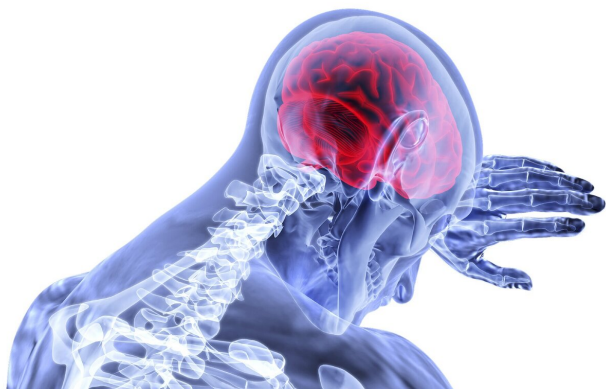


Moving later in life may not lower cognitive decline linked to Stroke Belt

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People who spent their childhood or early adulthood in the Stroke Belt are more likely to develop cognitive impairment later in life, even if they have moved away, according to preliminary research to be presented at the American Stroke Association's International Stroke Conference 2020—Feb. 19-21 in Los Angeles, a world premier meeting for researchers and clinicians dedicated to the science of stroke and brain health.

Conversely, those who reside in the Stroke Belt—eight states in the southeastern United States with elevated stroke rates (Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee) - when they are middle-aged and older yet lived somewhere else as a child or young adult are provided some protection.

"Risk factors for both stroke and [cognitive decline](#), such as smoking and high blood pressure, may be more common in the Stroke Belt than elsewhere in the country—even in children and [young adults](#)," said Virginia J. Howard, Ph.D., lead author of the study and a professor of epidemiology at the University of Alabama at Birmingham School of

Public Health.

Researchers compared almost 11,500 people (average age 64) residing in the Stroke Belt with nearly 9,000 (average age 65) people living outside of it. All are participants in the large, ongoing REGARDS (Reasons for Geographic and Racial Differences in Stroke) study.

None of the participants in the current study previously suffered a stroke before enrolling in REGARDS at age 45 or older. Based on a screening test of memory and thought-processing speed all were considered cognitively intact at the beginning of the study. The screening test was repeated annually, with an average of nine years between the first and last testing. Cognitive screening results were adjusted for age, sex, race and time between testing.

Among [older adults](#) currently living in the Stroke Belt, compared to lifelong residents, researchers found:

- Those who spent all their childhood (ages 0-18) outside the Stroke Belt were 24% less likely to develop cognitive impairment;
- Those who spent some of their childhood elsewhere were 18% less likely to show impairment;
- Those who spent all their early adulthood (ages 19-30) outside the Stroke Belt were 30% less likely to develop cognitive impairment; and
- Those who spent part of the early adulthood elsewhere were 14% less likely to show impairment.

When researchers compared older persons currently living outside the Stroke Belt to those who had never lived there, they found:

- Those who spent their entire young adulthood within the Stroke Belt were 51%

- more likely to develop cognitive impairment;
- There was no difference in risk of cognitive impairment in those who spent all or part of their childhood, or some but not all their young adulthood within the Stroke Belt.

"These findings suggest that early residence in the Stroke Belt during childhood or [early adulthood](#) may increase the risk of cognitive impairment, no matter where you live in later adulthood. Many of the risk factors for brain health are similar to the [risk factors](#) for stroke health and heart disease. Our research suggests prevention strategies should be started as early in life as possible," Howard said. "We also need further research to determine the characteristics of early Stroke Belt life that are linked to later adult cognitive impairment."

This analysis was limited, as it used a single screening test for [cognitive impairment](#). "We are currently analyzing additional measures of cognitive abilities that were also used in the study," said Howard.

Provided by American Heart Association

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