



# Alzheimer's Disease

Areas of focus for VA research on Alzheimer's disease include finding potential drug therapies for prevention and treatment, exploring the genetic and environmental causes of the disease, and studying the best ways to provide long-term care. Additionally, VA researchers are working to better understand the connection between Alzheimer's and other chronic diseases, such as diabetes.

## *Examples of VA Research Advances*

**New center aims to refine brain-scan methods** – A team at the San Francisco VA, led by Dr. Michael Weiner, has received a \$6.04 million grant from the National Institutes of Health to develop new ways to examine the brain through magnetic resonance imaging (MRI). The award is funding a “Biomedical Technology Research Center” focused on improving several MRI methods. Among the end goals: to better diagnose and track neurodegenerative diseases such as Alzheimer's.

**Improving home safety** – Researchers at the Bedford (Mass.) VA and Boston University are working to improve home safety for those with Alzheimer's disease and their caregivers. A preliminary study focused on which types of home modifications are practical and effective for families. The findings were translated into a 25-page, illustrated, simple-language guide. Now, the booklet is being tested with 160 families to see if it boosts implementation of the safety tips and—more importantly—reduces the risk of accidents and injuries.

**Protein reverses Alzheimer's in animal models** – Memory loss, brain cell degeneration, and cell death were prevented or reversed in animal models of Alzheimer's disease after treatment with a naturally occurring protein called brain-derived neurotrophic factor. The researchers, led by Dr. Mark Tuszynski of VA and the University of California, San Diego, say the results “provide a rationale for exploring clinical translation to humans.”

## Facts About Alzheimer's Disease

One of the most common forms of dementia is Alzheimer's disease, a progressive neurodegenerative condition. In this biological disease of the brain, deterioration occurs in nerve cells and parts of the brain controlling thought, memory, and language. As the disease progresses, symptoms range from mild forgetfulness to serious impairment and inability to perform everyday tasks. Alzheimer's is estimated to affect some 4.5 million Americans, and this figure is expected to triple by 2050. About five percent of men and women ages 65 to 74 have the disease, and nearly 50 percent of those age 85 and older may be affected. The annual direct and indirect costs of caring for Americans with the disease are estimated to be around \$100 billion.



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