

## Finding suggests new heart disease screening target for middle-aged black women

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Middle-aged black women have higher levels of a protein in their blood associated with a predictor of heart disease than their white counterparts, even after other factors, such as obesity, are taken into consideration, according to a study conducted by the University of Pittsburgh Graduate School of Public Health and School of Medicine.

The finding, reported today in the journal *Menopause*, suggests routine blood testing of black menopausal [women](#) may be warranted to determine their [heart disease](#) risk and potentially when to start therapies, such as aspirin and statins. The research was funded by the National Institutes of Health (NIH).

"Multiple previous studies have shown that [black women](#) are at higher risk for heart disease than white women; however, guidelines for assessing [cardiovascular disease risk](#) in asymptomatic adults do not recommend selective race- or ethnic-based risk-assessment," said lead author Norman C. Wang, M.D., M.S., assistant professor in Pitt's School of Medicine. "Our study revealed for the first time that in black, but not white, women going through menopause, [higher levels](#) of an easily measured risk factor for heart disease are associated with higher amounts of early atherosclerosis, even after accounting for other risk factors for heart disease. A clinical trial to determine whether routine screening in this population can save lives may be warranted."

Dr. Wang and his colleagues examined medical records, blood samples and heart CT scans for 372 black and white women from Pittsburgh and

Chicago enrolled in the Study of Women's Health Across the Nation (SWAN). The women averaged just over 51 years old, were not on hormone replacement therapy and had no known heart disease when enrolled.

The researchers looked at blood levels of five biomarkers linked to inflammation. All of the biomarkers were associated with [coronary artery](#) calcification, a predictor of heart disease that is measured with a heart CT scan. When the researchers then took into account the participants' body mass index (BMI), a measure of overall body fat, they found that obesity was a key factor linking most of the elevated inflammation biomarkers and coronary artery calcification.

Regardless of BMI, black women with higher levels of one particular biomarker, C-reactive protein, were more likely to have coronary artery calcification than whites. In fact, black women with coronary artery calcification had an average level of C-reactive protein in their blood that was almost double that of their white counterparts.

"We clearly demonstrated that obesity, inflammation biomarkers and [coronary artery calcification](#) are linked for both black and white midlife women, further emphasizing the need to promote lifestyle changes to combat obesity at midlife when women are subjected to many physiological and biological changes that could potentially increase their risk for heart disease," said senior author Samar El Khoudary, Ph.D., M.P.H., assistant professor in Pitt Public Health's Department of Epidemiology. "Future research should build on our findings regarding black women and C-reactive protein by testing similar associations over time, which could potentially yield interventions that can help these women avoid developing heart disease."

The researchers noted that their study only looked at black and [white women](#), so the results are not generalizable to other racial or ethnic

groups.

Provided by University of Pittsburgh Schools of the Health Sciences

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