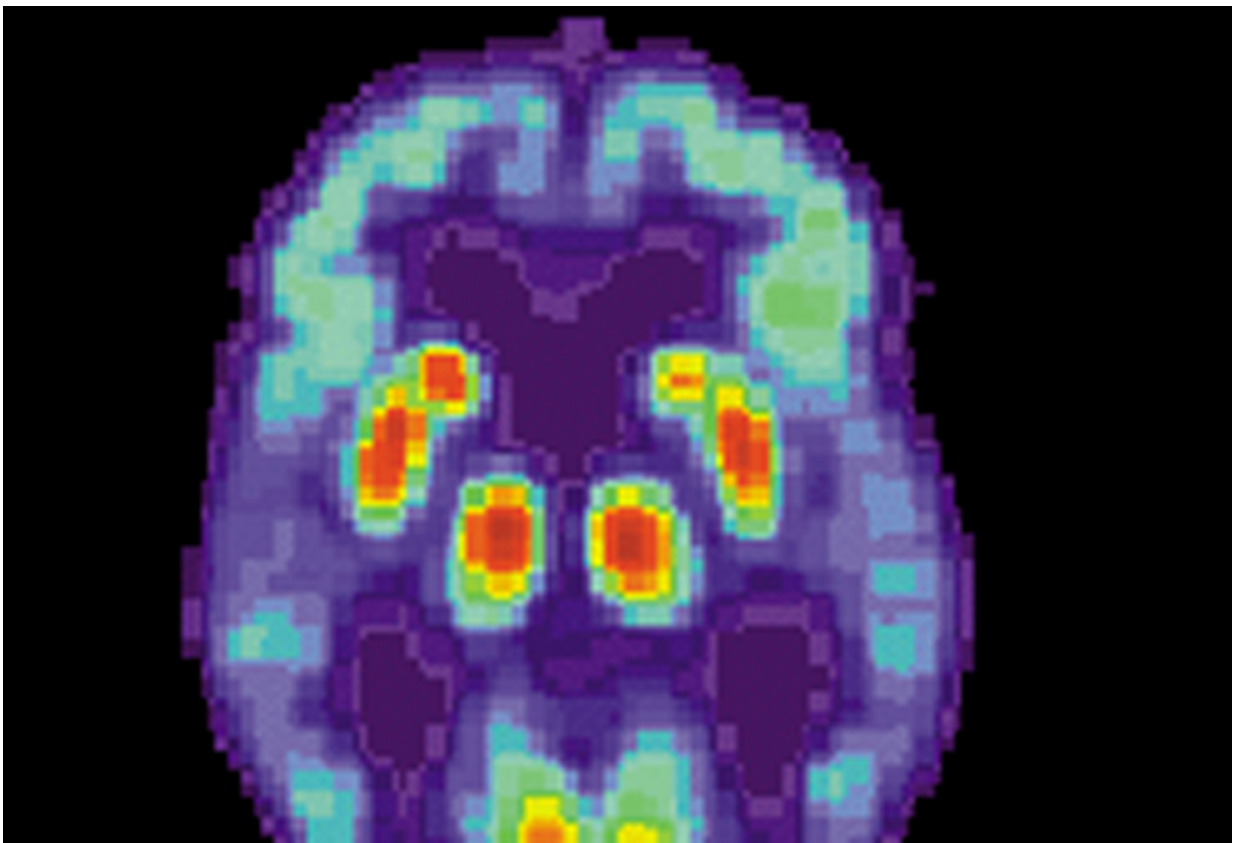


Researchers find gene variants that may increase susceptibility to Alzheimer's proteins

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PET scan of a human brain with Alzheimer's disease. Credit: public domain

Researchers know that the protein tau develops into tangles in the brains

of people with Alzheimer's disease. But until now they have struggled to understand what factors make you more or less likely to develop these tangles. In a preliminary study released today that will be presented at the American Academy of Neurology's 72nd Annual Meeting in Toronto, Canada, April 25 to May 1, 2020, researchers say that they have identified gene variants that are associated with a susceptibility to developing tau deposits in older age.

"These results are exciting, particularly since we know that tau accumulation is closely related to [cognitive impairment](#) in Alzheimer's disease," said study author Vijay Ramanan, M.D., Ph.D., of the Mayo Clinic in Rochester, Minn., and a member of the American Academy of Neurology. "Gaining a better sense of why some people are more susceptible or resistant to having tau deposits may help us better predict who will develop symptomatic disease, and hopefully better target individualized therapies for these patients."

The study involved 754 people with an average age of 72. Of the group, 87% had no problems with memory or thinking skills. The researchers reviewed the genetic profiles of the participants and also reviewed [brain scans](#) that showed how much tau protein those people had in their brains.

The researchers found that people with certain gene variants on chromosomes 1 and 5 had a higher amount of tau in their brains than the people who had the more typical gene sequences in those regions. The gene variants were found in around 2 to 3% of the group, and those with the variants had about 10% higher tau levels than those without.

There was no relationship between these new genetic markers and other [genes](#) that have previously been identified as related to Alzheimer's risk, including the apolipoprotein E gene, or APOE.

"This suggests that the deposition of these tau proteins in the [brain](#) may

be influenced by different inherited factors than the known genes that increase the risk of Alzheimer's," Ramanan said. "This may give us additional avenues for discovery as we work to identify people at risk for this devastating disease and to develop new targets for therapies."

Provided by American Academy of Neurology

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