



Great Ormond Street Hospital for Children NHS Foundation Trust: Information for Young People

Coming to GOSH for a Cardiac MRI scan

This information sheet from Great Ormond Street Hospital (GOSH) explains about cardiac MRI scans, what they involve and what to expect when you have one. Your cardiologist (specialist heart doctor) has asked us to carry out an MRI scan on your heart so we can find out about its structure and how it is working.

Although GOSH is a hospital for children and young people, the Cardiac MRI Unit specialises in imaging MRI scans of the heart in children and adults.

What is an MRI scan and why do I need a scan of my heart?

MRI is short for Magnetic Resonance Imaging. This means that rather than using x-rays, the scan uses a strong magnetic field, radio waves and a computer to take very detailed pictures of inside your body. MRI scans do not hurt and nothing will touch you during the scan, although they are very noisy.

When you have (or have had) heart problems, it can be useful for your doctor to see detailed pictures of how your heart functions and how your blood vessels are arranged. This helps them to plan any treatment you might need and/or monitor how well your treatment is working.

The MRI scanner is shaped like a short, open-ended tunnel with a bed that moves through the middle of it. You will lie down on the bed and the radiographer will move the bed inside the tunnel.

If you would like to watch a short film about having an MRI scan at GOSH, visit our website at www.gosh.nhs.uk/medical-information/procedures-and-treatments/mri-scan-without-sedation-or-general-anaesthetic/your-child-having-mri-scan-video-podcast or the GOSH YouTube™ channel.

Please bring along a DVD to play during the scan or you can borrow one of ours. Unfortunately we cannot play music during the scan.

Is cardiac MRI safe for everyone?

No. If you have a cardiac pacemaker or other metal devices in your chest or body, aneurysm clips in your head, dental braces within the last six weeks, or history of metal fragments in the eyes then the magnetic field of the MRI scanner may not be safe for you. You must know your full medical history including any operations so you can sign a metal check form, from birth to present day. Please call the department immediately when you get the appointment letter if you have any questions about safety.



Important

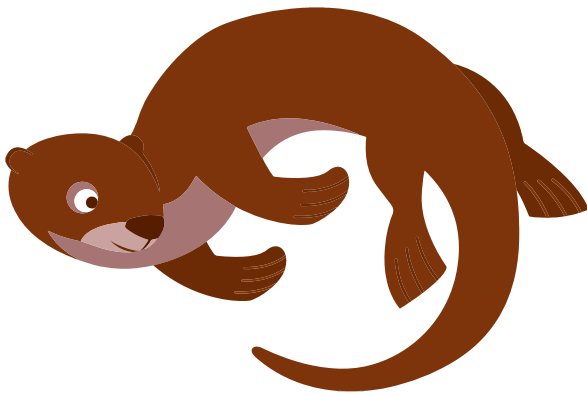
If you are under 16 years old, you need to come to the appointment with a parent or an adult who knows your medical history. They will need to tell us your full medical history from birth to the present day including any operations you have had. We will then ask them to sign a metal check form stating that it is safe for you to enter the MRI scanner.

If you are 16 years old or more, we will ask you to tell us your full medical history and then sign the metal check form.

If you (or your parent) do not know your full medical history, we may have to cancel the scan.

Where is the Cardiac MRI department at GOSH?

It is on level 1 (basement) of the Variety Club Building within the Otter Imaging Suite. Details of how to get to GOSH are enclosed with your appointment letter and also available on our website at www.gosh.nhs.uk/parents-and-visitors/travelling-gosh. When you arrive at GOSH, ask one of our volunteer guides to show you to the lift or stairs down to Otter.



What should I wear for the scan?

As the MRI scanner uses strong magnets, you should wear clothing without any metal zips or fasteners – such as tracksuit bottoms and a t-shirt – or we can also give you hospital clothes to wear.

What should I bring with me?

You should bring your appointment letter with you as well as any other information that will help us.

Can I bring someone with me?

You can bring a friend, carer or advocate with you. They can also come into the scanning room with you if you like – they will have to answer the metal check questions too and confirm that they are not pregnant. We will give them a set of headphones to wear as well.

Am I allowed to eat and drink before the scan?

Yes. You will be awake when you have the MRI scan so you do not need to stop eating and drinking beforehand. However, as you will be lying down, we suggest you avoid having a heavy meal or large amount of fluid before the scan as this could be uncomfortable.

On the day of the scan

When you arrive at the Otter Imaging Suite, you should tell the receptionist that you have arrived and sit down in the waiting area. A cardiac radiographer (an imaging technologist who specialises in taking MRI pictures of the heart) will ask you lots of questions for the 'metal check' to make sure that it is safe for you to have the scan. We will also ask you to take off anything metal, such as keys, coins, travel cards and so on and put them in one of the lockers.

We ask **all** females over 12 years about their periods and if there is any chance they could be pregnant and we can carry out a pregnancy test before the scan.

Your height and weight will be measured and your blood pressure will be taken.

The radiographers will take you into the scanning room and help you onto the scanner bed. They will put some electrocardiogram (ECG) leads on your chest and lay a light, rectangular coil device over these leads – this will not hurt. We will also put a blood pressure cuff around your arm so we can measure this during the scan.

Just before the scan starts, we will give you some headphones to wear so the knocking sound from the MRI scanner is not too loud. When you are comfortably in position on the bed, the radiographer will go into the room next door to operate the scanner.

Contrast

Most people will need contrast for the scan – this is given as **an injection**. We will decide on the day whether you will need it and if you do, we will put a cannula (thin, plastic tube) into a vein in your arm or hand – we can use local anaesthetic cream or cold spray so your skin is numb. **If you need local anaesthetic cream, please tell the receptionist when you arrive so the cream can be applied 30 minutes before the scan.**

The contrast we use is called gadoteric acid (Dotarem®). Dotarem is an extremely safe contrast but with all drugs there are potential side effects although these are extremely rare. We will be happy to discuss any questions you may have on the day.

What happens during the scan?

The radiographer will talk to you over the intercom and watch you through the window. They will move the bed inside the scanner and the scan will start. You will need to lie very still and try to relax during the scan – if you move, the images will not be clear and the scan will take longer. There will be parts of the scan where the radiographer will ask you to hold your breath for a few seconds as well but this will not be for long. You will usually spend between 45 minutes and one hour in the scanner – we will tell you when the scan is nearly over.

What happens afterwards?

The radiographer will tell you when the scan has finished and come back into the scanning room to take off the coil device, ECG leads and blood pressure cuff. We will also remove the cannula and put a small plaster on the area. They will help you off the scanner bed and take you back to the lockers so you can get dressed again (if you wore hospital clothes for the scan) and pick up your belongings. If you are not having any other scans or appointments, you can go home when you are ready.

When do I get the results?

The Cardiac MRI consultant will look at all the scan results and write a report for your cardiologist. You will receive the results at your next clinic appointment.

If you have any questions, please call the Cardiac Booking Office on 020 7405 9200 ext. 5178