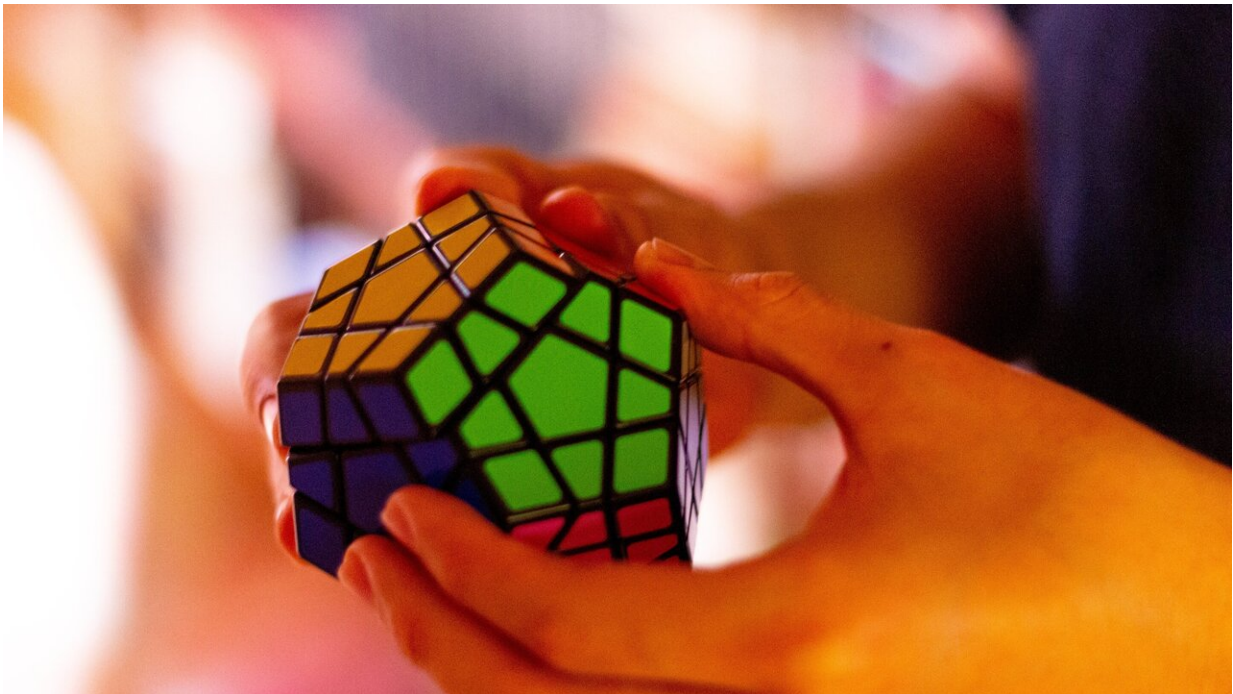


Memory may be preserved in condition with brain changes similar to Alzheimer's disease

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Primary progressive aphasia is a rare neurodegenerative condition characterized by prominent language problems that worsen over time. About 40% of people with the condition have underlying Alzheimer's disease. But a new study has found that people with the condition may not develop the memory problems associated with Alzheimer's disease. The study is published in the January 13, 2021, online issue of

Neurology.

"While we knew that the memories of people with [primary progressive aphasia](#) were not affected at first, we did not know if they maintained their [memory](#) functioning over years," said study author M. Marsel Mesulam, M.D., of Northwestern University Feinberg School of Medicine in Chicago and a Fellow of the American Academy of Neurology. "This has been difficult to determine because most [memory tests](#) rely on [verbal skills](#) that these people have lost or are losing."

The study included 17 people with primary progressive aphasia associated with Alzheimer's disease. They were compared to 14 people who had typical Alzheimer's disease with [memory loss](#).

Researchers tested memory skills of the people with primary progressive aphasia by showing them pictures of common objects. After waiting 10 minutes, they were shown the same pictures along with others and had to indicate whether they had seen the picture before. This test was given once and then again an average of 2.4 years later. The people with typical Alzheimer's disease listened to a list of common words and were later given the same words along with others and asked to choose the ones they had heard before. They were tested once and then again an average of 1.7 years later.

Both groups also had tests of their language skills. Brain scans were taken of the people with primary progressive aphasia to look at how the disease was affecting their brains, especially in the areas related to memory.

The people with primary progressive aphasia had no decline in their memory skills when they took the tests a second time. At that point, they had been showing symptoms of the disorder for an average of six years. In contrast, their language skills declined significantly during the same

period. For the people with typical Alzheimer's disease, their verbal memory and language skills declined with equal severity during the study.

Researchers had brain autopsies from eight of the people with primary progressive aphasia and all of the people with typical Alzheimer's disease. The people with primary progressive aphasia had similar amounts of the plaques and tangles that are signs of Alzheimer's disease as the people with typical Alzheimer's, Mesulam said. Left sided asymmetry of brain shrinkage and a lower incidence of brain proteins known as ApoE4 and TDP-43 were identified as potential contributors to the preservation of memory in this rare type of Alzheimer's disease.

"More research is needed to help us determine what factors allow these people to show this resilience of memory skills even in the face of considerable Alzheimer's [disease](#) pathology in the brain," Mesulam said.

Provided by American Academy of Neurology

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