Guy's and St Thomas' NHS Foundation Trust

Nuclear medicine department
Royal Brompton Hospital

Having a nuclear medicine myocardial perfusion scan

This leaflet gives you general information about a myocardial perfusion scan and how to prepare for it. It does not replace the need for personal advice from a qualified healthcare professional. Please ask us if you have any questions.

What is a myocardial perfusion scan?

Nuclear medicine tests provide information about your body to help with your diagnosis and treatment. We use substances called tracers that contain a small amount of radioactivity to highlight the area of the body being examined.

A myocardial perfusion scan is a nuclear medicine test that shows how well your heart muscle is supplied with blood.

Pregnancy

If you are pregnant, or think you may be pregnant, please tell us before your scan. Even small amounts of radiation can harm unborn babies. If you are breastfeeding, you can still have this test. Please contact us for advice before you come.

Getting ready for your appointment

Please follow the instructions in your appointment letter to prepare for your myocardial perfusion scan. This will help to make sure that your test is carried out effectively and without delay.

Caffeine, drinks and food

If you have caffeine in your body, it makes the medicine used during the test less effective. This can lead to test results that are not correct.

For a full 24 hours before your appointment time, do not eat or drink any of the following:

- tea or coffee
- green tea
- decaffeinated tea or coffee
- chocolate or drinking chocolate
- colas
- drinks such as energy or sports drinks that contain caffeine (check the label)
- cold or pain relief medicines that contain caffeine

You can eat or drink anything that is not in this list until 2 hours before your appointment time.

Please note: drinks that do not contain caffeine are fine. These include water, milk, fruit juice, soya milk, and herbal drinks that do not contain caffeine.

Then for 2 hours before your appointment time:

- drink water or clear fluids only
- do not eat any food

You will be able to eat again after your first scan.

Please bring with you

When you come for your test, **please bring a list of all the medicines that you are taking.** This includes:

- inhalers
- creams
- sprays
- medicines that you buy in a pharmacy or shop, such as herbal remedies

If you cannot bring a list, bring all the medicines that you are taking in their original packaging. You can also show us your medicines in the NHS app on your phone.

We cannot carry out your test unless we know all the medicines you are taking. This helps us choose the most appropriate method to prepare you for your test.

You can take all your medicines as usual on the day of your scan. If you need to take any of your medicines during your visit to the department, bring them with you.

Clothing
Wear loose, comfortable clothes. This will make it easier to attach monitoring leads and a blood pressure cuff to your body.

We may ask you to do some gentle exercise by pedalling while you are seated on a chair. Please wear trousers and flat shoes or trainers. Please do not wear high heels.

Books and laptops
You are welcome to bring a book, laptop or tablet computer when you attend for your scan. You will be able to connect to our free wi-fi network.

Food and drink
You will have time to go to the hospital restaurant or coffee shop during your visit to the department. If you would prefer to eat in the department, you can bring food with you.

People with diabetes
You do not need to change your diet or treatment. Please bring any medicines or foods that you may need.

Family and carers
You are welcome to bring an adult family member, friend, or other adult to the nuclear medicine department.

Children

Please do not bring children with you while you are having your scan. To avoid unnecessary radiation exposure, children are not allowed in the department unless they are having a scan.

What happens when you come for your appointment

We assess your medical history and symptoms. We explain the procedure and its benefits and risks. You can ask any questions you may have.

We attach some leads to your chest to allow us to monitor your heart. We place a blood pressure cuff on your arm to monitor your blood pressure. We insert a small plastic tube (cannula) into a vein in your arm. This is to give the medicine and the tracer used for first scan.

Then we begin your preparation for the first scan. If you can, we may ask you to pedal while seated on a chair for 4 to 6 minutes. If you are unable to exercise for any reason, do not worry as we can still carry out the scan.

Then we give you a medicine to prepare your heart for the scan. The medicine may cause mild side effects. Common side effects are mild shortness of breath or a feeling of warmth in the body. The medicines leave your body quickly. Any side effects only last for a few minutes.

Next, you will receive the radioactive tracer that allows us to take images of your heart. This does not cause any side effects. We will then ask you to rest for between 30 and 45 minutes.

First scan
After this rest period, a member of our team will call you to the scanner room.

We will ask you to be as still as you can, with your arms relaxed and away from your chest. Depending on the scanner camera used, you may be seated or lying flat.

During a seated scan, a camera is positioned in front of your chest.

During a flat bed scan, you will lie down on the scanner bed. We will make sure you are comfortable. The scanner bed then moves in and out of the scanner, which is like a large ring.

The scan takes about 15 minutes. There is no discomfort when you are on the scanner bed, and the machinery is quiet. Clinical staff will be close to you during the scan if you need to ask about anything.

Rest
We will ask you to have a rest for 2 to 3 hours. You will be able to drink (including tea or coffee) and eat now. Most people have their lunch during this rest period.

Second scan
After this rest period a second scan, just like the first one, is carried out. The second scan is a resting scan, and no exercise is needed.

Two-day scans
We ask some patients, depending on their medical history and body weight, to have their 2 scans on 2 separate days. This allows us to ensure we obtain good quality test results while keeping the total radiation exposure as low as possible.

