

Patient Information Leaflet

Magnetic Resonance Imaging (MRI) Cardiac Stress Perfusion Scan

Introduction

Your doctor has requested that you have a Magnetic Resonance Imaging (MRI) cardiac stress perfusion scan.

What is a Magnetic Resonance Imaging (MRI) cardiac stress perfusion scan?

A Magnetic Resonance Imaging (MRI) cardiac stress perfusion scan is a specialised scan of your heart.

Magnetic Resonance Imaging (MRI) is a test which uses a powerful magnet and a computer to produce detailed images of any part of the body. The Magnetic Resonance Imaging (MRI) scanner does not use X-rays. The Magnetic Resonance Imaging (MRI) procedure is quite simple and safe.

The stress element of the test involves giving you a drug (called adenosine or dobutamine), which stimulates the heart and will make you feel like you are exercising. This allows us to measure the blood supply to your heart.

Why am I having this test?

Most peoples' heart symptoms occur when they are doing something e.g. walking, climbing stairs, exercise etc. The aim of this test is to see how well blood feeds the heart muscle when your heart is coping with extra exercise or 'stress'.

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Important Safety Information

- **Prior to arranging an Magnetic Resonance Imaging (MRI) scan, please inform us if you have a pacemaker.**
- You must tell us, by calling the telephone number on your appointment letter if you have any of the following:
 - If you have a pacemaker or defibrillator.
 - If you have ever had any metal fragments in your eyes.
 - If you have any implants or surgical clips in your body or head.
 - If you have ever had an operation on your head, eyes, ears, heart or chest.
 - If there is any chance that you are pregnant.
 - If you have had an operation in the last 6 weeks.
 - If you have a cochlear implant.

Asthma

It is also important for us to know if you have asthma and:

- Take tablets for your asthma, or
- Have had a hospital admission for your asthma, or
- Had your asthma diagnosed before the age of 30.

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How To Prepare For An Magnetic Resonance Imaging (MRI) Perfusion Scan

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

Do not drink or eat anything that contains caffeine for 12 hours before the examination. Caffeine is found primarily in tea, coffee, fizzy drinks and chocolate. There are also traces of caffeine in decaffeinated teas, green teas and coffees, so these must also be avoided. All chocolate products have caffeine, including ice cream and hot drinks. It is best to drink only water and fruit juices for these 12 hours. This is very important because caffeine will invalidate the results of the test.

How to prepare for an Magnetic Resonance Imaging (MRI) perfusion scan
(continued)

To recap, please do not eat or drink the following:

- Tea (including decaffeinated)
- Any green tea (including herb teas)
- Coffee (including decaffeinated)
- Coca-cola (diet or original)
- Hot chocolate (or any chocolate drink)
- All chocolate products, including ice cream
- All fizzy drinks e.g. Lucozade, lemonade, Irn Bru, Red Bull, etc.
- Coffee liquors (such as Tia Maria)

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

Drinks allowed: water, milk, fruit juice, squash.

You can eat normally but do not eat the food stuffs listed above.

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

- **Please bring any sprays or inhalers that you are taking with you to the scan appointment. If you are on medication from your doctor please continue to take it as normal.**
- **Please bring a list of your current medication with you.**
- Please do not wear jewellery items, nail polish or eye makeup.

What Happens During The Magnetic Resonance Imaging (MRI) Scan?

On arrival at the radiology department you will be asked to change into a hospital gown. You will answer a safety questionnaire. During this time, the examination will be explained and you may ask any questions that you have.

You will have an electrocardiogram (ECG) done. The radiographer or doctor will insert a plastic needle (cannula) into a vein in your arm. The cannula will be used to give you the heart exercising drug (called adenosine or dobutamine), and the Magnetic Resonance Imaging (MRI) contrast agent (a colourless liquid that shows up on the scan). These show how well the blood goes to the muscle of your heart.

You will then go into the scanner room and lie down on the Magnetic Resonance Imaging (MRI) table. You will be monitored by an electrocardiograph (ECG). Your

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blood pressure, heart rate and oxygen levels will also be measured throughout the Magnetic Resonance Imaging (MRI) examination.

During the scanning the scanner table will be moved into the magnet and you will hear a rhythmic tapping sound which may become quite loud. This is normal. You will be given headphones to protect your ears from the noise.

The radiographer operating the scanner can see you throughout the scan. You will be given a call button to alert the staff if you need to speak to them during the scan.

It will be necessary for you to hold your breath for short periods (up to about 20 seconds) during the examination. The radiographer will tell you when to do this.

How Long Will It Take?

A Magnetic Resonance Imaging (MRI) heart scan usually takes between 45 and 60 minutes. The time will vary for each patient. With preparation and changing afterwards you will be in the department for between one and a half to two hours.

What Happens After The Examination?

You should have no after effects from this examination. You may eat and drink normally after the examination and you should then be free to return to work and normal daily life.

Are There Any Risks?

If you have a cardiac pacemaker, metal fragments in your eyes or cerebral aneurysmal clips you cannot have a Magnetic Resonance Imaging (MRI) scan. No

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short term harmful effects have been found from Magnetic Resonance Imaging (MRI) scans. The use of magnetic fields is not thought to be harmful; however, long term side effects are unknown.

The drug used to exercise the heart during the scan can occasionally cause heart beat rhythm problems or chest pain/tightness. You might also feel flushed, have a headache, or become short of breath, as you would if you were exercising. These effects usually last only a short time and our staff are fully trained to look after you if you feel these effects.

There is a small risk of bruising around the injection site.

There is a very small risk of allergy or side effects from the injection of the Magnetic Resonance contrast agent but this is extremely rare. These are usually mild and may include a metallic taste, itchy skin, pain at the injection site and feeling light headed. Headache and chest pain are rare. If you do experience any side effects please inform the Magnetic Resonance Imaging (MRI) staff immediately.

How Do I Get The Results?

Your Magnetic Resonance Imaging (MRI) scan pictures will be interpreted by a specialist and the results will be sent to the consultant who referred you for this examination.

