**Alzheimer’s Disease Among the Aged**

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 Alzheimer’s disease is a brain disorder that destroys memory and other mental functions (U.S. Department of Health and Human Services, 2021). This disease is the most common form of dementia among aged individuals. Research has shown that changes in the brain can begin a decade before symptoms appear. In the early stage of Alzheimer’s, there are abnormal buildups of proteins that form amyloid plaques and tangles in the brain. This causes abnormally functioning neurons that lose connection with other neurons and eventually die, leading to shrinkage in the brain tissue. These changes are thought to occur in the hippocampus and the entorhinal cortex, the areas of the brain responsible for forming memories (U.S. Department of Health and Human Services, 2021).

 Alzheimer’s disease can progress through several stages, those being mild, moderate, and severe (U.S. Department of Health and Human Services, 2017). One of the first symptoms of cognitive impairment in Alzheimer’s disease is memory difficulties. Signs of mild Alzheimer’s may include memory loss, poor judgement, loss of spontaneity, longer time to complete daily tasks, wandering, getting lost, misplacing items in wrong places, personality changes, and increased anxiety. Moderate Alzheimer’s disease may cause increased memory loss, inability to learn, difficulty with language, difficulty organizing, difficulty with logical thinking, shortened attention span, coping problems, inappropriate anger outbursts, agitation, and repetitive statements or movement. Those with severe Alzheimer’s are unable to communicate and are dependent on someone else for care. Their symptoms often include weight loss, seizures, skin infections, difficulty swallowing, groaning, increased sleeping, and loss of bowel or bladder control. Aspiration pneumonia is a common cause of death in these patients due to their difficulty with swallowing (U.S. Department of Health and Human Services, 2017).

 It is estimated that 6.2 million Americans aged 65 and older suffered from Alzheimer’s in 2021, with seventy-two percent being over the age of 75 (Alzheimer's Association, 2021). Of the total United States population, 11.3% of those 65 years of age and older has Alzheimer’s dementia. According to estimates from the 2011 U.S. census, approximately 910,000 people 65 and older developed Alzheimer’s in the United States. Furthermore, an average of one in three seniors die with Alzheimer’s or another dementia, causing more deaths than breast cancer and prostate cancer combined. This disease has a slow and uncertain progression, with patients surviving an average of four to eight years after their diagnosis. Among those 70 years old, 61% with Alzheimer’s are expected to die before age 80, compared to 30% who do not suffer from this disease. Alzheimer’s is the sixth leading cause of death in the United States, but the fifth leading cause of death for individuals over the age of 65. According from data collected by the Centers for Disease Control and Prevention, 121,499 individuals died from this disease in 2019. Furthermore, it is a leading cause of disability and poor health in the aged population (Alzheimer's Association, 2021).

 Research has shown that there are more Whites living with Alzheimer’s disease than any other racial or ethnic group in the United States due to this group being the largest racial and ethnic group in the country (Alzheimer's Association, 2021). However, older Black and Hispanic Americans are disproportionately more likely to suffer from Alzheimer’s than older White Americans. A recent study showed that 18.6% of Blacks and 14% of Hispanics age 65 and older have this disease compared to only 10% of older White individuals. This higher prevalence is thought to be due to the higher risk these groups have for developing dementia. These risks can be due to medical conditions, health-related behaviors, and socioeconomic factors that differ among racial groups. Furthermore, it has been determined that genetic factors do not play a huge role in the difference in the prevalence and incidence rates among different ethnic and racial groups. Cardiovascular disease and diabetes, among other chronic health conditions, disproportionately affect Black and Hispanic Americans and are associated with a higher risk of dementia. Environmental factors, such as quality of education, higher poverty rates, and discrimination can further increase these groups risk for chronic conditions and dementia. A study in California determined that the incidence of Alzheimer’s was highest for African Americans, intermediate for Latinos and Whites, and lowest for Asian Americans (Alzheimer's Association, 2021).

 As the population ages, especially the baby boomer’s population, it is likely we will see an increasing number of individuals with Alzheimer’s disease (U.S. Department of Health and Human Services, 2018). Therefore, it is imperative to develop interventions and policies to prevent or delay the progression. Although there is no cure for Alzheimer’s, researchers are working to develop strategies that may show promise in working to solve this issue, including increased physical activity, blood pressure control, and cognitive training. Many human and animal studies have shown that increased physical activity can reduce the risk of cognitive decline and is associated with fewer plaques and tangles that appear in Alzheimer’s. Evidence has also shown that high blood pressure and other cerebrovascular risk factors can increase one’s risk for developing Alzheimer’s. Cognitive training has also been used to enhance memory, reasoning, and mental processing (U.S. Department of Health and Human Services, 2018). Although these strategies have not shown to reduce or prevent Alzheimer’s, I think there should be more research conducted to study the benefits and effectiveness of such approaches in relation to Alzheimer’s.

