



Oxford University Hospitals
NHS Foundation Trust

Nuclear Cardiology Imaging

Myocardial Perfusion Test

Information for patients

The Myocardial Perfusion Test

Coronary Artery Disease (CAD) is caused by the narrowing of the blood vessels that supply the heart – the coronary arteries.

The Myocardial Perfusion Test is a nuclear cardiology test which uses a small dose of a radioactive agent to assess the blood flow through the heart muscle.

This test checks the blood supply to the heart muscle, both on stress and at rest, and compares the results. This allows us to assess previous damage to the heart muscle caused by a myocardial infarction (heart attack) or reduced flow of blood through the heart during exercise (myocardial ischemia or angina).

The test may be performed over one or two days depending on the reason you have been referred.

Preparing for the test

You may have a light breakfast or snack before the scan, but not a heavy meal.

It is important that you **do not** have caffeinated drinks (coffee, tea, chocolate, cola, etc) for 24 hours before the test.

If your medication includes Beta-blockers (Atenolol, Bisoprolol, Carvedilol, Metoprolol, Propanolol, Sotalol etc.), Verapamil, Dipyridamole, Diltiazem or Aminophylline, we ask you **not to take it on the day of the test and the day before**. This is because these medicines may affect the readings we take during the test. Please bring the tablets with you so you can take them after the stress procedure.

However, if you have **Atrial Fibrillation (AF) or Atrial Flutter** then **YOU MUST CONTINUE** all your prescribed drugs as per normal before the test. If you are unsure or have any question please contact us on: 01865 221 979.

If you are pregnant or think you may be, please telephone us before your scan as we may be able to arrange an alternative test for you. Also, to avoid unnecessary radiation exposure, **please do not bring children with you**.

Also contact the department if you are breastfeeding, on dialysis, incontinent, claustrophobic or require assistance with mobility.

Please wear loose comfortable clothing and shoes suitable for exercise.

After the injection of the radioactive agent, and before the scan, we will ask you to eat and drink something to help to clear the radiation out of your system. This improves the quality of the scan. You may like to bring some food and drink with you from home. Alternatively, there is a restaurant in the hospital and several food shops, including our League of Friends café.

What happens when you arrive?

When you arrive in the department you will be taken into the preparation room. We will ask you some questions about your medical history and about any medications that you are taking.

The Cardiac Physiologist will then apply some electrodes onto your skin and put a blood pressure cuff on your arm so that we can monitor your heart rate and your blood pressure. A fine tube (cannula) will be put into a vein in your hand so that we can give you injections during the test.

What the test involves

The test consists of two parts: **stress** and **rest**. We may do the stress or the rest part first.

For the **stress** part of the test:

We will take you into the exercise room. We may ask you to perform an exercise test either on a treadmill or bicycle. This will raise or "stress" your heartbeat.

If you are unable to exercise, we will stress your heart by giving you an injection of a drug (regadenoson, adenosine or dobutamine). This exercises the heart to the same extent as physical exercise would. This is called pharmacological stress.

We will monitor your heart rate with a machine called ECG (electrocardiogram). We will also record your blood pressure and other symptoms during stress. When you reach the peak of your exercise/stress we will give you an injection of the radioactive agent (Myoview or Thallium). This will help us to assess the blood supply to your heart during the scan.

After the exercise or pharmacological stress:
If we have given you Thallium, we will take you for your scan immediately.

If you have been given Myoview we will ask you eat and drink something to help to clear the radiation out of your system and improve the quality of the scan. You can leave the department for your meal and we will let you know when you will need to return, this may be between 30 - 60 minutes.

What the test involves (continued)

When its time for your scan we will take you into the scanning room, where we will carry out the myocardial perfusion scan, using a scanner called a Gamma-Camera. The stationary detector will be placed around your chest, your head will be outside the scanner. The scanner is quiet when it is working.

The technician will normally leave the room during the scan, but they can stay with you if you prefer.

