

Having an MRI cardiac stress perfusion scan to check blood flow to your heart

Department of Radiology

Information for Patients

Last reviewed: September 2025

Next review: September 2028

Leaflet number: 65 Version: 7

Introduction

If you are an outpatient please read your appointment letter carefully. Check which hospital your appointment is at.

This leaflet tells you about your scan. Please read it carefully as it has important information and instructions.

What is an MRI cardiac stress perfusion scan?

This is a specialised scan of your heart.

An MRI scanner is a large tube that has a powerful magnet. An MRI scan uses the magnet and a computer to produce detailed pictures of any part of the body. The MRI scanner does not use X-rays.

For the 'stress' part of the test we give you a drug (called adenosine or dobutamine). This stimulates the heart. It makes you feel like you are exercising. This lets us measure the blood supply to your heart.

Why am I having this test?

Most peoples' heart symptoms happen when they are doing something physical. This could be when you are walking, climbing stairs or exercising. The aim of this test is to see how well blood feeds your heart muscle during extra exercise or 'stress'.

**Health information and support is available at www.nhs.uk
or call 111 for non-emergency medical advice**

Visit www.uhleicester.nhs.uk for maps and information about visiting Leicester's Hospitals
To give feedback about this information sheet, contact uhl-tr.informationforpatientsmailbox@nhs.net

Important safety information

You must tell us, by calling the number on your appointment letter if you:

- have a pacemaker or internal defibrillator.
- have ever had any metal fragments in your eyes.
- have any implants or surgical clips in your body or head.
- have ever had an operation on your head, eyes, ears, heart or chest.
- think there is any chance that you might be pregnant.
- have had an operation in the last 6 weeks.
- have a cochlear implant for your hearing.
- have asthma. It is important for us to know if you:
 - take tablets for your asthma.
 - have had a hospital admission for your asthma.
 - were diagnosed with asthma before the age of 30.

If you have been sent a safety questionnaire with your appointment letter, please fill it in and return it according to the instructions.

If you have a drug patch on your skin:

If you have a stick-on drug patch for pain medicine, hormones, nicotine or other medicine, you will need to take it off before having your MRI scan. This is because the patch may warm up or get hot during the scan. This can change the amount of drug given to you.

Once a drug patch is removed it will not reattach to the skin. If you need your drug-patch all the time, please bring a new patch with you. You can put it on after your scan.

If your drug patch is applied by a nurse at home please tell the nurse that you will need a new drug patch after your MRI appointment. They can then arrange to visit you at home to apply a new one.

If you have a glucose monitor and/ or an insulin pump on your skin:

If you use a glucose sensor (flash monitor or continuous glucose monitor (CGM)), which attaches to the surface of your skin, you will need to take it off for your MRI scan. Please bring a replacement to your appointment. You can put it on after your scan. Or, you can call us to change your appointment so it ties in with when you are due to replace your sensor.

If you have an insulin pump with tubing, you will need to remove the pump before your MRI scan. You can reattach the pump after your scan.

If you have a patch pump, such as an Omnipod, you will need to take the pod off for the scan. The Personal Diabetes Manager (PDM) must be kept outside of the room. You can bring a new pod to put on after the scan.

How do I get ready for the scan?

If you take a medicine called dipyridamole or Persantin, stop taking it 48 hours (2 days) before your MRI perfusion scan.

Eating and drinking instructions:

For 12 hours before your scan do not eat or drink anything that has caffeine in. Caffeine is mostly found in tea, coffee, fizzy drinks and chocolate. There are also traces of caffeine in decaffeinated teas, green teas and coffees. These must also be avoided. All chocolate products have caffeine. This includes chocolate ice cream and hot drinks. It is best to drink only water and fruit juice for these 12 hours. This is very important because caffeine will affect the results of the test.

To recap, please do not eat or drink the following for 12 hours before your scan:

- Tea (including decaffeinated)
- Any green tea (including herbal teas)
- Coffee (including decaffeinated)
- Hot chocolate (or any chocolate drink)
- **All** chocolate products, including ice-cream
- **All** fizzy and energy drinks

Drinks allowed: water, milk, fruit juice, squash and plain Horlicks.

Foods allowed: you can eat normally but do not eat the food listed above.

Some painkillers and over-the-counter cold remedies contain caffeine. Please read the ingredients before taking them.

If you are in any doubt as to whether something has caffeine in, please do not have it.

When you come for your scan:

Please bring any sprays or inhalers that you are taking with you to the appointment.

Medicine prescribed by your doctor should be taken as usual . Please bring a list of your current medicines with you.

Before you go into the MRI scanner we will talk to you about your scan. We will ask you to fill out a safety questionnaire if you have not already done this.

What to wear: it is helpful to wear clothes which do not have metal zips or clips.

Before the scan you will need to remove all loose metal objects, including:

- watch, activity tracker, mobile phone, money, credit cards, keys, glasses.
- all jewellery (including piercings). You can replace metal piercings with plastic piercings before coming for your scan.
- hair clips and grips, wigs, hair pieces, weaves or extensions.

- eye make-up, fake eyelashes.
- sports clothing that has silver fibres in
- stick-on drug patches - see instructions on previous page.
- diabetic monitoring device - see instructions on previous page.

