

Gene Variant in People of African Descent Increases Parkinson's Risk

Researchers emphasize the need to diversify participants in Parkinson's disease research.

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Researchers discovered a [gene variant](#) found almost exclusively in the genomes of individuals of African ancestry that increases the likelihood of developing [Parkinson's disease](#), according to an international study published in [The Lancet Neurology](#).

Scientists at the National Institutes of Health (NIH) and other academic institutions suggest the increased risk is associated with a variant in the gene encoding β -glucocerebrosidase (GBA1), which regulates the recycling of proteins in the body, according to an [NIH news release](#).

For the study, researchers collected [DNA](#) samples and analyzed genetic data from nearly 198,000 people. Findings revealed that people who carry one copy of the genetic variant are about 1.5 times more likely to develop Parkinson's disease compared with those with no copies. Individuals who carry two copies are about 3.5 times more likely to develop the brain disorder, which causes unintended or uncontrollable movements. Over time, the disorder may progress to cause problems with walking, talking, sleeping, remembering and mood.

Researchers collected genetic data primarily from individuals from Nigeria and four sites across the United States. Nearly 195,600 people were of African-American or Afro-Caribbean descent and consented to participate in 23andMe research. (23andMe is a biotech company specializing in DNA testing and reporting.) Of the cohort, 1,488 people had Parkinson's disease and 196,430 did not.

A significant link was discovered between the GBA1 gene and risk of developing Parkinson's disease. When scientists reviewed previous studies, they found that this variant was seldom seen in people of European and Asian descent.

"To effectively treat Parkinson's and truly any disease, we must study diverse populations to fully understand what the drivers and risk factors are for these disorders," said study author Andrew Singleton, PhD, director of the NIH Intramural Center for Alzheimer's Related Dementias, in the news release. "These results support the idea that the genetic basis for a common disease can differ by ancestry, and understanding these differences may provide new insights into the biology of Parkinson's disease."

Black people with Parkinson's are often underrepresented in research. In fact, there is no current estimate of how many Black people in the United States are living with Parkinson's, according to [the Parkinson's Foundation](#).

"Our results represent a good first step toward fully understanding the genetic and biological complexity of each individual around the world who has Parkinson's disease," said Singleton. "Our hope is that results like these will provide researchers a road map for developing new genetic treatments and therapies for Parkinson's disease."

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