

Researchers explore memory problems related to Parkinson's

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Brain scans revealed changes in white and gray matter.

(HealthDay)—Many people with Parkinson's disease have memory problems, researchers report.

The study included 40 people with early stage Parkinson's disease and 40 healthy older adults. While the disease is generally viewed as a movement disorder, about half of the Parkinson's patients had difficulty with some aspect of memory, such as learning and retaining information, or recalling spoken information, the investigators found.

"And then half of those participants, or nearly one-quarter of all participants with Parkinson's, were really having a difficult time consistently with their memory, enough that it would be noticeable to other people," said study author Jared Tanner. Tanner is an assistant

research professor in the department of clinical and [health psychology](#) at the University of Florida at Gainesville.

Still, there was good news: Most of the Parkinson's patients did not have significant memory problems, according to the authors of the study published online recently in the journal *PLoS One*.

Because of the study's design, the researchers could only show an association between Parkinson's disease and memory problems; they couldn't prove a cause-and-effect relationship.

"While a large proportion of people with Parkinson's will experience slower thinking speed, which may make them less quick to speak or have difficulty doing two things at once, we now know that there are a subset of individuals with Parkinson's disease who have memory problems," senior study author Catherine Price, an associate professor in the clinical and health psychology department, said in a university news release.

"It is important to recognize which people have issues with learning and memory so we can improve diagnostic accuracy and determine if they would benefit from certain pharmaceutical or behavioral interventions," she said.

Parkinson's disease-related movement problems are caused by low levels of a brain chemical called dopamine. Some experts have suggested that thinking and memory problems in patients are also due to a shortage of dopamine.

But brain scans of the Parkinson's patients in this study revealed changes in the brain's gray and white matter that appear unrelated to dopamine loss. Also, these changes were only present in those with [memory problems](#).

Tanner explained that it's not only gray matter that's important for memory. "In Parkinson's disease, white matter connections between the temporal lobe and a region in the posterior portion of the brain called the retrosplenial cortex were particularly important in the recall of verbal information," he said in the news release.

"People with Parkinson's disease who had stronger connections between these areas of the brain did better at remembering information," he said.

More information: The U.S. National Institute of Neurological Disorders and Stroke has more on [Parkinson's disease](#).

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