



Royal Hospital Nuclear Medicine Department

Myocardial Perfusion Scan

Patient information sheet

How nuclear medicine works?

Nuclear Medicine exams can help to assess how well your organs are working. Hence, it is different from other areas of radiology, which create images of the body anatomy. During a nuclear medicine procedure, you will receive an injection of a radioactive material called a radiopharmaceutical. When the radiopharmaceutical reaches the right area, a special machine called a gamma camera will take pictures of the area of interest.

What is a Myocardial Perfusion Scan?

It is a study that determines whether your heart is receiving enough blood from your coronary arteries. It evaluates the blood flow to the heart at both rest and stress and also helps determine the overall function of the left ventricle.

What is involved in this test?

The test involves two parts done over 2 days:
Stress and Rest studies.

1-Stress Study:

There are two types of stress:

A-Exercise stress

B-Pharmacological stress

The attending cardiologist will review your medical history and symptoms with you before your scan so that the most suitable **method for** your test can be selected.

Stress study procedure:

- A technologist will put a small cannula into a vein in your arm.
- Your blood pressure, weight and height will be monitored.
- To monitor your heart rate throughout the procedure, small pads will be placed onto your chest.
- Depending on your condition, you will be asked to walk on a treadmill if you are able to do so, exercise type of the test. The speed will start at a slow pace then gradually increase every three minutes. After achieving the target heart rate calculated by the cardiologist, a radionuclide will be injected through your cannula.
- If you are unable to do the treadmill exercise test, you will be asked to lie on a bed while a medicine is given through your cannula, pharmacological type of test. This medication will cause the coronary arteries to dilate which will increase blood flow in a similar response to that during exercise.
- When you reach your peak activity level, you will receive a small amount of radiopharmaceutical through the cannula.





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- If you experience any symptoms such as dizziness, chest pain, extreme shortness of breath, or severe fatigue at any point during the procedure, let the doctor or technologist know.
- After the test has finished you will be asked to wait for 45 – 60 minutes and you will be advised to eat and drink.
- Then a technologist will ask you to lie down on a scanner bed while a special camera (gamma camera) is taking pictures of your heart. The scanning takes 20 - 30



minutes to complete during which you have to stay still with steady breathing for the whole procedure.

- After the imaging has finished, you will be given a second appointment for the second part of the study (Rest Study).

2-Rest Study:

During this part of the study, the patient will receive a radiopharmaceutical injection and will be asked to wait for 45 - 60 minutes before being called for the scanning part of the test which is similar to that done during the stress study. This is in order to compare both sets of images (stress and rest) for an accurate evaluation of the heart.

What happens after the test?

- You may resume your normal activities and continue your medications once the examination is completed.
- The report will be sent to your doctor.

- Drink plenty of water to flush the radioactive material from your body.
- Avoid contact with children and pregnant women for 24 hours post injection.

Preparation:

- Fasting for 4-6 hours prior to the test.
- You must not consume any products that contain caffeine for 24 hours before the test.
- Please tell the staff if you have Diabetes as some changes to your diabetic medication may be needed.
- For the stress part you will be asked to sign a consent form which indicates that you agree to have the test.

For female patients

- If you are pregnant, please tell the technologist before you are injected with the radioactive tracer.
- Females who are breast feeding should discard the milk for 24 hours after the injection is given.

Your **Thyroid** Scan has been scheduled for _____ at _____

If you have any questions or concerns about the test, or if you need to cancel or reschedule your appointment, please contact the **Nuclear Medicine Department** at **24627069**

Nuclear Medicine Department is located on the Ground floor in the Oncology Centre

Please check in with nuclear medicine reception 15 minutes before your appointment.