 The interventions and policies mentioned in the rest of this paper will focus on the social aspects of Alzheimer’s. The Centers for Disease Control and Prevention reported that studies have shown that maintaining strong social relationships and staying mentally active can help lower the risk of cognitive decline and dementia as one ages (Centers for Disease Control and Prevention, 2020). Furthermore, a longitudinal cohort study focused on the correlation between loneliness and the risk of developing Alzheimer’s (Hsiao et al., 2018). The results showed that those who were living lonely without many social interactions were at a greater risk for Alzheimer’s than those who were not (Hsiao et al., 2018). Therefore, I think policies should be created that require physicians to educate their older patients on the importance of maintaining strong social connections, mental activity, and physical activity. In regard to mental activity, older individuals can be encouraged to use crossword puzzles, word searches, or watch educational television shows that make them use their brain and think.

 Regular exercise and physical activity have also been shown to induce biochemical changes in the brain that are important for memory and learning and in preventing cognitive decline and dementia (Hsiao et al., 2018). Furthermore, eating a Mediterranean style diet has also shown to reduce the incidence of cognitive decline, cardiovascular disease, and chronic degenerative diseases. This diet consists of fruits, vegetables, breads, cereals, potatoes, beans, nuts, and seeds. In contrast, research has shown a diet high in meats leads to an increased risk for developing Alzheimer’s (Hsiao et al., 2018). Therefore, policies should be implemented to educate the public on the importance of regular physical exercise and healthy diet control to help lead researchers in determining the best ways to alleviate the incidence of Alzheimer’s.

Access to health care can be another issue older individuals face but provides individuals with the opportunity for preventative health measures and early diagnosis (Centers for Disease Control and Prevention, 2020). By creating policies to increase access to health care, particularly for the aged population, we can help prevent or reduce the incidence of Alzheimer’s. Education is an important social determinant that has been shown to lead to better brain health and reduce cognitive decline. Although education is most often thought to be for the younger population, I think it is important to implement policies that provide older and younger individuals with opportunities to gain a higher education. These policies could focus on the financial aspect or the availability of such services. Researchers are studying this approach due to the idea of cognitive reserve, or the idea that the level or knowledge and education gained in earlier years may protect an individual from cognitive decline as they age (Centers for Disease Control and Prevention, 2020).

 In my research I found that there are possibly missed diagnoses of Alzheimer’s among racial and ethnic groups (Alzheimer's Association, 2021). As already discussed, Black and Hispanic Americans are at a greater risk due to chronic health conditions such as cardiovascular disease and diabetes (Alzheimer's Association, 2021). Therefore, I think policies should be put into place that studies the incidence of Alzheimer’s in these groups to better understand the causes of the disease so that further research on alleviating it can be conducted. Many of the policies I discuss in this paper can not only aid in preventing Alzheimer’s, but they can also reduce the risk of developing other chronic conditions that put them at an even higher risk for developing Alzheimer’s. As these policies are important for all racial and ethnic groups, I think it is important to put a strong focus on those who are disproportionately at risk for Alzheimer’s. Furthermore, I feel that all the policies discussed are particularly important for the aged population because they are at such a greater risk for many cognitive and physical impairments that younger individuals do not have to worry about as much. Although all of these things are important for younger individuals as well, the elderly population can greatly benefit from such interventions. For example, educating older individuals to join or participate in fitness programs, community programs, or social activities can not only give them an opportunity for physical activity, but also will assist them with their mental activity and social interactions. Finally, legislators or government organizations could promote and give incentives to insurance companies to provide their elderly policy holders gym memberships and educational classes while covering transportation costs. This would not only provide physical and mental stimulation but also the opportunity for socializing with others, all of which have proven to help combat the effects of Alzheimer’s.

 In conclusion, Alzheimer’s disease affects many older individuals throughout the world, both physically and mentally. Although some may experience mild symptoms, it can lead to severe symptoms such as the inability to communicate. Furthermore, research has shown disproportionate morbidity and mortality rates in different racial and ethic groups. The research I have studied shows the importance of developing policies and interventions to help prevent and alleviate the Alzheimer’s disease throughout the world. Although I only mentioned a few possible interventions that may alleviate Alzheimer’s, I feel that further research is important to determine the best and most reliable ways to prevent individuals from developing this disease in older age.

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