

What is Myocardial Perfusion Scan?

Myocardial perfusion scan is a medical test that uses a radioactive substance, known as a tracer, to assess the flow of blood to the heart muscle. It produces images of the heart muscle during periods of exercise (or stress) and at rest.

Other terms often used to describe myocardial perfusion scan include: cardiac perfusion imaging, cardiac nuclear imaging, and radionuclide stress test. Based on the specific tracer that's used, it may also be called Thallium, Cardiolite, or Myoview scan.

By comparing the stress and rest images, doctors identify areas of the heart muscle with reduced blood flow as well as areas that may be scarred from a previous heart attack.

What Does the Procedure Show?

Myocardial perfusion scanning helps doctors diagnose coronary heart disease, which is caused by narrowed or blocked coronary arteries (the vessels that supply blood to the heart muscle).

During a cardiac perfusion test, a small amount of tracer is injected into a vein in your arm, once while you exercise, and once at rest.

The tracer travels in the bloodstream and is picked up by the heart muscle. Areas of the heart muscle that have a good supply of blood pick up the tracer right away. Areas that do not have a good supply pick up the tracer very slowly or not at all.

The tracer gives off a small amount of radiation that is detected with a scanning camera. A computer processes the information and produces images that show how radioactivity is distributed in the heart.

If an area of the heart received less blood than the rest of the heart (because of narrowed or blocked artery) it will pick up less radioactivity and will show up as a lighter area, called a "defect".

One set of images is taken after you exercise, another set is taken while you are at rest. The images allow doctors to compare how much blood flows to the heart muscle during stress and at rest.

Why is the Test Done?

Most often, myocardial perfusion scanning is done to diagnose coronary heart disease. Your doctor may order this test if you have chest pain, shortness of breath, or any other symptoms that could be related to your heart. In addition, you may be asked to take this test if you have had an abnormal EKG, abnormal treadmill stress test, or other factors.

Preparing for the Test

- Generally you will be instructed not to eat or drink for at least 6 hours before the test. If you have diabetes, take your diabetic medication. You will need to fast for 4 hours before the test.
- If you take heart or blood pressure medications, check with your doctor when you schedule the test. He or she may ask you to stop certain medications a day or two before the test.
- The procedure will be explained to you and you will be asked to sign a consent form. Feel free to ask any questions you may have.
- Please wear a button-down shirt.
- If you are asked to take the treadmill stress test, please wear athletic or tennis shoes. Clogs, sandals, open-toe or slip-on shoes are not allowed.

The test may also be done to determine how severe coronary disease is, to estimate the risk of a future heart attack, and to assess the results of a coronary procedure (such as angioplasty or bypass surgery).

What Happens During the Test?

Myocardial perfusion scanning is generally performed at a hospital, test center, or clinic. It may be done on a single day or on two separate days.

Usually, two sets of images are taken. One set is taken after exercise, and another set after a period of rest. Depending on the department's routine, either the exercise or the rest may be done first.

Stress/Exercise/Chemical Portion

Several electrodes (small sticky patches) will be placed on your chest to monitor your heartbeat during the test. An intravenous (IV) line will be inserted into a vein in your arm, so that the tracer can be injected.

You then walk on a treadmill or a pharmacological agent will be injected through your vein. Be sure to report any symptoms, such as chest pain or discomfort, dizziness, or shortness of breath.

After one hour you will return and lie flat on a special table under a large scanning camera. During imaging, the camera moves slowly in an arc over the front of your chest, taking pictures of your heart from different angles. *Remain still while the pictures are being taken.* The imaging part of the test takes about 20-30 minutes.

Rest Portion

A tracer will be injected one other time, and another set of pictures will be taken while you are at rest. These images are then compared to the images taken during the exercise/stress part of the test.

How Long Does it Take?

Myocardial perfusion scanning can take from 3 to 4 hours. If you are an outpatient, you may be allowed to leave the test area between the two parts of the test. Or, you may be asked to return the next day for more imaging.

Is the Test Safe?

The radiation exposure during the perfusion scanning is small, and the doses used are safe. However, if you are pregnant, suspect you may be, or are a nursing mother, be sure to let your doctor know.

The exercise test is also safe. A small amount of risk does exist, however, because the heart is stressed. Possible rare complications include abnormal heart rhythms and a heart attack. Trained personnel are there to handle any emergency.

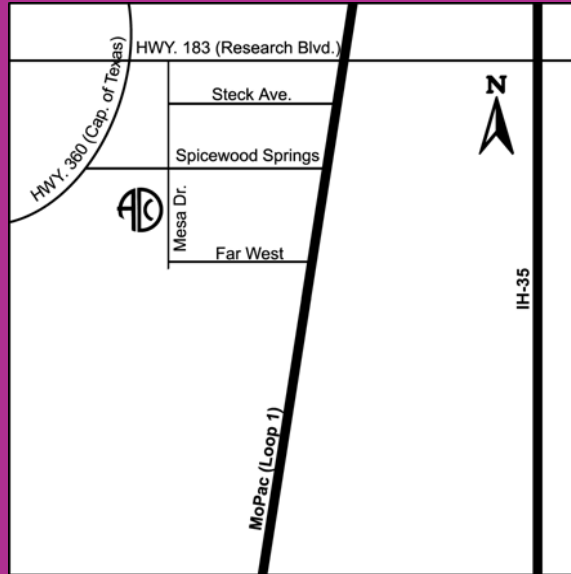
Your Test Results

Your doctor will discuss the results of the test with you during a future visit. The results help the doctor accurately diagnose your condition and develop a treatment plan that's best for you.

For additional details about myocardial perfusion scanning or other radiological procedures, please visit www.radiologyinfo.org or consult your physician.



www.adclinic.com



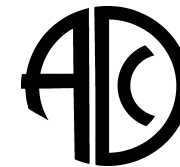
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Appointment

Date: _____

Time: _____

Myocardial Perfusion Scans



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