

Study shows heart health declines rapidly after menopause

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A woman's cardiovascular risk can rise sharply after she goes through menopause, quickly catching up to men of a similar age and health profile, according to new findings presented at the [American College of Cardiology's Annual Scientific Session](#). Researchers said the study underscores the importance of recognizing and addressing early warning signs of heart disease risk in women as they lose the protective effects of estrogen after menopause.

"This is a unique study cohort of only post-menopausal statin users that signals that post-menopausal women may have risk of heart disease that is on par with males," said Ella Ishaaya, MD, an internal medicine physician at Harbor-UCLA Medical Center in Torrance, California, and the study's lead author.

"Women are underscreened and undertreated, especially post-menopausal women, who have a barrage of new [risk factors](#) that many are not aware of. This study raises awareness of what those risk factors are and opens the door to indicating the importance of increased screening for coronary artery calcium (CAC)."

In the study, post-menopausal women underwent heart scans to assess their CAC score, a measure of plaque buildup—fat, calcium and other substances—in the heart's arteries. CAC levels are assessed with a quick, non-invasive scan similar to an X-ray. A higher CAC score indicates a higher risk of a heart attack or other cardiac events.

Researchers analyzed data from 579 post-menopausal women who were taking statins to control their cholesterol and had undergone two CAC scans at least one year apart. Participants did not have heart disease at the time of the first scan. To compare CAC changes in men and women, each female participant was matched with a male of a similar profile in

terms of age, race, statin use, blood pressure and diabetes status.

Researchers divided the participants into three groups with CAC levels of 1–99, 100–399, and 400 or higher at baseline. Between their first and second heart scan, women with baseline CAC of 1–99 saw their CAC rise by a median of eight points, double the median of four seen in their male counterparts. Similarly, women with baseline CAC of 100–399 saw their CAC rise by a median of 31 points, about double the median of 16 seen in males. There was no significant difference between sexes for those with baseline CAC of 400 or higher.

The findings suggest plaque buildup is accelerated in post-menopausal women compared to men, indicating that many women experience a steep rise in the risk of heart problems. Ishaaya said this is likely related to the drop in estrogen that women experience during menopause. Estrogen has long been known to have a protective effect on heart health, but researchers said many women and even many clinicians are not aware of what it means to lose that protection during menopause.

"After menopause, women have much less estrogen and shift to a more testosterone-heavy profile," Ishaaya said. "This affects the way your body stores fat, where it stores fat and the way it processes fat; it even affects the way your blood clots. And all of those [changes] increase your risk for developing heart disease."

Heart disease is the leading cause of death in both men and women, but women's cardiovascular risk has traditionally been undertreated because women tend to develop heart disease at an older age than men and may experience different and sometimes more subtle symptoms.

Based on these results, researchers suggested post-menopausal women should talk to their doctor about [heart disease](#) risk factors and follow up on any recommended tests or monitoring. More women may benefit

from heart scans when compared to the number of women currently receiving them, Ishaaya said.

Since all the women in the study were taking statins but many still saw a substantial rise in CAC, the results may also indicate that statins are not sufficient to keep plaque buildup in check for this population, Ishaaya said. Future studies could investigate the effectiveness of statins or other therapies in reducing plaque burden in [post-menopausal women](#), she said.

ACC/American Heart Association guidelines recommend considering a heart scan to assess CAC when a person's risk level is ambiguous or borderline based on standard risk factors. In the U.S. and many other countries, CAC scoring is most used to determine recommendations for statins for intermediate-risk and asymptomatic patients.

More information: Ishaaya will present the study "CAC Progression in Men and Women: Is There an Inflection at Menopause?" on Sunday, April 7, 2024.

Visit CardioSmart.org/CAC to learn more about coronary artery calcium.

Provided by American College of Cardiology

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