

Imaging department

MRI cardiac stress scan (with adenosine)

Key information you need to know

1. You must tell the department in advance if you have, or have ever had:

- A pacemaker, internal defibrillator or any other electronic heart device
- Aneurysm clips or coils put in your head
- Any brain or spinal surgery
- Any mechanical pumps or implants
- Any auditory implants e.g. cochlear implants
- Metal fragments in your eyes

Glucose monitor patches will need to be removed before the scan because they have metal in them.

We will most likely need to postpone your scan if you have any of the above and you don't tell us in advance. You can find the phone number for the department at the end of this leaflet.

Pregnancy If you are pregnant or think you might be, please contact the MRI department.

2. In the 24 hours before your appointment time it is essential that you **do not** consume any caffeinated foods, drinks, or medicines. This includes:

- All tea and coffee (including decaffeinated versions)
- Hot chocolate
- Soft drink/fizzy carbonated drinks
- Energy or sports drinks
- Chocolate
- Sweets
- Pain killers containing caffeine (please check the label)

If you need to eat any other food before your scan, please have only a small light meal. Please do not eat **anything** in the four hours before your appointment. You can eat or drink things that aren't in the list above up to four hours before your appointment. If you have a meal, please keep it small.

3. Please contact the MRI department as soon as possible if any of the following applies to you:

- You have asthma or use any type of inhaler e.g. Sulbutamol (Ventolin)
- You take Persantine/Dipyridamole

If you don't know whether you are taking any of the medications above, please contact your GP or pharmacist and ask. **Please bring a list of all your current medications with you and any inhalers that you use.**

4. Please do not:

- Smoke or vape
- Take any medication containing nitrates (commonly prescribed for patients with angina)
These include:
 - Glycerol trinitrate (GTN) spray
 - Isosorbide mononitrate e.g. Cibral, Elantan, Isotard, Chemydur, Monomil
 - Isosorbide dinitrate e.g. Isordil, Sorbitrate, Bisoprolol

If you have a GTN spray or a GTN patch, please take it if you need to, but tell us when you arrive for your scan.

Please take all other medication as usual.

If you do not follow these instructions, your appointment might be delayed or the results of your MRI scan might be inaccurate. The contact details for the department are on page 6 (the last page of this leaflet).

Please continue reading for more information about your cardiac stress scan (with adenosine).

Introduction

You've been given this information because you have an appointment for an MRI cardiac stress scan with adenosine with Imperial College Healthcare NHS Trust. It explains what an MRI cardiac stress scan is, how to prepare for your appointment and what will happen at the appointment.

You should also have an appointment letter, which gives you details about the date, time and location of your scan. If you are unable to attend this appointment, please phone the department using the phone number at the end of this leaflet so another appointment can be arranged for you. If you have any questions please contact us using the contact information at the end of this leaflet.

What is an MRI scan?

Magnetic Resonance Imaging (MRI) is a type of scan that uses a strong magnetic field to create an image of the inside of your body. The images are very detailed and are used to diagnose conditions, plan treatments, and check the progress of treatments. MRI scans are safe and do not hurt.

What is an adenosine cardiac stress scan?

A cardiac stress scan is an MRI of your heart. During the scan you'll be given an injection with a small amount of a drug called adenosine. The adenosine makes your heart behave like you're exercising temporarily. This will happen while you are laying down in the scanner. The adenosine will be given to you for around four minutes. Some images will be taken to check the blood flow to your heart.

What are the risks and benefits of having an MRI?

The benefit of an MRI is that it is a safe and relatively quick procedure, which gives your doctors detailed information about a specific part of your body. There are no known risks or side effects of MRIs.

Are there any alternatives to this test?

Your doctor has requested this test because they think it's the best way to find out more about your condition. If you're unsure why you've been recommended to have this test, please contact them.

There are other tests that can be useful, such as a stress echocardiogram (a test that uses ultrasound waves to create a picture of your heart) and a CT scan (another test that takes detailed pictures of inside your body). Doing an MRI often gives us more information, for example, it may help identify any scarring of your heart muscle.

