Future and Current Treatments in Alzheimer's Disease

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Abstract

Alzheimer’s disease is the leading cause of dementia and affects millions of Americans, with women over 50 carrying a risk higher than most (NIA, 2025). Women have been underrepresented in a lot of research for the disease, even today. New research is, on the other hand, beginning to catch up. Cholinesterase inhibitors and newer drugs, newer therapies, can only help with managing the symptoms instead of stopping the disease progression altogether. Fortunately, research in immunotherapies and regenerative medicine is coming out to possibly prevent decline. This paper goes over how Alzheimer’s specifically affects women over 50, goes over current treatment options, and talks about advances in innovation that may shape future care. By bringing attention to both ongoing challenges and new possibilities, it emphasizes the important need for research that addresses women directly.

Introduction

Alzheimer’s has become one of the most unfortunate health challenges to the present day, taking memory, thought, and even independence from those who have the disease. Women over 50 are highly impacted, and they face higher risks due to a combination of biological, hormonal, and other factors (Otto). The disease disrupts patients' lives in a horrible way and can also bring extreme emotional and financial strain on families. Although there have been decades of research, existing treatment options remain small. Only symptom relief or temporary slowing of decline. The urgency for more effective interventions grows as cases increase. This paper will show the importance in the need for treatments that relate to the progression of the disease.

Alzheimer's Risk in Women over 50

Alzheimer's disease is more common in women over 50 for many different reasons. One reason is the APOE4 gene. Research from the USC Leonard Davis School of Gerontology says, "in women, Alzheimer's disease risk is increased approximately four times with one copy of the gene and ten times with two copies of the APOE4 gene, whereas men show essentially no increased risk with one APOE4 gene and only a fourfold increase in risk with two copies of APOE4" (Pike, 2024). This specific version of the gene that is more common in women is poor at blocking amyloid plaque from building up in the brain (Pike, 2024). Hormonal changes after menopause show to also play a large role. The UWM report says that "the hormone estrogen is essential for proper functioning of memory, but it declines when women reach menopause, putting them at a higher risk than men of developing Alzheimer's disease"(Otto, 2022). One simple reason is also lifespan. Women are more likely to get Alzheimer's because they spend more years at risk for developing the disease. For example, a girl born in a specific year is expected to live five years longer than a boy born in that same year, increasing the chance of reaching ages where the chance of Alzheimer's is highest (Budson, 2022). The reasons for why women over 50 are more affected by Alzheimer's can be explained by these combined factors, showing the importance of studying this demographic for specific treatment. These factors do increase risk, but they definitely do not guarantee that a woman will develop the disease. Many factors such as lifestyle also are important, which shows the need for continued and specific research (Pike, 2024).

Current Treatments for Women with Alzheimer's

There is currently no cure for Alzheimer's disease, but many treatments are available to help manage symptoms. The most commonly used medications are cholinesterase inhibitors, such as donepezil, rivastigmine, and galantamine (NIA, 2023). These medications raise levels of acetylcholine, which is a chemical messenger that helps with memory. According to the National Institute on Aging, "these drugs may help reduce or control some cognitive and behavioral symptoms" (NIA, 2023). Another common medication that's prescribed is memantine, an NMDA antagonist. This can block the NMDA glutamate binds to in your brain, possibly slowing down how fast Alzheimer's progresses. (Cleveland Clinic, 2025). Aside from medications, supportive treatments are also important. The NHS also says that occupational therapy, counseling, and reminiscence can work "by getting you to use the parts of your brain that are working to help the parts that are not" (NHS, 2024). These approaches do not stop the progression of the disease or reverse it, but help people maintain independence and quality of life. These medications and care work together to focus on managing symptoms of Alzheimer's.

Future Treatments and Potential Cures

Researchers are exploring new treatments whose intention is to potentially slow or even reverse the progression of Alzheimer's. One part of research that's been looking promising has therapies targeting toxic protein build up, like amyloid plaques and tau tangles. These build-ups are believed to be a cause of cognitive decline because they are usually found in brains of those who have the disease (Glass, 2024). According to Alzheimer's Research UK, scientists are developing treatments that can possibly "remove proteins that build up in the brain, protect brain cells from the effects of diseases that cause dementia, and restore damage that has been caused

by disease" (Tran, 2025). In addition to protein-targeting therapies, genetic and regenerative approaches are being investigated. Boston University reports that researchers are trying genetic level strategies, looking at the specific root causes of Alzheimer's, which could eventually lead to curative treatments (Glass, 2024). BrightFocus Foundation also says that combining different kinds of therapies that target multiple pathways for disease, could be key to future treatments (Findley, 2024). While these therapies are still new and going through trials, they show a hopeful move forward in Alzheimer's research, showing that future treatments might one day move beyond symptom management to find potential cures.

Alzheimer's disease remains one of the most unfortunate neurodegenerative disorders. Currently, treatments for the disease only help with temporary relief and symptom management, but new research has begun to create hope and better understanding for the future. Many new therapies and possible cures are beginning to surface. By looking at the causes of the disease as well as current and future treatments, it shows that early detection and advancing science are highly important and hold immense hope for patients and their families. The study of Alzheimer's disease is overall critical for finding effective treatments and potential cures for millions affected worldwide.

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