

Lower systolic blood pressure reduces risk of stroke

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People 60 or older, especially minorities and women, have a lower risk of stroke if the top number (systolic) in their blood pressure is below 140 millimeters of mercury (mm Hg), according to a study presented at the American Stroke Association's International Stroke Conference 2015.

A report published in *JAMA* in 2014, advised doctors to aim for [blood pressure](#) readings of less than 150/90 mm Hg when treating patients 60 or older who do not have diabetes or chronic kidney disease. That raised the standard for [systolic blood pressure](#), by 10 points from previous guidance, stirring controversy among healthcare providers, agencies and professional groups.

While the 2014 report relied on evidence from clinical trials, it did not consider data from various other types of studies that support a systolic blood pressure goal for these patients of less than 140, said Chuanhui Dong, Ph.D., lead author of the new study and research associate professor at the University of Miami Miller School of Medicine.

The new study, by researchers at Miami and Columbia University, involved 1,706 people older than 60 (average age 72) in the Northern Manhattan Study in New York City. None of the participants had a previous stroke, diabetes or kidney disease. After adjustment for age, sex, race/ethnicity and use of blood pressure medications, stroke risk was 70 percent higher for people with systolic pressure in the 140-149 range, compared with those whose readings fell below 140.

The results support what some health experts had feared, Dong said: "Raising the treatment bar could lead to more strokes."

The elevated stroke rate for people in the 140-149 range is close to the 80 percent higher risk the study found for people with systolic readings at or above 150, Dong said. "This implies blood pressure from 140-149 is just as strong of a stroke risk factor as levels of 150 and greater."

Among people in the study, 20 percent had systolic readings of 140-149, and 37 percent had readings of 150 or greater. About 40 percent of the subjects were taking blood pressure medicine.

Compared with those whose readings were below 140, the study found:

- Hispanics with systolic readings of 140-149 had 2.4 times the risk of a first stroke.
- Blacks with systolic readings of 140-149 had twice the risk.
- No such difference was seen in non-Hispanic whites, but their numbers in the study were too small for firm conclusions to be drawn, researchers said.

Healthcare providers should heed these findings, Dong said, because Hispanics and blacks are known to suffer strokes more frequently than whites. "Raising the threshold for hypertension treatment could have a worse effect on racial-ethnic disparities in stroke risk reduction."

Among women, the difference in risk was also striking:

- Women in the study with a [systolic pressure](#) of 140-149 faced nearly double the risk of a first stroke, compared with those below the 140 threshold.
- Men in the 140-149 range had a 34 percent higher risk.

Strengths of the research include its real-world population, the fact that few people dropped out, and a high proportion of Hispanics from the same community. But the sample size for whites and blacks was relatively small, limiting the study's ability to discern differences in risk among groups. Also, systolic readings and patients' use of blood pressure drugs were determined at the study's start, so the findings did not account for changes in these over time.

"Hypertension is the most established and modifiable risk factor for stroke, one of the leading causes of death and disability," Dong said. "Reduction in systolic blood pressure below 140 is important in primary [stroke](#) prevention, even among those over 60 without diabetes or [chronic kidney disease](#)."

Current AHA guidelines indicate:

- Healthy adults under the age of 80 should strive for a blood pressure below 140/90.
- Healthy adults over the age of 80 should strive for a blood pressure below 150/90."

Provided by American Heart Association

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