



Associated Radiologists of Clarkston

## Coronary Artery Scanning

### What's your risk for coronary artery disease?

Heart disease rarely develops from a single risk factor. Risk factors usually occur in clusters and may "feed" each other. Even a small increase in one, such as moderately high blood pressure, becomes more critical when combined with others.

Fortunately, a similar thing happens in reverse. Moderate changes in one factor can decrease several others at the same time. For example, beginning an exercise program can lower blood pressure, increase HDL ("good") cholesterol and help control weight and blood sugar levels if you have diabetes.

Here are major risk factors for coronary artery disease. If you have one or more of these risk factors, your doctor may advise further diagnostic testing *even if you have no symptoms*.

### Risk factors you can change

<b>Risk factor</b>	<b>How to minimize the risk</b>
High blood Cholesterol	Limit intake of cholesterol, saturated fat and trans (hydrogenated) fat. Get regular exercise. Keep total cholesterol and triglycerides less than 200 mg/dl, LDL ("bad") cholesterol less than 100 to 130 mg/dl and HDL ("good") cholesterol above 35 mg/dl.
High blood Pressure	New National Institutes of Health (NIH) recommendations: Systolic (top) blood pressure measurement under 130; diastolic (lower) measurement under 85.
Smoking	Stop smoking. Nicotine constricts blood vessels and forces your heart to work harder. Carbon monoxide reduces oxygen in blood and damages the lining of blood vessels. Smoking worsens cholesterol and increased fibrinogen, a clotting protein.
Diabetes	Maintain proper weight. Losing excess weight helps control blood sugar level. Eat high-fiber foods and complex carbohydrates. Limit saturated fat and sugar. Get regular exercise. Work closely with your doctor to control your blood sugar.
Physical inactivity	Get at least 200 minutes of moderate-paced physical activity each week. You can do one exercise session a day or spread the time throughout the day in 10-minute blocks.
Being overweight	Maintain proper weight and get enough exercise. Being only 10% overweight increases heart disease risk. Losing just 5 to 10 pounds may lower your blood pressure.
Improper diet	Keep total fat intake to less than 20% to 30% of daily calories and saturated fat to under 7%. Substitute olive and canola oils for saturated fat. Increase fiber intake to 25 to 30 grams a day by eating cereal grains, legumes and fruits.
Stress	Get regular exercise and enough rest. Avoid nicotine and excessive caffeine and alcohol. Practice relaxation techniques. Maintain good social relationships.

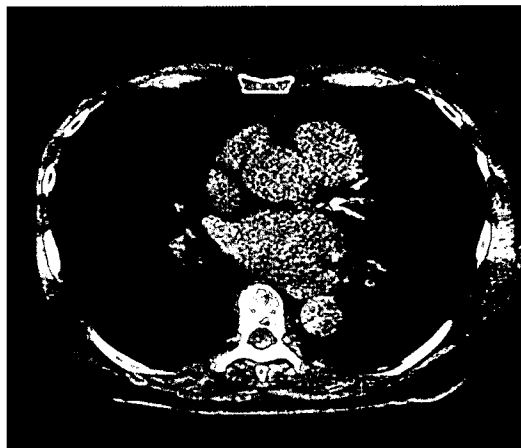
### Risk factors you can't change

Age	Men over age 45 and women over age 55 are at increased risk.
Male gender	Men have more long-term high blood cholesterol and elevated blood pressure than women do. Estrogen may protect women before menopause.
Genetic makeup	Increased risk if you have a father or brother under age 55 or a mother or sister under 65 who had a heart attack, sudden cardiac death, angina or coronary artery disease.
Race	Blacks have a higher risk than whites, Hispanic- or Asian-Americans, and their heart disease is often more severe.

- Mayo Clinic Health Letter, June, 1999

## CORONARY CALCIUM SCORE

The coronary calcium score is a screening test designed to identify coronary artery disease at the preclinical, asymptomatic stage. Using a CT scanner and special software, it effectively quantifies the amount of calcified plaque in the patient, compared with that of the normal population.



Patients with an elevated calcium score are at an increased risk for cardiac events such as myocardial infarction and sudden death. When physicians and patients know they are at risk, a myriad of treatment options can be explored to halt—or even reverse—the progression of the disease.

### ***Why is the coronary calcium score necessary?***

Conventional risk factor analysis fails to predict nearly half of all cardiac events. In addition, unlike cholesterol and blood pressure tests, the calcium score is the only non-invasive test that can provide direct visual evidence of the disease itself.

### ***Which patients should have the test?***

Your highest risk patients will not require a calcium score because they are already being treated aggressively. Low risk patients (<40 years of age with no family history) are also not considered. Intermediate risk patients are ideal candidates for the test. These are defined as having two traditional risk factors (age, family history, hyperlipidemia, tobacco use, hypertension, etc.).

### ***Why isn't the test covered by most insurance?***

While the calcium score is now covered by some insurance and Medicare, most insurance providers have not yet followed suit. However, the test itself is relatively inexpensive (less than \$400) and we will work with your patients who cannot afford the test.

History has shown that the availability of insurance reimbursement does not equate to the value of a medical test; it took many years before mammograms were covered by most insurance providers. We believe the calcium score, because of its ability to lower overall healthcare costs, will also be widely covered at some point in the future.

### ***Why Associated Radiologists of Clarkston?***

Marc Kahn, M.D. has performed and read more coronary calcium scores than any other radiologist in Michigan. His extensive experience, along with the precise image quality attained by our Toshiba Aquilion 64-slice CT scanner, gives you the confidence you need when recommending this test to your patients.