

## Asymptomatic Patient at Risk for Coronary Artery Disease

Coronary atherosclerotic disease (CAD) is caused by the buildup of cholesterol plaques in the walls of coronary arteries, which supply blood to the heart. CAD can lead to myocardial infarction (heart attack) and other cardiac events. A person with CAD may be asymptomatic (ie, not have any symptoms). An early diagnosis and treatment of CAD before a person has symptoms can reduce heart attacks and deaths.

Doctors can use a variety of factors to determine a person's risk for CAD. These include family history, physical examination, blood tests, lifestyles, and risk calculators. These risk assessments are based on the average of a lot of people. Based on level of risk, imaging tests can look for coronary artery calcium. Coronary artery calcium is found in plaques in the walls of arteries. It is a strong indicator of CAD for an individual. It can be used to help develop a treatment plan to reduce the risk of a cardiac event.

For asymptomatic individuals with a low risk of CAD, imaging tests are usually not recommended.

For asymptomatic patients with intermediate risk for CAD, CT coronary calcium ([https://www.radiologyinfo.org/en/info/ct\\_calscoring](https://www.radiologyinfo.org/en/info/ct_calscoring)) (detects calcium deposits in the coronary arteries of the heart) is usually appropriate. CT angiography coronary arteries (<https://www.radiologyinfo.org/en/info/angiocorocct>) with intravenous (IV) contrast (CT scan of arteries using IV contrast) may be appropriate.

For asymptomatic individuals with high risk for CAD, CT coronary calcium and CT angiography of coronary arteries with IV contrast may be appropriate.

—By Emily Hahn and Khushboo Jhala, MD, MBA. This information originally appeared in the *Journal of the American College of Radiology*.

### Disclaimer

This information is copied from the RadiologyInfo Web site (<http://www.radiologyinfo.org>) which is dedicated to providing the highest quality information. To ensure that, each section is reviewed by a physician with expertise in the area presented. All information contained in the Web site is further reviewed by an ACR (American College of Radiology) - RSNA (Radiological Society of North America) committee, comprising physicians with expertise in several radiologic areas.

However, it is not possible to assure that this Web site contains complete, up-to-date information on any particular subject. Therefore, ACR and RSNA make no representations or warranties about the suitability of this information for use for any particular purpose. All information is provided "as is" without express or implied warranty.

Please visit the RadiologyInfo Web site at <http://www.radiologyinfo.org> to view or download the latest information.

**Note:** Images may be shown for illustrative purposes. Do not attempt to draw conclusions or make diagnoses by comparing these images to other medical images, particularly your own. Only qualified physicians should interpret images; the radiologist is the physician expert trained in medical imaging.

### Copyright

This material is copyrighted by either the Radiological Society of North America (RSNA), 820 Jorie Boulevard, Oak Brook, IL 60523-2251 or the American College of Radiology (ACR), 1891 Preston White Drive, Reston, VA 20191-4397. Commercial reproduction or multiple distribution by any traditional or electronically based reproduction/publication method is prohibited.

Copyright © 2023 Radiological Society of North America, Inc.