



Great Ormond Street Hospital for Children NHS Foundation Trust: Information for Families

Cardiac MRI scan for older children, without sedation or anaesthetic

Your child's cardiologist has requested a magnetic resonance imaging (MRI) scan to find out more about the structure and function of your child's heart and blood vessels. This information sheet explains the scan and what you can expect when you come to Great Ormond Street Hospital (GOSH) to have one.

Although Great Ormond Street Hospital is a hospital for children, the Cardiac MRI department specialises in cardiac imaging for both children and adults.

What is a cardiac MRI?

Magnetic resonance imaging (MRI) is a way to take pictures of the body using a large magnet, radio waves and a computer. The machine takes pictures without touching the body. It does not hurt and does not use X-rays or any radiation.

The MRI machine is shaped like a short, open-ended tunnel and sits in a large room. Your child will need to lie down on a flat scanning bed that slides into the tunnel.

Is cardiac MRI safe for everyone?

If your child has a cardiac pacemaker or other metal devices in their chest, aneurysm clips in their head, or they may be pregnant, then the magnetic field of the MRI scanner may not be safe for them. Please contact our Cardiac Booking Office on the numbers below if you have any questions about safety.

Can I go into the scanning room with my child?

If you or your partner is safe to go into a strong magnetic field and have been through our metal object safety checklist, then you can stay inside the scanning room with your child. You will need to wear earphones for protection during the scan, but can sit near your child's head or feet to keep them company while the scanning takes place.

Where is the Cardiac MRI Unit at GOSH?

Details of travelling to GOSH are available on our website at www.gosh.nhs.uk/parents-and-visitors/coming-to-hospital/directions-map-and-parking.

The MRI scanner is on Level 1 (basement) of the Variety Club Building.

When you arrive at the hospital, please first come to the GOSH main reception desk. From there, you will be directed towards the lift or stairs down to Level 1, then follow the signs to the MRI Unit reception desk.



What time should we arrive?

Please arrive on time for your child's appointment, as stated on your appointment letter so that we can register your child, answer any questions you have and check that they are fit and well for the scan. We also need to check that your child (and you) is safe to go into the magnetic environment of the MRI scanner.

If you arrive late, we may have to cancel the investigation.

What should my child wear?

Your child should wear comfortable clothing without metal zips or fasteners, such as a tracksuit and t-shirt. He or she can wear their own clothes for the scan if they do not have any metal zips, clips or fasteners. We also have a changing room and scrubs to change into if preferable.

If you are accompanying your child into the scanning room, you will need to remove all metal objects from your own pockets, or clothing such as watch and glasses, but the metal attached to your clothing is safe to wear.

May my child eat and drink before the scan?

Your child may eat and drink, as long as this will not make them feel uncomfortable when lying flat.

Please note: if your child is having other tests on the same day, these may require a fasting period where they cannot eat and drink. Young children having an MRI with general anaesthetic also have to fast before the scan.

What will happen first?

We will greet you at our reception desk, check our metal object safety checklist with you and your child, and guide your child to change into a gown if necessary. We have safe place in which you can leave your child's clothing (if necessary). You will also have to remove any

keys, coins, watches, rail tickets, wallets, credit cards, hair clips and any other metal objects from your child's clothing, and your clothing if you are coming into the scanner room.

Before the scan, we will need to check your child's weight and height. Most patients will need to have an intravenous (IV) contrast dye called gadolinium for some of the pictures during the scan. This dye flows through the blood vessels, making them show up on the scan more clearly. We will insert a cannula (thin plastic tube) into a vein (usually in your child's arm) before the scan takes place. The cannula will be removed again after the scan, before you go home.

If your child is scared of needles, we can put some local anaesthetic cream on the arm before inserting the cannula, to make this more comfortable. If your child requires anaesthetic cream, please arrive at least 30 minutes before the stated appointment time, so that the cream has time to work on the skin.

What happens during the scan?

We will help your child into the scanning room and onto the bed, making him or her as comfortable as possible. ECG leads will be placed on the skin of your child's chest and we will lay a light, rectangular plastic device containing coils on their chest on top of these leads. We will give your child earphones to wear, as the scanner makes a loud knocking noise during the scan. Your child can watch a DVD during the scan. You can bring your own DVD, or we have a selection of DVDs from which you can choose.

A radiographer will operate the MRI machine from the room beside the scanning room, but he or she will talk and listen to your child through an intercom, and will see him or her through a large glass window. While the scan is happening, your child will need to relax and lie as still as possible. We will give them instructions about holding their breath for some of the pictures.



How long will the scan take?

The scanning time is usually between 45 minutes and one hour. Please expect to be in the Cardiac MRI department for up to two hours.

What happens afterwards?

When the MRI scan is finished, your child will be able to get dressed and leave. Many families will need to return to other parts of the Cardiac Unit for other tests. The cardiac MRI specialist will review the images and will send the report with results to your child's cardiologist. Your cardiologist will contact you about the results and any further appointments needed.

What happens if my child is unwell before or at the time of the appointment?

If your child is unwell, or there is another reason that you cannot keep the appointment, please inform the Cardiac Booking Office as soon as possible. We may be able to offer the appointment to someone else and will re-book a more suitable appointment for you.

If you have any questions, please contact the Cardiac Booking Office on 020 7405 9200, extension 5178

Compiled by the Cardiac MRI team in collaboration with the Child and Family Information Group
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