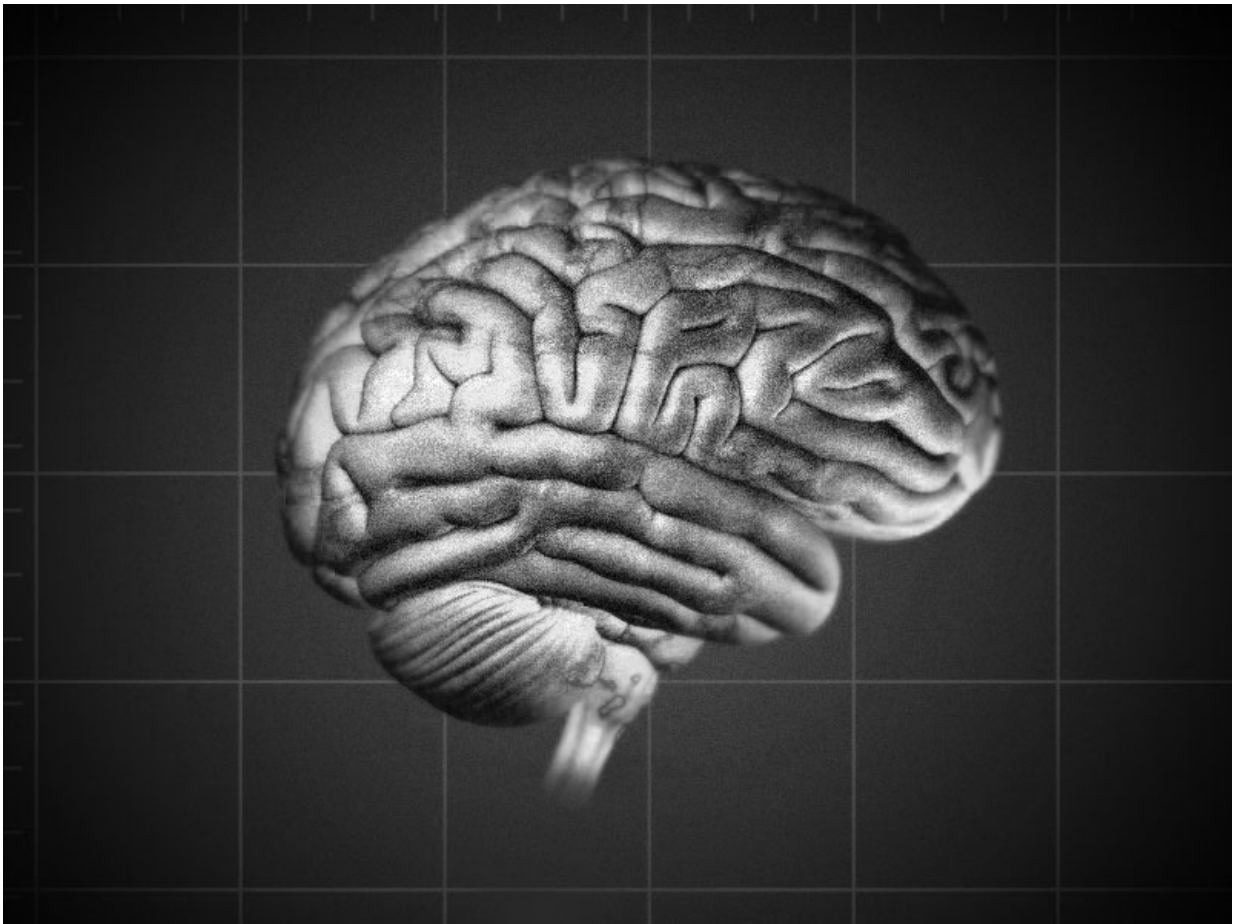


# Researchers report promising new Alzheimer's drug

November 3 2016

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Clinical trials show that an inhibitor of the enzyme BACE1 reduces A $\beta$  peptides in the brain of Alzheimer's disease patients. Credit: Val Altounian / *Science Translational Medicine* (2016)

A new experimental treatment against Alzheimer's has proved to be promising and free of harmful side effects, researchers in the United States reported Wednesday.

The research published in the journal *Science Translational Medicine* on the basis of a small 32-person sample gave rise to two broader clinical trials that are now underway with more than 3,000 subjects.

The treatment uses a compound called verubecestat, developed by US [pharmaceutical firm](#). It reduces levels of proteins called beta amyloids by blocking an enzyme known as BACE1.

In people with Alzheimer's disease, the proteins clump into plaques that damage the brain, affecting cognitive abilities, especially memory. The enzyme plays a key role in production of the proteins.

The 32 people who participated in the first clinical trial had been diagnosed with mild to moderate Alzheimer's.

Pharmaceutical labs are working to develop compounds that can stop or even reverse the formation of these plaques.

Until now, products developed to neutralize the BACEI enzyme had very toxic side effects, such as liver damage or further neuro-degeneration.

But verubecestat does not, said Dr Matthew Kennedy of the Merck research lab in northeastern state of New Jersey.

Researchers found that one or two doses of the compound were enough to lower protein levels without causing side effects.

The two so-called phase 3 clinical trials now under way to evaluate how well verubecestat works will conclude in July 2017.

If the results are good, the compound could be marketed as a pill in two or three years.

The number of people in the United States suffering from mind-wasting Alzheimer's could surpass 28 million by 2050 after the entire [baby boomer generation](#) gets past age 80, according to projections.

The World Health Organization says 36 million people around the world suffer from some form of dementia, most of them with Alzheimer.

The figure is expected to double by 2030 to exceed 65.7 million, and triple by 2050 to 115.4 million, if no effective treatment is found in the next few years.

**More information:** M. E. Kennedy et al, The BACE1 inhibitor verubecestat (MK-8931) reduces CNS -amyloid in animal models and in Alzheimers disease patients, *Science Translational Medicine* (2016). [DOI: 10.1126/scitranslmed.aad9704](#)

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