

Women with early memory problems have better verbal memory than men

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A team of researchers from the US has reported that women with early memory problems called mild cognitive impairment (MCI) show better verbal memory than men despite similar changes having occurred in the brain. The findings suggest that women may have more resilience to damage – so called 'higher cognitive reserve'. The study is published on 5 October 2016 in the journal *Neurology*.

Throughout life, [women](#) outperform men on tests of verbal memory and this difference could alter how women exhibit the symptoms of [dementia](#) compared with men. To understand this, the researchers studied data from 390 healthy older people (101 women, 153 men), 254 people with Alzheimer's disease (196 women, 194 men) and 672 people (276 women, 396 men) with [mild cognitive impairment](#) (MCI). MCI is a condition characterised by early memory and thinking problems that are not severe enough to be diagnosed as dementia but increase a person's chances of developing the condition.

The team analysed brain scans from the participants to measure how much energy was being used in the brain, as reductions in energy use can indicate that nerve cells aren't working properly. By comparing the activity of brain areas on the scans with scores from verbal memory tests, they studied the links between reduced [brain activity](#) and verbal memory.

The team saw that people with Alzheimer's showed reduced brain activity compared to those with MCI, who themselves showed less

energy use than healthy older people. These reductions in brain activity were linked to poorer performance on verbal memory tests. However, when the team compared men and women they found that women with MCI showed better performance on the verbal memory tests than men, despite their brains using the same amount of energy.

Dr Rosa Sancho, Head of Research at Alzheimer's Research UK, said:

"This study highlights differences in memory performance between men and women, at a stage when they may be developing early signs of dementia. While better [verbal memory](#) in women may seem advantageous and could reflect an innate resilience to damage in the brain, it may also mask symptoms of early dementia that could delay diagnosis until a later stage in women. While this study only represents one snapshot in time and doesn't provide insight into how or why men and women's memory performance changes over time, it highlights the potential importance of gender differences in understanding dementia. Last year Alzheimer's Research UK launched a report highlighting potential differences in how women and men express the symptoms of dementia and this study supports the need for further research in this area."

Provided by Alzheimer's Research UK

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