

Your cardiac MRI explained

This leaflet explains about your cardiac MRI examination. If you have any further questions or concerns, please speak to a doctor or nurse caring for you.

What is MRI?

MRI stands for magnetic resonance imaging. It is a method of taking pictures of your body using magnetic fields and radiofrequency pulses. The scan you have been referred for is to look at your heart. MRI scanning is widely performed, and unlike X-Ray does not use ionising radiation and therefore is not harmful.

Before your appointment

Remember to confirm your appointment.

If you have any of the following you must notify us **immediately**:

- pacemaker/reveal device
- artificial heart valve
- surgery to your brain
- any shrapnel or metal that has gone into your body.
- had a history of metal going into your eyes
- if there is any chance of you being pregnant.
- if you suffer from claustrophobia.
- if you suffer from asthma or COPD and require inhalers.
- have any kidney problems.

Please note that the scanner is a cylindrical piece of equipment and there are some restrictions on patient size, the maximum weight for the MRI scanner is 120kg (18 stone 8lbs), however there are also issues with body sizes. If you have any concerns, please contact us as we can take your measurements over the phone, this will help avoid your scan being cancelled and avoid an unnecessary journey to the hospital.

On the day of the examination

You can eat and drink, however **do not drink tea, coffee, chocolate, cola or anything containing caffeine**. Please do not smoke on the day of the scan. Please also refrain from using lotions/oil on the chest area, as this makes it difficult for the required ECG electrodes to attach.

This is to ensure that we have prepared you appropriately should we need to proceed with any further imaging on the day of your scan. If you have any questions about this please contact us for advice.

On arriving in the department, we will ask you to complete some paperwork before we start your scan, there is a patient safety questionnaire, which is to ensure that you are safe to scan. The scanner is a large magnet, so we need to know about any metal inside your

body or on your person. You should also have received an information leaflet regarding the research we conduct, and will ask you when you arrive, if you wish to participate. There is no obligation and your decision will not affect the results of your test.

A member of the clinical team will come and meet you and take you to the MRI scanner. As we are a research and clinical facility, it is quite common that there will be a number of staff present; these are all people who are involved in the process of cardiac MRI.

We may need to insert a cannula (small plastic tube) into your arm to give contrast agent (a dye), which allows us to see certain structures of your heart more clearly. This will stay in place throughout the scan and be removed at the end. Sometimes there can be problems inserting a cannula. If you have had previous problems, or would like to discuss this please contact the department. The contrast agent can cause some adverse side effects – the most common (less than one in 200 people) being headache, nausea and dizziness, while other people may have previously experienced allergic reactions to contrast agents. Please inform us if you have experienced any problems with contrast agent in the past. Due to the complexities of cardiac MRI, specialist equipment is used to ensure we can get the best images to help with your diagnosis. If you would like to speak to a specialist regarding the process, please contact the bookings department who will ask someone to speak to you.

Equipment used within the scanner

- **ECG stickers** on your chest to monitor your heart rate whilst you are in the scanner. This can sometimes be difficult if you have body lotion/oil on your chest or have a hairy chest, please refrain from using lotions/oil on the chest area. If you do have a hairy chest we will need to shave the area before the scan to ensure the stickers do stay in place.
- **An MRI Coil** is a piece of equipment placed on your chest to take the pictures, this is held in place with Velcro.
- **Breathing bellows** is a small “pad” (about the size of a glasses case) that is placed on your tummy, to monitor your breathing pattern during the scan and help obtain some of the pictures.
- **Headphones** are used to communicate with you during your scan and also help protect your ears against the noise of the scanner.
- **Blood pressure cuff** is used to monitor your blood pressure during the scan.

Your scan is constantly reviewed during the process and adapted to your clinical needs throughout; this is often done in discussion with your cardiologist.

In some cases we may also need to look at the blood flow to the heart during exercise. Usually, your doctor has discussed this with you when planning the MRI. Sometimes we find out that an exercise test should be done once we see some of the first images. We will always discuss the procedure with you before any decisions are made. If we do need to exercise the heart we will need to put a second cannula into your arm and inject a drug called adenosine. This will increase the blood flow to your heart. We have all the monitoring in place to ensure that you are safe at all times during this procedure. Sometimes patients feel some mild side effects such as shortness of breath or flushing while this drug is given but the effect wears off shortly after we stop the drip. There are doctors at the MRI scanner at all times during this injection.

The scan can take up to one and a half hours. Due to the nature of the scan, sometimes patients need a little extra time and care, so the appointments may run slightly behind. If you would like information about this, please ask one of the MRI team when you arrive in the department.

Research

We are a very active research department and are successfully contributing to the advances to the field of imaging with cardiovascular magnetic resonance. We would like to take this opportunity to invite you to contribute to research while you are undergoing your clinical scan. You can read about this in the enclosed letters. Please ask us any questions you might have. It is important for you to know that research participation is entirely voluntary and it does not affect your clinical management. You can read more about the kind of research we do on our website, by visiting www.kcl.ac.uk/lsm/research/index.aspx.

How you get your results

The images from the scan are reviewed by specialists and they will write a report. This report is sent to your referring specialist within two weeks. This report, or a summary of it, is also sent to your GP.

Illness

Please do not come to the hospital if you are suffering from flu-like symptoms, vomiting (being sick) or diarrhoea.

Useful sources of information

NHS choices website – provides patients with information on what to expect during an MRI scan. **w:** www.nhs.uk/conditions/MRI-scan/Pages/Introduction.aspx

Contact us

If you have any queries please do not hesitate to contact us on **t:** 020 7188 5441 or **e:** gst-tr.kclcardiacmri@nhs.net

The office is open Monday to Friday, 9am to 5pm.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch.

t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

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