diagnose Alzheimer's disease, the researchers estimate that more than 90% professional physicians accurately diagnose this health condition (Morrison & Lyketsos, 2005).
- ❖ This disease is, as a rule, diagnosed on the basis of personal history that reflects mental and behavioral characteristics and observations.
- ❖ High-quality medical imaging and computer tomography help physicians to diagnose Alzheimer's disease (Morrison & Lyketsos, 2005).
- ❖ Neurological tests are no less effective because they assist healthcare professionals in identifying serious mental and behavioral dysfunctions.
- ❖ Detailed physical examinations and laboratory tests help to assess the potential health-threatening causes of Alzheimer's disease (Morrison & Lyketsos, 2005).

# Signs and Symptoms of the Disease

## Early Stage of Alzheimer's Disease

- ❑ forgetfulness or not remembering entire episodes;
- ❑ loss of short-term memory (names of friends or family members) (Benoit, 2012);
- ❑ subtle problems with such important executive functions of a human body as attentiveness, critical as well as abstract thinking, flexibility, and, finally, semantic memory (Benoit, 2012);
- ❑ behavioral and mental problems are not usually recognized by family members and friends;
- ❑ various depressive symptoms, especially increased irritability and apathy (Benoit, 2012).

## **Middle Stage of Alzheimer's Disease**

- ❑ continuous and irreversible deterioration of many body functions that hinder independence of patients with AD (Benoit, 2012);
- ❑ severe problems with long-term memory, reading, listening, and writing skills;
- ❑ troubles with sleep, sundowning, illusionary misidentifications, and continuous urinary incontinence (Benoit, 2012).

## **Advanced or Late Stage of Alzheimer's Disease**

- ❑ absolute dependence of patients with AD on their caregivers;
- ❑ complete loss of speech as well as reading and listening skills (Benoit, 2012);
- ❑ extreme apathy, depression;
- ❑ inability to cope with the simplest tasks and activities independently (Benoit, 2012);
- ❑ deterioration of muscle mass and mobility;
- ❑ pressure ulcers as well as pneumonia are the major causes of death among patients with Alzheimer's disease (Benoit, 2012).

## **Effect of Alzheimer's Disease on Aging Body Systems**

- **CENTRAL NERVOUS SYSTEM.** Alzheimer's disease is a severe health disorder that results in the deterioration of central nervous system, including brain as well as spinal cord (Justin, Turek & Hakim, 2013).
- **DIGESTIVE SYSTEM.** AD negatively impacts this system of a human body and mainly causes swallowing difficulties. However, such negative effects as smell and taste impairment are common among patients with this progressive disease (Justin, Turek & Hakim, 2013).
- **NEUROMUSCULAR SYSTEM.** At final stages of the disease patients with AD lose their ability to use muscles for some purposeful aims. In addition, motor functions of patients with AD are also very weak (Justin, Turek & Hakim, 2013).

## **Treatment & Management that Minimize Adverse Symptoms of the Disease**

Because there is no effective cure for Alzheimer's disease, the researchers insist on the significance of treatment and management (Justin, Turek & Hakim, 2013). Nowadays, effective methods of treatment and management are subdivided into two major categories:

1. pharmacological treatment;
2. non-pharmacological means of management (Justin, Turek & Hakim, 2013).

## **Pharmacological Treatment of Alzheimer's Disease**

- ❖ Medications are classified as effective ways to treat various cognitive problems of Alzheimer's disease. At present, there are five medications, including tacrine and rivastigmine, that slow down the progression of the disease. However, the results of statistics prove that these medications are not effective in the long-term use because of numerous negative adverse effects (Kelley & Knopman, 2014).
- ❖ Some experts insist on significance of numerous psychosocial interventions, especially behavioral and emotion-oriented methods of treatment (Kelley & Knopman, 2014).
- ❖ Since Alzheimer's disease is classified as irreversible disease, caregiving is inevitable because only professional assistance can help patients with AD to cope with malnutrition, disabilities, and various hygiene problems (Kelley & Knopman, 2014).
- ❖ Feeding tubes are sometimes required because many people with AD have reduced appetite, problems with swallowing, and, finally, poor ability to recognize food (Kelley & Knopman, 2014).

## **Effective Management and Prevention of AD**

- Numerous epidemiological evidence provide convincing data that balanced diet, effective therapies, and, finally, physical exercises can reduce the risk of being diagnosed with AD (Kelley & Knopman, 2014).
- The results of statistics prove that intellectual activities, including reading, playing various musical instruments, and continuous social interactions with other people drastically reduce the risk of AD (Kelley & Knopman, 2014).
- Physical activities play a crucial role in reducing possible risk for AD.
- Balanced diet and healthy types of food may lessen the risk of Alzheimer's disease (Kelley & Knopman, 2014).

## **Governmental Policies and Resources that Provide Assistance to People with AD**

- Because Alzheimer's is the most expensive health disorder in the USA, Congress devotes a vast scope of resources annually to contribute to effective treatment and prevention of this disease (Kelley & Knopman, 2014).
- NAPA or, in other words, the National Alzheimer's Project Act is the most successful legislative victory that is purposed to overcome this disease.
- Nowadays, Alzheimer's disease is considered to be a national priority because thousands of people are under risk (Kelley & Knopman, 2014).
- Numerous products and services for patients with Alzheimer's disease are currently developed because they are helpful resources that give the chance to these people to feel more comfortable (Kelley & Knopman, 2014).

# CONCLUSIONS

As a result, having shed light on the definition of Alzheimer's disease, its causes, symptoms, effects, and efficient methods of treatment and management, it is possible to conclude that AD is a serious progressive health disorder that leads to deterioration of a human brain, thinking as well as speaking skills, and, finally, the ability to cope with the simplest daily activities. Although Alzheimer's is currently an incurable disease, healthy lifestyle, physical exercising, high-quality medications, and balanced diet are the most effective strategies that drastically slow down the progression of this lethal disease.

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