

# Disparities in Black adults' stroke risk factors persist; risk factor control reduces gap

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Significant stroke risk factor disparities exist between Black adults and

non-Black adults who have had a stroke. However, after one-year of intensive medical intervention, some of the risk factors that increase the risk of stroke were reduced in the Black adults, according to research published today in *Stroke*.

This analysis did not compare Black adults to any other specific racial subgroup due to insufficient numbers of each race in the non-Black group. The non-Black participant group included white, Asian and Hispanic adults who were measured collectively.

"Modifiable [stroke](#) risk factor differences between Black and non-Black adults were found at enrollment; however, our study found these disparities may be resolved by tailoring care to include lifestyle coaching, medication alterations or additions if appropriate, access to routine health care support and regular physician follow-up," said study co-author Ashley Nelson, D.O., who at the time of this study was a neurology resident at the Medical University of South Carolina in Charleston. "Intense risk factor management has an important role in improving or eliminating these risk factor disparities in Black adults."

In this analysis, researchers examined health data from a study called SAMMPRIS (Stenting and Aggressive Medical Management for Preventing Recurrent Stroke in Intracranial Stenosis). They evaluated medication use and vascular [risk factors](#), such as [systolic blood pressure](#), diastolic blood pressure, [low-density lipoprotein](#), [blood glucose levels](#) and physical activity of Black and non-Black adults with a recent stroke event. Physical activity was measured by the Physician-based Assessment and Counseling for Exercise (PACE) score.

The analysis found:

- Significant differences were seen at enrollment in the study for Black participants compared to their non-Black counterparts.

Black participants had younger age (57 versus 61 years old); more [high blood pressure](#) at study enrollment (95.2% versus 87.5%); more Type 2 diabetes at enrollment (52.9% versus 39.7%); higher average diastolic blood pressure (82.4 versus 79.5 mm Hg); and low physical activity PACE score (2.7 versus 3.3). A PACE score of 4 or above is considered moderately active and within the target range.

- After one year of intensive intervention, the disparity in diastolic blood pressure had disappeared—the average diastolic blood pressure in Black adults dropped to 74.7 mm Hg, compared to 75.5 mm Hg in all other participants.
- After one year of the intervention program, the average PACE score had increased among Black adults to 4.2 from 2.7; in comparison, the average PACE score among non-Black adults was 4.1.
- During the one year of aggressive [medical management](#), the percentage of diuretic medication use doubled in Black adults. Researchers speculate that the increased use of thiazide diuretics may explain the notable decrease in average diastolic blood pressure.

"We tend to focus on systolic blood pressure, yet [diastolic blood pressure](#) is also a good marker for cardiovascular health and the integrity of the blood vessels," Nelson said. "Using a tailored approach resulted in better risk factor control for the participants."

Study details and background:

- SAMMPRIS was a randomized controlled trial conducted from 2008-2011 at 50 sites within the U.S. SAMMPRIS compared medical management versus stenting to prevent recurrent stroke for 451 adults with stroke caused by severe intracranial atherosclerotic stenosis, which is a narrowing of a major brain

artery by at least 70%.

- SAMMPRIS found that a second stroke was less likely in adults treated with aggressive medical management alone in comparison to adults who received an intracranial stent and aggressive medical care (30-day rate of recurrent stroke or death was 14.7% in the group that received stents vs. 5.8% in the group who had medical management).
- In this follow-up analysis using data from the SAMMPRIS medical management group, researchers compared data on the cardiovascular risk factors in 104 Black and 347 non-Black adults at baseline and then one year later, after the aggressive medical management intervention was implemented. This intervention consisted of initiation of dual antiplatelet therapy as well as intensive medical control of blood pressure, cholesterol, Type 2 diabetes, smoking and [physical activity](#) levels, and included regular follow-up visits with the health care team and lifestyle coaching.

The authors note that their research raises questions about other factors beyond physiology, medications and regular follow-up that may help to reduce these disparities even further. "Many different approaches are needed to reduce and eliminate these disparities in Black adults. Access to health care, lifestyle coaching, early follow-up and administration of appropriate medications after stroke may help to resolve it, but not wholly in terms of overall risk and all of the baseline disparities," Nelson said.

The study compared Black and non-Black patients in the United States and had a disproportionate enrollment of people from all ethnicities; therefore, these results may not be generalizable to a broader geographic population.

**More information:** Ameliorating Racial Disparities in Vascular Risk

Factor Management With Aggressive Medical Management in the SAMMPRIS Trial, *Stroke* (2023). [DOI: 10.1161/STROKEAHA.122.042055](https://doi.org/10.1161/STROKEAHA.122.042055)

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