If this is the most appropriate way to carry out your scan, we will discuss this with you when you phone to book your appointment. Each of the 2 visits to the department will be about 60 to 90 minutes long. We arrange the 2 visits so that they are no longer than 7 days apart.

Risks and side effects of having a myocardial perfusion scan

Myocardial perfusion tests are very safe, and they have been used for over 40 years. Like most medical tests and procedures, there is some risk involved. The specialists involved in your care assess your medical history before referring you for this scan. This is to make sure that the benefits of the information provided by the scan outweigh these small risks.

The nuclear medicine team will also carefully assess you when you come to the department to assess your level of risk. We answer any questions you may have.

Risks
There is a very low risk that any medicine or exercise required for this scan could cause an abnormal heart rhythm or a heart attack.

The risk of heart attack is rare (1 in 20,000 people). The risk of death is also very rare (1 in 20,000 people).

If you can walk at a medium pace for 6 minutes without problems, then the risk is even lower.

Radiation risks
The tracers we use produce a small amount of radiation.

The risk of a person getting cancer because of this radiation is rare (1 in 10,000 people to 1 in 1,000 people). This level of risk is very small compared with the lifetime chance of getting cancer, which is around 1 in 2.

Please ask us if you would like more information about this.

Side effects
We will give you a medicine that prepares your heart for the first scan. The medicine may cause mild side effects that last for a few minutes. The most common side effects are mild shortness of breath or a feeling of warmth in the body.

Advice for family members and carers
Being with someone while they are having this scan causes very small increase in radiation exposure. The additional risk of cancer to a carer is about 1 in 110,000 people. This is very small compared our existing lifetime risk of cancer.

Important

We always try to keep to your appointment time. However, there can occasionally be delays due to technical issues or for other reasons. We will keep you informed if there is any delay.

How long does the appointment take?

You can expect to be in the nuclear medicine department for 4 to 5 hours in total. The table provides information about each stage of the appointment:

Preparing for your first scan	30 minutes.
Rest	45-minute rest period before the first visit to the scanner room. You can drink tea or coffee now if you want to.
First scan	15 minutes.
Rest	2 to 3 hours rest. You can have your lunch now.
Second scan	15 minutes.

After your myocardial perfusion scan

After your scans have been checked, the cannula will be removed from your arm. You can then leave the department.

After your appointment you can resume normal daily activities. There are no lasting side effects, and you will be able to eat and drink as usual. You will be able to drive straight away after your appointment.

Contact with others living at home with you

The radioactive tracer given to you during your test continues to produce a small amount of radiation afterwards.

To reduce radiation exposure, we suggest taking the following precautions if you live with any children under 12 years old, or someone who is pregnant:

- Avoid prolonged close contact for 24 hours
- Maximum duration of close contact, if needed – 30 minutes
  Close contact means being less than 1 metre away from another person.

No other special contact precautions are needed. You do not need to take any special precautions if you have any pets at home.

Results of your myocardial perfusion scan

We will send the results to the hospital consultant who referred you. This is normally within a week of your visit. Your referring consultant or their team will contact you or arrange an appointment to discuss the results.

Travelling after your myocardial perfusion scan

The small amount of radiation left in your body may be detectable by equipment such as airport security scanners.

If you are travelling abroad **within 1 week being scanned**, please tell us. We can provide an information letter that you can give to security staff if needed.

Getting to the nuclear medicine department

Royal Brompton Hospital is a 15-minute walk from South Kensington tube station, which is on the Circle, District and Piccadilly London underground lines. Several bus routes serve the hospital.

You will receive a map of the local area when you arrange an appointment. For more information on reaching us, visit our website. Please note that there is no parking at the hospital and very limited parking in the local area.

When you reach the main hospital reception in the Sydney Street building, follow the signs to the lifts. Go up to Level 3 in the lift or stairs and then follow the signs to the nuclear medicine department.

If you need help, ask at the hospital reception desk. The receptionist can arrange for a porter to help you get to the department.

Patient transport

If for medical reasons you need to arrange transport to come to the hospital, please contact your GP. They can arrange this by referring you to our hospital transport department on 020 7351 8012.

More information

Find more information about nuclear medicine scans by using the search function on Royal Brompton and Harefield hospitals' website: www.rbht.nhs.uk

Contact us

If you have any queries about your appointment, please contact us:

Phone 0330 128 8666 9am to 5pm, Monday to Friday.

Was this leaflet useful?
If you have any comments about this information, we'd be happy to hear from you.
email gstt.healthcontent@nhs.net

Language and accessible support services
If you need an interpreter or information about your care in a different language or format, please contact the department your appointment is with.

Your comments and concerns
For advice, support or to raise a concern about any service or department at Royal Brompton and Harefield hospitals. Contact our Patient Advice and Liaison Service (PALS):
• Royal Brompton Hospital **phone** 020 7349 7715
• Harefield Hospital **phone** 01895 826 572
Or **email** gstt.rbhh-pals@nhs.net

NHS 111
This service offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day,
phone 111 **web** www.111.nhs.uk

Become a member of the Trust
Members contribute to Guy's and St Thomas' NHS Foundation Trust on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it's up to you how you get involved. To find out more, **phone** 0800 731 0319 **email** gstt.members@nhs.net or **web** www.guysandstthomas.nhs.uk/membership

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