

Sex, race, place of residence influence high blood pressure incidence

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High blood pressure may help to explain why deaths from heart disease and stroke vary according to geography, race and sex, researchers reported in *Hypertension: Journal of the American Heart Association*.

"Where you live, your race, and your gender strongly influence your risk of developing [high blood pressure](#) as you move from young adulthood into middle age — and hypertension is a major risk factor for [heart disease](#) and stroke," said Deborah A. Levine, M.D., M.P.H., lead study author and assistant professor of internal medicine in the Departments of Medicine and Neurology at the University of Michigan Medical School in Ann Arbor.

Between 1968 and 2006, deaths from heart disease and [stroke](#) fell an impressive 65 percent, but everyone didn't share equally in the positive trend, she said. Cardiovascular deaths are still higher in the southeastern United States, in blacks compared with whites, and in men compared with women.

"The gaps may be widening, particularly for blacks," Levine said. "The reasons for the variations are not clear, so we examined whether high blood pressure might help to explain it."

The researchers examined data from the Coronary Artery Risk Development in Young Adults (CARDIA) study that followed young people from Birmingham, Ala., Chicago, Ill., Minneapolis, Minn. and Oakland, Calif., from the time they were 18-30 years old. Each center

began the study with groups similar to each other for race, sex, and age. Among 3,436 participants who didn't have high blood pressure when the research began, and were followed for 20 years (when average age was 45), hypertension was diagnosed in:

- 37.6 percent of black women; 34.5 percent of black men; 21.4 percent of white men and 12.3 percent of white women;
- 33.6 percent of Birmingham residents; 27.4 percent in Oakland; 23.4 percent in Chicago and 19 percent in Minneapolis.

After adjusting for multiple risk factors, living in Birmingham significantly increased the chance that a person would develop high blood pressure.

"In addition, independently of where they live, blacks — especially black women — are at markedly higher risk of [hypertension](#) even after we took into account factors that are known to affect blood pressure, such as physical activity and obesity," Levine said.

More research is needed to understand the geographic and racial differences in high blood pressure documented in this study as well as the potential biological, environmental and genetic mechanisms, Levine said. "In the meantime, people at higher risk can benefit from close monitoring of their blood pressure and paying attention to risk factors such as obesity and physical activity."

Provided by American Heart Association

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