If you have a fear of confined spaces (claustrophobia) please tell us when you arrive. Most people who are anxious about the scan are able to manage it with support from our staff.

Sedation

If you think you might need some sedation for the scan please contact the Radiology Department. The phone number is at the end of this leaflet. We can then book your appointment on a day when we have the sedation and support available.

If you have sedation, you will need an adult to drive you home and stay with you for 12 hours afterwards. You must not drive for 24 hours after having sedation.

What happens during the scan?

- When you get to the Radiology Department we will direct you to the relevant waiting area.
- We will ask you to change into a hospital gown.
- We will talk to you about your scan and check your safety questionnaire. You may ask us any questions about the scan.
- Before your scan you will have a simple test to check called an electrocardiogram (ECG). This checks your heart's rhythm and electrical activity.
- We will put 2 small plastic needles (cannulae) into veins in your arm. This is normally 1 in each arm. We use one cannula to give you the heart exercising drug (adenosine or dobutamine). We use the other one to give you a colourless liquid (contrast) that shows up on the MRI scan. These show how well the blood goes to the muscle of your heart.
- We will take you into the scanner room. You will lie down on the MRI table. We will use ECG to keep track of your heart. We will check your blood pressure, heart rate and oxygen levels during your scan.
- The MRI table will move into the magnet. During your scan you will hear a rhythmic tapping sound. This may become quite loud. This is normal. We will give you headphones or earplugs to protect your ears from the noise.
- We can see you during your scan. This is so we can check you are OK. We will give you a call button to alert us if you need to speak to us during your scan.
- You will need to hold your breath for a short time (up to about 20 seconds) a few times during the scan. The radiographer will tell you when to do this.

Please remember not to eat or drink any products containing caffeine before your scan. This is because the drug (adenosine or dobutamine) that is being used to exercise the heart, will not work if you consume anything with caffeine in the 12 hours before your test.

Who will be doing the scan?

- Someone specially trained to do MRI scans (a radiographer) will do your scan.
- A specially trained radiographer or a doctor who specialises in MRI scans of the heart (cardiac radiologist) will do the 'stress' part of the test.
- A student may also be in there. If you do not want this, you can ask that a student is not there when you have your scan.

How long will it take?

An MRI heart scan usually takes between 45 and 60 minutes. The time will vary for each patient. With the time it takes to get ready for the scan and getting changed again afterwards, you will be in the department for between 1 hour and 30 minutes to 2 hours.

What happens after the scan?

You should have no after effects from this scan.

You may eat and drink as usual after the scan. You can return to work and normal daily life.

Are there any risks?

- If you have metal fragments in your eyes or clips in your brain (cerebral aneurysmal clips) you cannot have an MRI scan.
- No short term harmful effects have been found from MRI scans. The use of magnetic fields from MRI scans is not thought to be harmful.
- **Bruising:** There is a small risk of bruising around the injection site.
- **Side effects from the drug which stimulates the heart.** The drug used to make the heart exercise during the scan can sometimes cause side effects. You could get problems with the rhythm of your heart beat, or a feeling of tightness or pain in your chest. You might also get redness in the face (feel flushed), get a headache, or become short of breath as you would if you were doing exercise. These effects usually last only a short time. Our staff are fully trained to look after you if you feel these effects.

- **Side effects or a reaction to the contrast liquid:** There is small risk of side effects from the contrast liquid. Symptoms are usually mild and may include itchy skin, pain at the injection site. You could feel sick (nausea) or be sick (vomiting). Headache and chest pain are rare. If you get any of these symptoms at the hospital, tell the doctor, nurse or other staff looking after you. If you start to get symptoms at home you should contact your GP or call the NHS Helpline on 111.

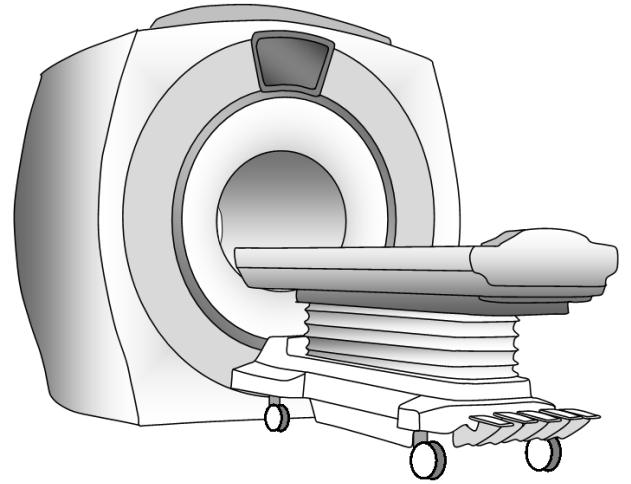
How do I get the results?

- You will not get the results straight away.
- A specialist will look at the pictures from your MRI scan. Your results will be sent to the hospital doctor who wanted you to have this scan.
- If you are an inpatient when you come for the scan, the results will be given to the doctor looking after you on your ward.

What if I need to talk to someone?

If you have any questions or concerns, or cannot make the appointment:

Please call the Radiology department on **0116 258 8765** and select **option 2**. Monday to Friday 9am to 5pm, but not on bank holidays.



اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
على هذه المعلومات بلغة أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل
જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ 'ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ।
Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email uhl-tr.equalitymailbox@nhs.net