

# Women may keep verbal memory skills longer than men in the early stages of Alzheimer's

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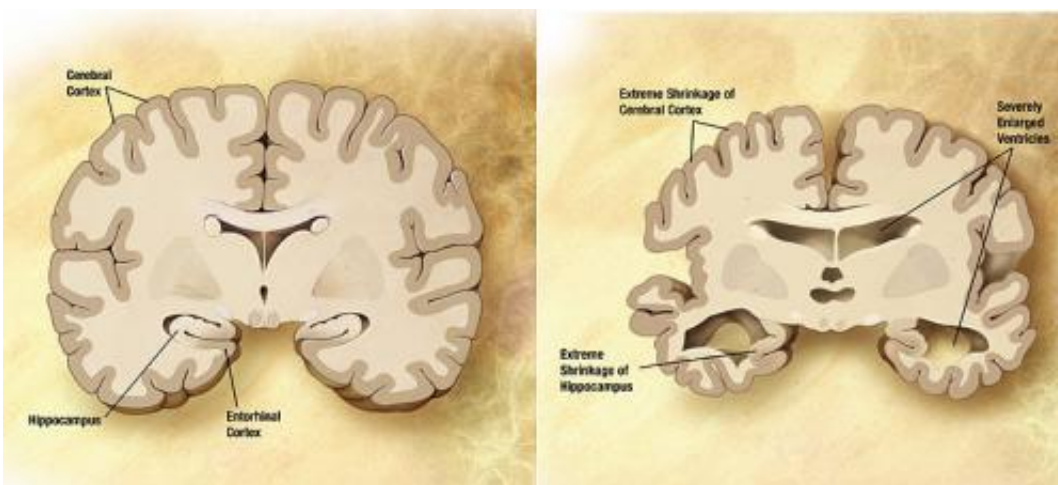


Diagram of the brain of a person with Alzheimer's Disease. Credit: Wikipedia/public domain.

Women may have a better memory for words than men despite evidence of similar levels of shrinkage in areas of the brain that show the earliest signs of Alzheimer's disease, according to a study published in the March 16, 2016, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

According to study author Erin E. Sundermann, PhD, of Albert Einstein College of Medicine in Bronx, NY, "One way to interpret the results is

that because [women](#) have better verbal memory skills than men throughout life, women have a buffer of protection against loss of verbal memory before the effects of Alzheimer's disease kick in. Because verbal memory tests are used to diagnose people with Alzheimer's disease and its precursor, mild [cognitive impairment](#), these tests may fail to detect mild cognitive impairment and Alzheimer's disease in women until they are further along in the disease."

The study included participants from the Alzheimer's Disease Neuroimaging Initiative: 235 people with Alzheimer's disease, 694 people with [mild cognitive impairment](#) that included memory problems, and 379 people with no memory or thinking problems. The groups' performance on a test of verbal memory was compared to the size of the hippocampal area of the brain, which is responsible for verbal memory and affected in the early stages of Alzheimer's disease.

Women performed better than men on the tests of both immediate recall and delayed recall among those showing evidence of minimal to moderate amounts of hippocampal shrinkage. At the high level of hippocampal shrinkage, there was no difference in the scores of men and women. At the score that indicates the start of [verbal memory](#) impairment, or 37 on a scale of zero to 75 for immediate recall, women showed greater evidence of hippocampal shrinkage (ratio of hippocampal volume to total brain volume multiplied by 103 was 5 compared to 6 for men).

Mary Sano, PhD, of Icahn School of Medicine at Mount Sinai in New York, NY, and a member of the American Academy of Neurology, said in a corresponding editorial, "At a public policy level, the potential health care cost for under-detection or delayed diagnosis of women with Alzheimer's disease or its early stages is staggering and should motivate funding in this area."

"If these results are confirmed, then we may need to adjust memory tests to account for the difference between men and women in order to improve our accuracy in diagnosis," said Sundermann.

Provided by American Academy of Neurology

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