

Having a nuclear medicine dynamic myocardial perfusion scan

This leaflet gives you general information about a dynamic 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 dynamic myocardial perfusion scan?

Nuclear medicine scans provide information about your body to help with your diagnosis and treatment. Substances called tracers that contain a small amount of radioactivity are used to highlight the part of the body that is being scanned.

Your heart is a muscle with its own blood supply that comes from the coronary arteries that surround the heart. A dynamic myocardial perfusion scan is a nuclear medicine test that tells us how well the coronary arteries are working. It also provides information about how well the blood supply moves through the muscle of the heart.

Preparing for your dynamic myocardial perfusion scan

Please follow the instructions to prepare for your scan. This will help to avoid any delay in carrying out your test and ensure that the test is carried out effectively.

Caffeine, drinks and food

If you have caffeine in your body, it makes the medicine used during the test less effective. Caffeine could also change the result of the test.

For 24 hours before your appointment, do not eat or drink:

- 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

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

For 2 hours before your appointment:

- do not eat any solid foods
- drink clear fluids only

Please bring with you

Medicines and inhalers

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

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

- 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 take all your medicines as usual on the day of your scan. If you need to, bring them with you and take them while you are in the department for your scan.

Clothing

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

A dynamic myocardial perfusion scan does not normally require you to carry out exercise.

Occasionally, after assessment, we may decide that a scan that does include exercise would be more suitable for you. If this is the case, the nurse will discuss this with you during your assessment.

The exercise involves steady pedalling for 4 minutes on a seated bicycle.

It is advisable to wear suitable clothing in case this is necessary:

- trousers are best
- together with 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 wi-fi network.

Food and drink

You will be able to eat and drink normally after your test.

People with diabetes

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

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 the scan, but it is important that you contact us for advice before you come.

Family and carers

You are welcome to bring an adult family member or friend, or other adult with you when you come to the nuclear medicine department.

Children

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

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.

Your dynamic myocardial perfusion scan

Assessment before your scan

A clinical nurse specialist assesses your medical history. The nurse explains the procedure and tells you about the medicines needed for the test. You can ask any questions you may have.

The nurse inserts a small plastic tube (cannula) into a vein in your right arm. This is to give the medicine and tracer used for the scan.

After your assessment, we will ask you to rest in the waiting area of the department for a short time. We also give you some water to drink. Having a drink at this time can improve the quality of the scan.

What happens during the scan

1. A technician will call you to the scanning room.
2. We make sure that you are comfortable on the scanner, which has a padded bed. You may need to keep one or both of your arms above shoulder height. We will ensure your arms are supported and comfortable.
3. The camera is quiet. Your body is not enclosed during the scan. A technician will be in the room while the scan takes place.
4. A technician will give you a very small quantity of a radioactive tracer. This is so they can check you are in the correct position on the scanner bed.
5. Then the technician will give you a radioactive tracer to allow the camera to scan the blood supply to your heart muscle while you are at rest. We scan your heart for around 15 minutes.
6. When this is completed, a further scan of your heart is carried out while the blood supply to your heart muscle has been increased. The medicine used to do this will be discussed during your assessment. The clinical nurse specialist who assessed you will give the medicine.
7. The technicians give you the final dose of radioactive tracer and scan your heart for another 15 minutes.
8. You will be on the scanner bed for about 45 minutes in total.

Risks and side effects of having a dynamic myocardial perfusion scan

Myocardial perfusion imaging is a very safe test that has been used for heart tests for over 40 years. Like most medical tests and procedures, there is some risk involved. The specialist team involved in your care assess your medical history to make sure that the benefits of the information provided by the scan outweigh these small risks.

General 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.

We find out about any risk to you before starting the scan. We answer any questions you may have.

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 your overall lifetime chance of getting cancer, which is about 1 in 2 people.

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

Side effects

The medicine used for the second part of the scan may cause mild side effects. The most common side effect is mild shortness of breath, which lasts for about 1 to 2 minutes. The clinical nurse specialist will discuss this with you during your assessment.

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 of getting cancer.

How long does the scan appointment take?

You can expect to be in the department for around 90 minutes in total.

After your dynamic myocardial perfusion scan

Once your scans have been checked, the cannula will be removed from your arm, and you can leave the department.

After your scan 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 also be able to drive after your scan.

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 pregnant women:

- Avoid prolonged close contact for 24 hours
- Maximum duration of close contact – 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 dynamic myocardial perfusion scan

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

Travelling after your dynamic myocardial perfusion scan

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

If you are travelling abroad **within 1 week of your scan**, please let us know. 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.

A map of the local area is provided 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: <https://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

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email gstt.members@nhs.net or **web** www.guysandstthomas.nhs.uk/membership

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