

Alzheimer's may affect the brain differently in African-Americans than European-Americans

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Alzheimer's disease may cause different changes in the brain, or pathologies, in African-Americans than in white Americans of European descent, according to a study published in the July 15, 2015, online issue of the medical journal of the American Academy of Neurology.

"Because some studies suggest that Alzheimer's disease is more common among older African-Americans than European-Americans, we wanted to see whether the brain changes caused by Alzheimer's are different in these two racial groups," said study author Lisa L. Barnes, PhD, with Rush University Medical Center in Chicago. "Studying how Alzheimer's disease looks in the brain in individuals of different races may help us to further understand the disease and pinpoint strategies for prevention and treatment."

The study included 41 African-Americans with a clinical diagnosis of Alzheimer's dementia from the memory clinic, who had an autopsy of their brain performed after death. They were then compared to 81 deceased European-Americans who had Alzheimer's dementia with the same level of disease severity and were of the same age, sex and education level. Researchers looked for typical signs of Alzheimer's disease (plaques and tangles) as well as other brain changes that can cause dementia, such as infarcts (the [brain changes](#) associated with stroke) and Lewy bodies (associated with Lewy body or Parkinson's disease). They noted whether people had just one pathology or more than one. They also looked at small and large blood vessel disease.

Almost all participants in the study had Alzheimer's disease in their brain. Only about half of the European-Americans had pure Alzheimer's disease pathology (no additional pathologies contributing to dementia) whereas the rest had

Alzheimer's disease pathology with either infarcts or Lewy bodies. In contrast, less than 25 percent of the African Americans had pure Alzheimer's disease pathology. On the other hand, almost three-quarters (71 percent) of African-Americans had Alzheimer's disease pathology mixed with another type of pathology, compared to 51 percent of European-Americans. Clinical Alzheimer's disease in African-Americans was much more likely to involve pathologies other than Alzheimer's [disease pathology](#). African-Americans also had more frequent and severe [blood vessel disease](#).

"Our study has important clinical implications because it may suggest a need for different types of Alzheimer's prevention and treatments in African-Americans. Indeed, current Alzheimer's drugs primarily target specific Alzheimer pathologies in the [brain](#). Given the mixed pattern of disease that we see in African American brains, it will be important to develop new treatments that target these other common pathologies, particularly for African-Americans," said Barnes.

Provided by American Academy of Neurology

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