

Does stroke risk linked to sleep apnea vary by race?

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The risk of stroke tied to sleep apnea may vary for Black people and white people, according to a study [published](#) in *Neurology*.

The study found that white people diagnosed with sleep apnea, whether or not they used a continuous positive airway pressure machine (CPAP),

were at increased risk for stroke. White people who were at high risk for sleep apnea but had not been diagnosed with the condition were also at increased risk for stroke. The study did not find an increased risk of stroke in Black people meeting these same criteria.

The study also found that Black people who used CPAP machines had a reduced risk of stroke compared to Black people with sleep apnea who did not use the machines.

"These results were not what we were expecting to find, since Black people have been shown to have a higher risk of stroke and are more likely to have sleep apnea than white people," said study author Rebecca Robbins, MMSc, Ph.D., of Brigham and Women's Hospital in Boston.

"More research is needed to understand these differences. Since it has been shown that Black people have more severe sleep apnea than white people and take longer to be screened and treated than white people, it's possible that using a CPAP machine provides a greater benefit on reducing stroke risk for Black people."

Robbins said it's also possible that because Black people have been shown to have a greater burden of other diseases in addition to sleep apnea, those diseases may be increasing the risk for stroke and reducing the impact sleep apnea has on stroke risk.

The study involved 22,192 people with an average age of 64; 38% were Black. None of the participants had a history of stroke at the start of the study. Their risk for sleep apnea was assessed through questions about snoring, [daytime sleepiness](#), [blood pressure](#) and weight. They also reported whether they had been diagnosed with sleep apnea and used a CPAP machine. A total of 2,412 people, or 10.9%, had diagnosed sleep apnea at the start of the study.

The participants were then followed for an average of 12 years. During that time, 969 people, or 4.4%, had a stroke.

There were 90 strokes among the 1,475 white people with diagnosed sleep apnea and 42 strokes among the 937 Black people with sleep apnea. When researchers adjusted for other factors that could affect stroke risk, such as age, diabetes and [alcohol use](#), they found that [white people](#) were 33% more likely to have a stroke than those without sleep apnea and there was increased risk of stroke among Black people.

White people who were at high risk for sleep apnea were 22% more likely to have a stroke than those at low risk for the condition.

Among 701 Black people with sleep apnea and information on whether or not they used a CPAP, CPAP use was associated with a 64% reduced risk of stroke compared to people with sleep apnea who did not use a machine. There was not a significant reduction in stroke risk for CPAP use in the 1,160 white individuals.

"These results were also surprising," said study author Virginia J. Howard, Ph.D., of the University of Alabama at Birmingham and member of the American Academy of Neurology. "One possible explanation for these results is that we did not have information on CPAP adherence. Research shows that those who do not use their CPAP machine as directed are at higher risk of stroke and other problems. We also didn't have information on the severity of sleep apnea. It's possible that those using a CPAP machine had a more severe case and were further along the road to stroke when they were diagnosed."

The study found no increased risk of [stroke](#) among people who snored but had no other [sleep apnea](#) symptoms.

More information: Rebecca Robbins et al, Sleep Apnea and Incident

Stroke in a National Cohort of Black and White Adults, *Neurology* (2024). [DOI: 10.1212/WNL.0000000000209171](https://doi.org/10.1212/WNL.0000000000209171)

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