

Patient information factsheet

Magnetic resonance imaging (MRI) cardiac stress scan (dobutamine)

We have given you this factsheet because you have an appointment for an MRI cardiac stress scan with dobutamine. It explains what a cardiac MRI stress scan with dobutamine is and what to expect at your appointment.

Your appointment letter will also give you details of your appointment date and other useful information. Please check the date and let us know if you will not be able to attend, so that another appointment can be arranged for you.

We hope this factsheet will help to answer your questions about the scan and prepare you for your appointment. If you have any questions, please contact the team using the details found at the end of this factsheet. If you are unsure why you need to have this scan, please speak to the doctor who referred you.

What is an MRI scan?

MRI is a type of scan that uses strong magnetic fields and radio waves to produce detailed images of the inside of the body. It is a painless and safe procedure. The results of an MRI scan can be used to help diagnose conditions, plan treatments and assess how effective previous treatment has been.

What is a cardiac stress scan with dobutamine?

A cardiac stress scan with dobutamine helps us to find out why you are experiencing symptoms from physical stress or exercise. Dobutamine increases how hard your heart works, so has similar effects on the heart and circulation as exercise does.

Preparing for your MRI stress scan with dobutamine

48 hours before the scan

For 48 hours before the scan, do not take any beta blockers you may have been prescribed.

Beta blockers include:

- atenolol
- metoprolol
- propranolol
- sotalol
- carvedilol
- bisoprolol

All other medication should be taken as normal.

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Eating and drinking

Please do not eat or drink anything four hours before the scan.

If you are diabetic, you can have a light breakfast (such as toast or a bowl of cereal).

At the appointment

Please bring a list of your current medication with you.

On the day, please attend 15 minutes before your appointment time.

Check in using the self-service monitors. We will be available to help if required. Alternatively, knock on the double doors to Cardiac MRI.

We will greet you, explain the procedure and go through a safety questionnaire.

We will ask you to change into a hospital gown and put your belongings into a locker before your scan. You will need to remove all jewellery, piercings, drug patches, metallic denture plates and hearing aids.

As preparation for the scan, we will measure your height and weight. We will also need to insert a cannula (a thin, plastic tube) into a vein in each arm. During the scan, we will inject dobutamine through one of the cannulas. This will increase the blood flow to your heart. We will also inject a contrast dye through the other cannula. Contrast dye helps certain tissues and blood vessels show up more clearly on the images.

During the scan

An MRI scanner is a short cylinder that is open at both ends.

You will enter the scanner head-first, lying on your back on the motorised bed. We will try to make you as comfortable as possible, using pads and supports as required.

A light frame (called a coil) will be rested on top of your chest. The coil contains receivers that pick up the signals sent out by your body during the scan. It can help to create a better-quality image.

We will also attach an ECG monitor to your chest. We will use this to scan in time with your heartbeat.

You will need to lie very still during the scan to achieve the best-quality images. You will be given instructions to hold your breath for a few seconds at a time. You will be told when you can breathe normally again.

We will operate the MRI scanner using a computer in a separate room. You will be able to communicate with the radiographer between scans, via a built-in microphone system. During the scan you may feel your body temperature increase and you may experience tingling in your hands and feet. These are normal sensations. Please tell us if you feel uncomfortable at any point. We will give you an emergency buzzer to hold during the scan.

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At certain times during the scan, the scanner will make loud tapping noises. This is the electric current in the scanner coils being turned on and off. We will give you ear plugs to protect your hearing from the noise. The breathing instructions will be given through headphones.

During the scan, we will inject dobutamine through one of the cannulas in your arm slowly over 15 minutes. During this time, you may notice that your heart is beating faster and stronger, as if you were exercising. Some patients feel:

- short of breath
- lightheaded
- nauseous (queasy)
- some chest discomfort

These are all normal sensations.

If your heart rate does not increase enough, we may give you another drug called atropine to try to increase your heart rate.

You will be scanned at regular intervals during this time. We will also inject contrast dye through the other cannula.

We will monitor you carefully and you will have contact with the staff during this time.

After the dobutamine scans have been taken, we will take some more scan images. You will be told to hold your breath for a few seconds for these.

Your scan will take approximately one hour, but you should be prepared to be in the department for up to two hours.

After your scan

After your scan, you may have to wait in the department for a period of observation until your heart rate returns to normal. We will then remove the cannulas and you will be able to dress and leave the department.

You will be able to eat and drink normally after the scan. You should also restart any medication that was stopped for the scan.

You may feel tired for two to three hours after your scan. We advise that you have something to eat or drink before returning home.

You will not be allowed to drive after this test, so you will need to arrange for someone to drive you home.

Your results

The radiographer will review your images to check the quality of the scan images. Your doctor will discuss your results with you at your next follow-up appointment.

MRI safety information

Please read the information below carefully.

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Implants and devices

Due to the powerful magnetic field created by the scanner, even when not in use, it may not be safe for some people with implants and devices to have an MRI scan. We will need to investigate the safety of these before your appointment.

You must contact us if:

- you have a cardiac pacemaker or defibrillator
- you have had a heart valve replacement
- you have ever had surgery on your head
- you have ever had metal in your eyes from welding or metal-work accidents (an eye x-ray may be required before your scan)
- you have any metallic or electronic implants
- you have had any surgery within the past six weeks
- you have any auditory implants (such as cochlear implants)
- you have ever swallowed a capsule camera (pillcam)

If you do not let us know in advance, we may have to postpone your scan.

Pregnancy

Please call us when you receive your appointment letter if:

- you are pregnant
- you think you might be pregnant
- you are currently breastfeeding

Bringing someone with you for support

If you wish to have someone in the scanner room with you for support, they will need to complete a safety questionnaire and comply with safety regulations.

We do not have crèche facilities at the hospital. We would advise that you do not bring young children with you for this scan. If you do bring young children with you, you will need to arrange for someone you know to look after them while you are having the scan.

Further information

If you are arriving by car, please remember that our car parks can get very busy, so it's a good idea to allow plenty of time to find a space. You may wish to consider getting a lift or coming by public transport.

If you have a medical condition that means you need help getting to hospital, please contact your GP surgery so they can arrange transport for you.

Contact

If you have any concerns or would like further information, you can contact us.

Cardiothoracic radiology appointment team

Telephone: **023 8120 4833** (8.30am to 4.30pm, Monday to Friday)
023 8120 4499 (8am to 6pm, Saturday and Sunday)

Email: **CardioRadApts@uhs.nhs.uk**

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Useful links

www.nhs.uk/conditions/mri-scan

For a translation of this document, or a version in another format such as easy read, large print, Braille or audio, please telephone **0800 484 0135** or email **patientsupporthub@uhs.nhs.uk**

For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit **www.uhs.nhs.uk/additionalsupport**