



Nuclear Medicine Test Checks Blood Flow to Heart



Myocardial perfusion imaging uses radioactive tracers to show blood flow (perfusion) to the heart muscle (myocardium).

This imaging exam involves three steps.

1. Blood flow is tested while the heart is at rest.

An intravenous line (IV) is placed in the patient's arm and a small amount of the radioactive tracer is injected. After a waiting period, the patient then lies flat on a bed and a gamma camera is positioned over the chest. The camera measures the radioactive gamma rays coming from the heart muscle.

2. The heart is put under stress.

To find out if the heart's blood vessels are becoming blocked, a stress test is performed to dilate the vessels. If vessels are narrowed or blocked they do not dilate adequately, causing a restriction. This restriction limits the flow of blood to an area of the heart. Either an exercise treadmill or a drug called adenosine can be used to increase heart rate. At this point, a second radioactive tracer is injected into the patient's IV.

3. Blood flow is tested while the heart is under stress.

Now the gamma camera takes a second set of images. They are compared to resting images to see how well blood flow is getting to the heart muscle.

Why do myocardial perfusion imaging?

- To investigate chest pain.
- To investigate arrhythmia.
- To assess the amount of heart muscle damage from a recent heart attack.
- To assess how well the heart is working before a major surgical procedure.

Is it safe?

The stress portion of test has some risks, although complications are rare.

What are the benefits?

Myocardial perfusion imaging is a non-surgical, low-risk test that can provide lots of information about artery blockages in the heart. By placing a patient's heart under physical stress, a disease hidden during the resting state may be uncovered.

How soon will you know the test results?

A physician will interpret the results on the day of your test, and the results will be sent to your doctor. Your doctor will discuss the results with you at a later time.

nuclear medicine

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