

Your child's cardiac MRI scan

This information explains your child's cardiac MRI scan, and what you can expect when you come to hospital. If you have any questions or concerns, please speak to a doctor or nurse caring for your child.



What is an MRI scan?

MRI stands for magnetic resonance imaging. An MRI scan uses a combination of a strong magnet and radio waves to produce detailed pictures of the inside of the body.

Benefits of a cardiac MRI scan

An MRI scan provides detailed pictures of your child's heart and how it is working. Unlike X-rays and CT scans, MRI scans do not use radiation.

Risks of a cardiac MRI scan

MRI is a very safe scan for most people. However children with certain heart pacemakers and other surgical implants might not be able to have an MRI scan.

Many children with a heart condition have had procedures where metal is used, such as a clip, stent (a small tube inserted into blood vessels and other tubes in the body to keep them open), valve or device. Most of these can be safely scanned. However, this will need to be confirmed before your child has the scan.

You will need to complete and sign a safety questionnaire for your child before their scan. This is to make sure it is safe for them to be scanned.

Your child might need to have an injection of contrast agent (dye) for their scan, which can very rarely cause an allergic reaction. Read more about contrast injections on page 2.

Other options (alternatives)

If your child cannot have an MRI scan, the cardiologist (specialist heart doctor) might suggest a different type of imaging. This could be a CT scan, an ultrasound scan or a cardiac catheter test. The doctor will explain these options to you in detail.

Preparing your child for their scan

Your child can eat and drink as normal. If your child is taking any medicines, please continue with this. If your child needs to do anything to prepare for the scan, we will send you information about this with your appointment letter.

Talking to your child

Preparing your child for the visit to hospital and the MRI scan will help them to understand what is happening. From a young age, children are keen to talk to help them learn and understand. Talking to your child in advance will give them time to ask any questions or raise any concerns.

Contrast injection

Cardiac MRI scans often need an injection of contrast dye. This shows up on the scan and gives us more detailed pictures of the heart and major blood vessels. The injection will be given by inserting a small plastic tube (cannula), using a needle into a vein in your child's arm.

If your child has any problems with their liver or kidneys, please tell the radiographer or another member of staff before the scan. Your child might need more tests before they can have the contrast dye.

This injection is very safe. It can very rarely cause an allergic reaction. The most common allergic reactions can present as headaches, feeling sick (nausea) and being sick (vomiting), sneezing, wheezing, runny nose, eye irritation, itching, hives, skin rash, swelling of the face, mouth, hands, feet or throat, difficulty breathing and low blood pressure.

If you would like more information about the contrast injection, speak to the cardiologist or radiographer before the scan.

Before the scan

You will be given the opportunity to ask the cardiologist and radiographer any questions you have. Your child will need to change into a hospital gown. This is because metal fastenings, such as zips or hooks and eyes, can spoil the scan pictures.

Can you be in the scan room with your child?

Yes, one parent or guardian can be in the scan room. You will be asked to complete and sign a safety questionnaire for yourself to make sure it is safe.

If you are going into the MRI room, you will need to take off your watch and take any credit cards or travel cards with magnetic strips out of your pockets. The scanner can affect these and stop them from working. There are lockers for your belongings.

Although this is a children's hospital, we do not have facility to look after other children in your care. If you are responsible for other children, please arrange supervision for them so that you do not need to bring them with you and can be with your child during the scan.

During the scan

Most cardiac MRI scans take between 45 and 60 minutes.

In the scanner your child will be asked to lie on the scanner bed. They will be made as comfortable as possible, as they will need to keep very still during the scan. It is important that they do not move, or the pictures could be blurred and the scan will have to be repeated.

Electrocardiogram (ECG) stickers and leads will be placed on your child's chest to monitor their heart rate. This is needed so that the scanner can take the pictures at the correct time.

Once your child is positioned correctly, we will move them into the scanner. The part of your child's body being scanned must be in the centre of the machine. The scanner is a short, open-ended tunnel.

The radiographer will talk to your child during the scan to let them know what is happening. For some scans, your child will be asked to hold their breath.

Your child will be given a buzzer to press if they need to attract our attention during the scan.

When the scanner is taking the pictures it makes a loud banging noise. We will give you and your child earplugs and headphones to wear. Your child can listen to music while they are being scanned, or watch a DVD. **Please bring in a DVD of your choice.** You can also bring a soft toy to go into the scanner with your child, as long as there is no metal on it.

Will your child feel anything?

The scan should be completely painless. The most difficult part is keeping still. Please make sure your child is as comfortable and as relaxed as possible before we start.

After the scan

As soon as the scan is finished you can go home, or back to the ward if your child is staying in the hospital. Your child can eat and drink as normal, and do their usual activities. The pictures taken during the scan are carefully studied by the cardiologist, who will produce a report.

Important. If your child had a contrast dye injection, very rarely an allergic reaction can occur up to 2 days after the scan. If this happens, please contact the MRI department where your child had the scan for advice, please refer to your child's clinic appointment letter for the contact details. If it is out of hours, contact your nearest emergency department (A&E).

Scan results

It takes some time for the doctor to examine the scan. Detailed results will be sent to the cardiologist who referred your child for the scan. Your cardiologist will then contact you to let you know the results and any action that might need to be taken.

Useful sources of information

Evelina London's Children Hospital has information about having an MRI scan in the MRI unit, [web](http://www.evelinalondon.nhs.uk/our-services/hospital/mri) www.evelinalondon.nhs.uk/our-services/hospital/mri

There is also information about children's cardiology services in the MRI unit. [web](http://www.evelinalondon.nhs.uk/our-services/hospital/heart-services) www.evelinalondon.nhs.uk/our-services/hospital/heart-services

Contact us

If you have any questions about your child's cardiac MRI appointment, contact the paediatric cardiology admissions department, **phone** 020 718 81142 and select option 2 (Monday to Friday, 9am to 5pm).

If you have any questions about the scan results, or need to contact your child's cardiologist, **phone** 020 7188 8552 (Monday to Friday, 9am to 5pm).

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

Evelina London Medicines Helpline

If you have any questions or concerns about your child's medicines, please speak to the staff caring for them or contact our helpline.

phone 020 7188 3003 Monday to Friday, 10am to 5pm **email:** letstalkmedicines@gstt.nhs.uk

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.

phone 020 7188 8801 (PALS) **email** pals@gstt.nhs.uk

phone 020 7188 3514 (complaints) **email** complaints2@gstt.nhs.uk

Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch, **phone** 020 7188 8815 **email** languagesupport@gstt.nhs.uk

NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day, **phone** 111

NHS website

Online information and guidance on all aspects of health and healthcare, to help you take control of your health and wellbeing, **web** www.nhs.uk

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