

Heart disease, stroke risk factors may increase in severity before menopause

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The severity of key risk factors for heart disease, diabetes and stroke appears to increase more rapidly in the years leading up to menopause, rather than after, according to new research in *Journal of the American Heart Association*, the Open Access Journal of the American Heart Association/American Stroke Association.

The study also found that this pattern of rapidly increasing risk factors before menopause appears to be more pronounced among African-American women.

The [risk factors](#), together known as [metabolic syndrome](#), include a large waistline, high triglyceride (a blood fat) levels, low HDL (the "good" cholesterol) levels, high blood pressure and [high blood sugar](#) when fasting.

"Previous research showed that after menopause, women were at much greater risk for metabolic syndrome than before menopause began," said Mark DeBoer, M.D., MSc., M.C.C., study senior author and an association professor of pediatric endocrinology at the University of Virginia in Charlottesville. "This latest study indicates that the increased risk observed earlier may be related more to the changes happening as women go through menopause and less to the changes that take place after menopause."

Researchers analyzed the records of 1,470 African-American and [white women](#) participating in the Atherosclerosis Risk in Communities Study,

a national study of the causes and health effects of hardening of the arteries. Participants were selected based on whether they went through menopausal changes over a 10-year period. Each participant was assigned a metabolic syndrome severity score based on a formula the authors developed that has been adopted by other researchers.

After taking into account hormone replacement therapy and other factors that might bias results, the study found:

- Women experienced rapid increases in metabolic syndrome severity during the last years of pre-menopause and the transition years to menopause, known as perimenopause.
- African-American women experienced a much more rapid increase in metabolic syndrome severity before menopause, but a slower rate of increase after menopause, than white women.
- Overall, African-American women had higher rates of metabolic syndrome, particularly [high blood pressure](#) and high fasting blood sugar levels, than white women at the beginning of the study.

These findings confirm many previous studies that show African-American women are at greater risk for cardiovascular disease and diabetes than white women.

DeBoer said study results provide physicians and other healthcare providers with an opportunity to motivate [women](#) to make lifestyle changes that will decrease their risk of having a heart attack, stroke or developing diabetes.

"Of course, you could argue that all of us should be eating better and making sure we're getting enough exercise," he said. "That's definitely true, but the years transitioning to [menopause](#) may represent a 'teachable moment,' when patients are especially receptive to learning and putting

into practice healthy habits that can make a difference in their cardiovascular disease risk."

DeBoer noted that their approach to assessing metabolic syndrome severity was originally created to assess risk in children. Adapting the formula to adult patients, he said, advanced the researchers' hope of one day incorporating risk factor information into an electronic medical record so that metabolic syndrome severity is calculated automatically and available to all patients throughout their lifetime.

Provided by American Heart Association

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