

the myocardial perfusion study will be injected at the peak of exercise.

7.The SPECT scan will be done after 45-60 minutes. During this period you can have bread and milk and / or chocolate.

8.Scan will take about 20 minutes. Gamma camera used for scanning will move around you and take a series of scans of the heart.

9.If these pictures show any abnormality, we will schedule you for the second scan, which is done following another injection of tracer after a minimum gap of 3 hours.



PLEASE SCAN FOR THE LOCATION

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MYOCARDIAL PERFUSION IMAGING





Digital Version



WHAT IS CORONARY ARTERY DISEASE?

Coronary Artery Disease (CAD) is caused by an inadequate blood supply to the heart, usually caused by blocked arteries.

WHAT IS A MYOCARDIAL PERFUSION **IMAGING TEST?**

Myocardial Perfusion Imaging test is usually done in Nuclear Medicine Departments or Cardiac clinics. They may perform the test on an outpatient or inpatient basis. The test involves an injection of a small amount of Radiopharmaceutical / Radioactive material, which circulates in the blood stream and shows if your heart muscle is receiving adequate blood supply under stress and/or rest conditions. The Radiopharmaceutical injection is a clear liquid called Tc99m MIBI and the other radioactive material, which could also be used is called Thallium.

WHAT IS A DIAGNOSTIC RADIOPHARMACEUTICAL?

It is a product which, when injected, temporarily collects in a particular organ of the body (for example, the liver, the lungs, the heart or other organ). As the Radiopharmaceutical contains a small amount of radioactivity, it can be detected from outside the body using special medical equipment called a gamma camera, and a picture, can be taken. This scan will show exactly the distribution of the Radiopharmaceutical within the organ and the body. This can give the doctor valuable information about the structure and function of that organ.

HOW SAFE IS A MYOCARDIAL **PERFUSION TEST?**

Any stress procedure may have some risks and you should consult with your physician regarding the risks and benefits of this procedure. The radioactive materials. Tc99m have been shown to be safe with low incidence of adverse reactions. This test and materials are used routinely worldwide under physician supervision for myocardial perfusion imaging. Neither Tc99m nor Thallium are "dyes", and there should be no serious side effects from this injection.

WHY WOULD MY DOCTOR ORDER A MYOCARDIAL PERFUSION IMAGING STRESS TEST INSTEAD OF A REGULAR STRESS TEST?

Under certain circumstances, a regular stress test may yield indeterminate results. To improve the diagnostic accuracy, your physician may request a Myocardial Perfusion Stress test.

HOW IS THE TEST PERFORMED?

The test usually consists of two parts,



after exercising and under resting conditions. The entire test may be completed in one day or in two days. You will be informed if the exercise or rest portion will be done first. The first dose will be administered by injection during peak exercise and once again while you are at rest. As in a regular stress test, ECG electrodes will be attached to your chest. This will allow your physician to monitor your heart rate before, during and after you have exercised. A blood pressure cuff will be placed on your arm to monitor your blood pressure before, during and after exercise.

Additionally, an intravenous (I,V) line will be placed in your hand or arm vein to allow for ease of the isotope injection. The IV line will be removed when the exam is completed.

WHAT IS EXERCISE/ STRESS TEST?

The exercise part of the exam is usually done on a treadmill, very similar to a

EXERCISE?

Some people, due to a variety of disabilities, are unable to exercise adequately enough on a treadmill machine to achieve a diagnostic test result. In these cases, your physician will decide the course of action for your testing.

walking.

use.

this is possible.

treadmill used at a health club. Exercising will begin slowly, and approximately every three minutes, the pace will gradually increase. As you exercise, your heart rate and blood pressure will change. This is normal and remember you are being closely monitored throughout the exam. At your peak exercise, the isotope will be injected into the I.V., and vou will be asked to continue exercising for an additional one or two minutes.

WHAT HAPPENS IF I AM UNABLE TO

ARE THERE ANY SPECIAL PRECAUTIONS / INSTRUCTIONS FOR THE MYOCARDIAL **PERFUSION IMAGING STUDY?**

Clothing: You should wear comfortable, loose-fitting clothing for exercise and comfortable shoes appropriate for

Food: Your physician may instruct you to have a light breakfast and avoid certain food such as milk products or caffeinecontaining beverages. If you are diabetic or insulin-dependent, consult your doctor on such dietary restrictions and insulin

Medications: Consult with your physician if certain medications should be taken before, or held until after, the test. Certain medications may interfere with the effectiveness of the exam.

Work: Depending on the procedure and if time permits, you may have time to go back to work between the two parts of the exam. The physician will inform you if

IMPORTANT POINTS TO REMEMBER

- There may be two parts of the exam
- Return for the second part

• You may receive an injection for both parts of the exam/scan

 The radioactive material is ordered especially for you. If you are unable to keep your appointment for any reason, notify the department before the exam/ scan

•A written report of the test/scan will be sent to your physician once it is interpreted.

• If you are pregnant or suspect you may be, notify your doctor before taking the test.

MYOCARDIAL PERFUSION SPECT STUDY.

1.Light breakfast 3-4 hours prior to the study.

2.The following medication may be discontinued in consultation with your cardiologist.

• STOP: beta blockers for 72 hours prior to the day of study.

 Calcium channel blockers 48-72 hours prior to day of study.

• Long acting nitrates 24 hours prior to the day of study.

3.Kindly bring a bar of chocolate or 2 slices of bread with butter and a glass of milk when you come for the study.

4.Basically the test consists of 2 parts. The first is done after the treadmill exercise and the second one is done after a period of resting. The second study will be done if any abnormal findings are suspected on the first scan.

5.After fixing the IV line in nuclear medicine department treadmill exercise will follow in the department of cardiology under the supervision of the cardiologist.

6.The Radiopharmaceutical (tracer) for