

Calcium score predicts future heart disease among adults with little or no risk factors

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With growing evidence that a measurement of the buildup of calcium in coronary arteries can predict heart disease risk, Los Angeles Biomedical Research Institute (LA BioMed) researchers found that the process of "calcium scoring" was also accurate in predicting the chances of dying of heart disease among adults with little or no known risk of heart disease.

Previous studies had found that calcium scores were effective in predicting [heart disease](#) among adults with known [heart disease risk](#) factors, such as hypertension, diabetes, dyslipidemia, current smoking or a family history of heart disease. The study conducted by LA BioMed researchers examined 5,593 adults with no known heart disease risk or with minimal risk of heart disease, who had undergone coronary artery calcium screening by non-contrast [cardiac computed tomography](#) from 1991-2011.

Normally, the coronary arteries don't contain calcium. A buildup of calcium can narrow the arteries to the heart and lead to a heart attack. The screening process results in a calcium score indicating the amount of calcium in the plaque lining the walls of the coronary arteries.

Among the adults in the study, even those with low coronary artery calcium scores of 1-99 were 50% more likely to die of heart disease than adults with a calcium score of zero. Adults with moderate scores of 100-399 were 80% more likely to die from heart disease than those with a score of zero, and those with scores of 400 or more were three times more likely to die from heart disease, when compared to adults with no calcified plaque buildup, or a score of zero.

"This long-term study builds on previous research conducted at LA BioMed and other institutions that have proven the effectiveness of [coronary artery](#) calcium screening in predicting heart disease risks," said Matthew J. Budoff, MD, one of the LA

BioMed researchers who conducted the study.

"Normally, calcium scoring is only recommended for patients with known heart disease risks. These findings suggest that [calcium](#) scoring can be an effective tool for assessing heart disease risks in adults with no known risk factors so that they can make the lifestyle and other changes that can help them avoid heart disease in the future."

Dr. Budoff and Rine Nakanishi, MD, PhD, presented these findings at ACC.14, the annual scientific session of the American College of Cardiology in March, along with other researchers whose studies also found [coronary artery calcium](#) screening accurately predicted the risk of future heart disease.

Provided by Los Angeles Biomedical Research Institute at Harbor

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