

African American women more resistant anti-inflammatory effect aspirin than white women

June 23 2014

African American women respond differently to the anti-inflammatory effect of aspirin than do white American women, new research finds. The results were presented Monday, June 23 at ICE/ENDO 2014, the joint meeting of the International Society of Endocrinology and the Endocrine Society in Chicago.

"African American women appear to be more resistant than white American women to the anti-inflammatory benefits of aspirin in reducing [cardiovascular disease](#) and its [risk factors](#)," said lead study author Nora Alghothani, MD, MPH, endocrinology fellow in the Division of Endocrinology, Diabetes, & Metabolism at The Ohio State University in Columbus.

Even though African American women have higher high-density lipoprotein (HDL, the "good" cholesterol) and lower triglyceride levels, they also have increased insulin resistance, oxidative stress burden, proinflammatory markers, HDL dysfunctionality – and significantly higher mortality. Aspirin therapy has been recommended to reduce subclinical atherosclerosis and cardiovascular disease outcomes, including stroke.

In their pilot study of 21 African American and 21 white American nondiabetic postmenopausal women with subclinical atherosclerosis, Dr. Alghothani and her colleagues randomly assigned half the women in

each group to receive 325 mg of enteric-coated aspirin and half of them to receive an identical placebo, every day for 6 months.

The researchers looked at the subclinical pro-inflammatory markers hsCRP and IL-6 to compare the anti-inflammatory response to aspirin therapy between the AAW and WAW groups.

After 6 months, while hsCRP increased in both AAW and WAW placebo groups, and remained essentially unchanged in the aspirin-treated AAW group, it decreased by 25% in the aspirin-treated WAW group. While IL-6 increased in both placebo groups and in the aspirin-treated AAW group, it decreased by 48% in the aspirin-treated WAW group.

The African American [women](#) appeared to be more resistant to the anti-inflammatory properties of aspirin.

"Aspirin therapy has long been recommended to help reduce poor cardiovascular disease outcomes. Its benefits, however, may be different among African Americans compared with white Americans. This research shows an overall blunted response to the anti-inflammatory properties of [aspirin](#) among African Americans, and it suggests that a higher dose may be required in African Americans to achieve better cardiovascular disease prevention and lessen disparities among the different ethnic groups," Dr. Alghothani advised.

Provided by The Endocrine Society

Citation: African American women more resistant anti-inflammatory effect aspirin than white women (2014, June 23) retrieved 30 April 2024 from <https://medicalxpress.com/news/2014-06-african-american-women-resistant-anti-inflammatory.html>

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