

Coronary Calcium Scoring

Coronary artery disease (CAD) is the leading cause of death in the United States. Each year 30-50% of the 1.5 million American men and women who have a heart attack (myocardial infarct) die as a result. **Most of these occur in people who've had no previous symptoms or warning.** Men are at greater risk for heart attack at certain times of their lives, but overall men and women die at equal rates from CAD.

Coronary artery calcification scoring is a non-invasive CAT scan of the heart. The scan detects and quantifies calcified atherosclerotic plaque in the coronary arteries. A score is computed based on the amount of calcification detected. Your score is an accurate predictor of the degree of narrowing of the coronary arteries and the likelihood of a future coronary event (heart attack). The radiologist, an imaging specialist, will interpret the scans and send a report to you and your physician.

Early detection of calcified atherosclerotic plaque can prompt preventive action to minimize risk of heart attack or direct you to seek medical evaluation for further testing. Coronary atherosclerosis can be slowed, stopped, and possibly reversed before artery blockage results in heart muscle damage or death. Remember, in cardiac disease, PREVENTION could mean everything!

The American Heart Association has identified the following risk factors:

- * Men over age 45
- * Women over age 55
- * Elevated LDL(bad) cholesterol
- * Low HDL(good) cholesterol
- * Family history of coronary artery disease
- * Smoking
- * Obesity
- * Sedentary life style
- * High blood pressure
- * Diabetes

If you are a male over 45 or a female over 55 and have one or more of these risk factors, You should consider Coronary Calcium Scoring.

Questions and answers about Coronary Calcium scoring

Q. What is Coronary Calcification Scoring?

A. Coronary calcification scoring or cardiac scoring is a CAT Scan technique to determine the amount of calcium build up in the coronary arteries. Coronary artery calcification is a specific marker for coronary atherosclerosis. The amount of calcification correlates with severity of coronary atherosclerosis and the probability of obstructive disease.

Q. How is it performed?

A. The scan is performed on an ultrafast CT (either helical or electron beam CT with similar accuracy) in one breathhold. The whole procedure takes just a few minutes.

Q. What happens after the scan?

A. The data are processed via a special cardiac scoring software package. A radiologist then evaluates the images and puts region of interests (ROI's) on the calcified coronary arteries. At

the end, individual scores for four arteries (left main, LAD, circumflex, and right coronary) and a total score are calculated. The total score falls under one of the following categories:

0-1	NO CALCIFICATION (low risk for obstructive coronary atherosclerosis)
1-10	MINIMAL CALCIFICATION;
11-100	SMALL AMOUNT CALCIFICATION;
101-400	MODERATE CALCIFICATION;
>400	LARGE AMOUNT CALCIFICATION (high risk for coronary atherosclerosis).

Q. What's the accuracy of the test?

A. It has a nearly 100% sensitivity for calcifications and nearly 100% negative predictive value for future coronary events. A zero or very low score implies virtually no coronary obstructive disease with the exception occurring in young patients who smoke (soft plaques). A high score indicates a significant plaque burden and risk for future cardiovascular event. It should be understood that calcification is not site specific for stenosis but rather indicates the extent of atherosclerosis in the coronary arteries overall. The score may be used as benchmark to measure subsequent disease development or assess preventative programs.

Recommended Testing site:

Mt. Clemens Regional Medical Center: Cost \$249

The hospital is located on Harrington Blvd., east off of Groesbeck Hwy., approximately one mile north of Metropolitan Pkwy.

CT Scan 586/493-8187

Monday – Friday, 7:30 am – 10 pm. Saturday appointments are also available.