For the **rest** part of the test:

We will give you the radioactive injection without asking you to do any form of exercise.

If you have been given Myoview we will ask that you eat and drink something to help to clear the radiation out of your system and improve the quality of the scan. You can leave the department for your meal. We will let you know when you will need to return to the department. This may be between 1 to 2 hours.

If we have given you Thallium then your rest scan will be 3 hours after having this injection.

How long does the test last

One day appointment – including both stress and rest parts – takes approx five hours.

Two day appointment – separate stress and rests parts – takes two to three hours each day.

You will be given a two day appointment if you weigh more than 120kg (19st), as this allows us to get better quality scan images.

During your visit you will be given the times for your scans. These may change though, depending on what happens on the day.

After your study

After your scan there will be some radioactivity left in your body, this will not present a significant risk to other people around you.

There is no need to stop giving children essential love and care entirely, however, for 24 hours after your test we advise you try to keep any time that you spend close to others, especially pregnant women and children as short as possible.

Is this Test Safe?

There are no side or after effects to the injection of radioactive agent. You will not feel drowsy, and you will be able to drive home after the test. If you have pharmacological stress, you may have a headache, slight nausea or feel light-headed. This should wear off quite quickly.

There is a small risk from the radiation exposure, which is similar to that from a CT scan. This small risk is outweighed by the information that will be gained by taking the scan. A doctor will have checked the request to make sure this is the appropriate test for you.

Travelling abroad

It is perfectly safe for you to travel abroad the day after your scan, but many airports and seaports are now equipped with very sensitive radiation detectors. It is possible that the very small amount of radioactivity left in your body could set off a detector as you pass through security.

Therefore, if you intend to travel abroad within a week following your scan, it could be helpful to take with you something to explain that you have recently had a nuclear medicine scan. This could be your appointment letter or some other official confirmation from the department where you had your scan.

How will I get my Results?

The results of your examination should be available within two weeks. We will then send a report to the Consultant or Doctor who requested your examination.

They may have arranged to see you again to discuss the results or may have told you how you will get the results – for example, by letter or through your GP.

Please note that we cannot discuss your results with you in person or on the telephone. This is because we have to report your examination results to the person who referred you to us.

If you do not hear anything within two weeks from the person who referred you, please contact them directly.

Transport

If you are eligible and need transport, please telephone the transport team on: 0300 100 0015.

Please tell them that you will be in the department for five hours for a one day procedure and two and a half hours for two day procedures. When booking hospital transport inform them that you are a nuclear cardiology patient (so that drivers are aware to keep their distance).

If you have any problems with booking transport please contact the department on: 01865 221 979.

How to contact us

If you have any other questions or concerns, please contact us.

We want your visit to be as pleasant as possible. You can find the Nuclear Cardiology Department in the main building of the John Radcliffe Hospital. We are situated on Level 1, opposite the entrance to the Cardiac Investigation Annexe.

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Further Information

British Heart Foundation
www.bhf.org.uk/information-support/tests/myocardial-perfusion-scan

British Nuclear Cardiology Society
www.bnccs.org.uk/what-is

Feedback

If you would like to tell us anything about your experience, staff, students and facilities, please speak to a member of the team. Alternatively, you can contact the patient advice and liaison service (PALS).

Telephone: 01865 221 473 or 01295 229 259

Email: PALS@ouh.nhs.uk or feedback@ouh.nhs.uk

For more information, please visit: www.ouh.nhs.uk

Further information

For a translation of this document, or a version in another format such as easy read, large print, braille or audio, please telephone: 01865 740 892 or email: patientexperience@ouh.nhs.uk.

If you would like help preparing for your visit, arranging an interpreter, or accessing the hospital, please visit Patient guide - Oxford University Hospitals (ouh.nhs.uk)



What did you think of your care?

<https://www.ouh.nhs.uk/patient-guide/feedback/friends-and-family-test.aspx>



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