

Complaints about memory are associated with Alzheimer-related brain damage

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Researchers at Rush University Medical Center found that having complaints about memory problems is associated with changes in the brain related to Alzheimer's disease. They reported their findings in the November 2006 issue of *Neurology*.

The researchers looked at the association between memory problems reported by study participants and signs of disease found in their brains after death. The study looked at autopsies of 90 older adults from the Rush Memory and Aging Project. The study included both participants who had been diagnosed with Alzheimer's disease (23) and those that showed no clinical signs of the disease (67).

"One of the most interesting findings of the study was that individuals who had yet to have any clinical symptoms of Alzheimer's disease still showed a strong link between their self-reported memory complaints and brain pathology associated with Alzheimer's disease," said Lisa L. Barnes, PhD, from the Rush Alzheimer's Disease Center. "This information may allow us to use memory complaints as a measure to intervene at an early point in the disease process."

To measure memory complaints participants were asked two questions:

How often do you have trouble remembering things?

How is your memory [now] compared to 10 years ago?

The researchers combined the answers to these two questions to create a scale to measure the severity of memory complaints. They used the memory scores taken closest to time of death. They also adjusted for confounding factors that might be related to memory problems like age, sex, and level of education.

The researchers then compared this scale with the levels of damage to the brain revealed during autopsy. The damage specifically looked at was

the amount of amyloid plaques and tau tangles in the brain at the time of death. These plaques and tangles are the type of damage most closely linked to Alzheimer's disease.

The researchers found that each unit of Alzheimer-related pathology was associated with one point higher score on the memory complaint scale. "Our results suggest that older persons with and without dementia possess some insight to their level of functioning, and this insight is related to actual changes in the brain," said Barnes. "The data suggests that if you're having complaints there's probably something going on. In other words, if mom notices that there's something different about her memory, we need to listen closely and investigate further."

The study shows that memory complaints should be taken seriously and not seen as just part of the aging process. "In my opinion, it is possible to preserve your memory into old age," said Barnes. "Memory loss is not an inevitable consequence of aging."

In fact, if you think you are having memory problems, you should probably see your doctor. As Barnes noted, "although not all memory complaints will lead to Alzheimer's disease, our data support the idea that memory complaints in older adults may represent the presence of significant Alzheimer's disease pathology in the brain."

"I don't want to cause concern for people who experience occasional memory loss, like losing their keys or forgetting their wife's birthday," said Barnes. "The important point in our study was that the people who hadn't developed Alzheimer's disease by the time they died, but complained about their memory performance, already had Alzheimer's pathology in their brains. We don't know whether they might have eventually developed the disease had they lived longer. The data suggest, however, that memory complaints

may be an early sign of disease in some people."

Source: Rush University Medical Center

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