

Black women with high blood pressure before age 35 may have triple the risk of a stroke

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Black women who develop high blood pressure before age 35 and are on medication for hypertension may have triple the odds of having a stroke, and those who develop high blood pressure before age 45 may have

twice the risk of suffering a stroke, according to a preliminary study to be presented at the American Stroke Association's [International Stroke Conference 2024](#). The meeting will be held in Phoenix, Feb. 7-9.

"This research was motivated by the glaring disparity I have seen in my own practice. Strokes are occurring at younger ages among my patients who identify as Black and among women," said the study's lead author Hugo J. Aparicio, M.D., M.P.H., an associate professor of neurology at Boston University Chobanian & Avedisian School of Medicine. "Early onset stroke, particularly at midlife, is even more tragic because these patients often have families or are caretakers for sick family members."

"In addition, early onset stroke at a younger age is associated with an increased risk of dying, as well as a burden of physical disability that creates many problems for stroke survivors and their families as they try to re-integrate into their normal lives and return to work," Aparicio said.

According to the [American Heart Association's Heart Disease and Stroke Statistics 2024 Update](#), the rate of high blood pressure in Black adults in the United States is among the highest in the world. In the U.S., about 58% of Black women have high blood pressure, while 43% of [white women](#), 38% of Asian women and 35% of Hispanic women have high blood pressure.

Researchers investigated how the development of high blood pressure at a younger stage in life among Black women may influence the risk of a potentially disabling stroke. They examined data from the Black Women's Health Study, a study of 59,000 Black women from across the United States who have been followed since 1995 via questionnaires once every two years.

Researchers compared participants with and without treatment for hypertension before age 45, between ages 45-64, and within 10-year age

intervals from 1999 to 2019.

The analysis found that stroke occurred in 1,485 participants (3.2%) during up to 23 years of follow-up. Compared to Black women with no history of hypertension treatment:

- Black women who developed high blood pressure and began hypertension treatment between ages 24-34 had a 3.1 times higher risk of having a subsequent stroke.
- Black women who developed high blood pressure and were treated before age 45 had a 2.2 times higher risk of stroke.
- Black women who had high blood pressure and were treated between ages 45-64 faced 1.69 higher odds of a stroke.

"We expected to see an association between having high blood pressure at a younger age and having a stroke during midlife and later life, however, we were surprised and concerned to see the magnitude of the relationship, especially for women who were taking antihypertension medications before age 35," Aparicio said.

"This was striking because we had the ability to adjust or account for many important factors in this [longitudinal study](#), including clinical factors like smoking, body weight and diabetes status; and neighborhood socioeconomic status, which is estimated using zip code data. We also adjusted for people living in certain geographic regions in the U.S. where stroke is more common and where stroke mortality is higher, mainly clustered in the Southeast and Mid-Atlantic regions of the country, or the so-called Stroke Belt."

Study details and background:

- Data was drawn from the Black Women's Health Study of 59,000 Black women from across the United States who have been

followed since 1995 via questionnaires once every two years.

- Study participants were age 24-64 years old (average age of 42) and had not suffered a stroke when they enrolled in the study.
- This investigation follows participants from 1999; participants reported whether they had been diagnosed with high blood pressure and were taking any antihypertensive medication.
- Follow-up was from 1999 until whichever came first: stroke, death, loss to follow-up or end of study follow-up in December 2019. Strokes were self-reported once every two years.

Study limitations include that researchers were unable to obtain medical records for all participants who reported a stroke, and not all stroke events may be reported by the participants. Aparicio said self-reported high blood pressure diagnoses were proven reliable in previous analyses of the Black Women's Health Study.

"My hope is that [health care professionals](#) are persuaded to pay special attention to [high blood pressure](#) screening and treatment over the life course for African American women, such as during childbearing years and both before and at the start of middle age. Health care policy changes are needed so that primary prevention is promoted and funded because by the time a Black woman has a stroke at middle age, it is often too late," Aparicio said.

"While many factors contribute to early-onset hypertension resulting in an alarming [stroke](#) burden among Black women, an understudied component is the cumulative impact of multiple psychosocial stressors that likely disproportionately affect Black women compared to women from other racial and ethnic groups regardless of socioeconomic status. The impact of these stressors also likely affect the ability of Black women to receive and maintain holistic care," said the American Heart Association's Immediate Past President Michelle A. Albert, M.D., M.P.H., FAHA. Dr. Albert was not involved in the study.

More information: Abstract poster HUP20:
[www.abstractsonline.com/pp8/#!/... 42/presentation/3603](http://www.abstractsonline.com/pp8/#!/...42/presentation/3603)

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