Having an MRI cardiac stress scan (with adenosine)

At your appointment

Please arrive 30 minutes before your scheduled appointment time. If you're late, it may not be possible to perform your scan, because there will be appointments after you and we may need to see the next person.

We will ask you to fill in an MRI safety screening form with your full medical history. If you can't do this, please bring a relative or carer who can help you. If you would like a translator, please tell us beforehand and we will arrange one for you.

We will ask you to change into a hospital gown, with your underwear still on, and remove ALL jewellery, piercings, dentures, and hearing aids.

Once you are ready to go, we will measure your height and weight. We will also measure your blood pressure and heart rate. A staff member will explain the procedure to you and insert two cannulas (a thin, plastic tube), one into each of your arms. We will use this to inject the medicine and contrast dye for the scan.

During the scan

You will be asked to lie down on your back. We will try to make you as comfortable as possible, if there's anything we can do to help, like bring you a blanket or a pillow, please let us know. It's important that you stay very still for the entire duration of the scan.

The scan requires electrocardiogram (ECG) monitoring, which we will attach to your chest using small sticky patches. We will clean your chest and shave it if necessary. This is so that the electrodes can be as close to your heart as possible.

We will connect you to the injection lines via the cannula and a camera (called a coil) will be placed on top of your chest. MRI scans are very noisy so we will give you earplugs and headphones.

During the scan the machine will ask you to hold your breath for some of the pictures. You will hear the instructions 'Breath In, Breath Out, Hold Your Breath' and will last for 10 to 15 seconds. The instructions will come from the machine and the radiographer. It's very important that you consistently hold your breath at the same level when the instructions tell you to. If the images are blurry because you did not hold your breath, they will need to be taken again and the scan will take longer.

During the first 15 to 20 minutes of the procedure we will take images of your heart in its normal resting state. After these images we will inject the adenosine for around four minutes to increase your hearts workload similar to exercising.

It is normal for you to feel:

- Short of breath
- Tight chest

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- Sweaty
 - Flushed

After the adenosine injection we will give you an injection of the contrast dye to check the blood supply to your heart. The effects of the adenosine drug will wear off quickly, and then we will take some more images of your heart. Your heart rhythm and breathing will be monitored for the whole scan. The scan will take approximately 60 minutes.

If you begin to feel unwell at any point during or after the scan, please tell the staff immediately. During the scan you will be given a buzzer to alert the radiographer if you are having any problems, like feeling unwell.

After the scan

Once the scan is completed there is nothing special you need to do and you can leave the department. You can eat, drink and take your medications as normal, and you are also fine to drive.

The results will be sent to the doctor who referred you to us.

Are there any symptoms I need to watch for at home?

There are **no delayed side-effects** to the test. This means that there are no specific symptoms you need to watch out for after the MRI.

If you feel unwell later in the day please contact your GP or go to your nearest Accident & Emergency department.

How do I get to hospital?

Please visit the Trust's website for more information about travelling to our hospitals:

www.imperial.nhs.uk/our-locations

What if I am not available for my appointment?

Please contact us as soon as possible. You can find the phone numbers to ring on your appointment letter and below.

If you are unable to come for your appointment, but you do not let us know, we will discharge you back to the care of your doctor. They will then need to refer you to us again if you still wish to have the test.

Contact details

If you have any questions regarding your scan or any of the information provided in this leaflet please call:

- **Imaging Department, Hammersmith Hospital:** Du Cane Road, London W12 0HS
Telephone: **020 3313 3389**
- **Imaging Department, St Mary's Hospital:** Praed Street, London W2 1NY
Telephone: **020 3312 6418**
- **Robert Steiner MRI Unit, Hammersmith Hospital:** Du Cane Road, London W12 OHS
Telephone: **020 8383 3298**

How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3312 7777** (10.00 – 16.00, Monday to Friday). You can also email PALS at imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street
London W2 1NY

Email: ICHC-tr.Complaints@nhs.net

Telephone: **020 3312 1337 / 1349**

Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages. Please email the communications team:
imperial.communications@nhs.net

Wi-fi

Wi-fi is available at our Trust. For more information visit our website: www.imperial.nhs.uk