

Your child's cardiac MRI scan

This leaflet aims to answer your questions about your child's cardiac MRI scan. It explains the benefits, risks and alternatives, as well as what you can expect when you come to hospital. If you have any questions or concerns, please do not hesitate to 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.

What are the benefits of an MRI scan?

An MRI scan provides detailed pictures of the anatomy and function of your child's heart. Unlike X-rays and CT (computerised tomography) scans, MRI scans do not use radiation.

Are there any risks?

MRI is a very safe procedure for most patients, however patients with certain heart pacemakers and other surgical implants, such as a cochlear implant (a device surgically inserted into the ear to aid hearing), cannot be scanned.

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

Many children with a heart condition have had procedures where metal is used, such as a clip, stent (tiny 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.

Your child may need to have an injection of contrast agent (dye) for their scan which can very rarely cause an allergic reaction. Please see the dedicated section later in this leaflet for more information.

Are there any alternatives?

If your child cannot have a scan, for example if they have a cochlear implant, the cardiologist (a specialist heart doctor) may suggest an alternative 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.

How can I prepare my child for the scan?

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

Talk 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. Please see our website; the address can be found at the end of this leaflet.

Will my child need an injection?

Cardiac MRI scans often require 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 cannula (small plastic tube), using a needle, into a vein in your child's arm.

This injection is very safe. It can very rarely cause an allergic reaction. The most common allergic reactions can present as headaches, nausea and 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 your child has any problems with their liver and/or kidneys, please raise this in advance with the radiographer (a specially trained member of the radiology team who performs the MRI scan) as extra tests may be required before administering any contrast dye.

What does my child need to wear?

Your child will need to change into a hospital gown. This is because metal fastenings, such as zips or hooks and eyes, may spoil the pictures.

What happens before the scan?

You will be given the opportunity to ask the cardiologist and radiographer any questions you have.

Can you be in the scan room with your child?

Yes, one parent or guardian is allowed into the scan room, although you will also be asked to complete and sign a safety questionnaire for yourself in order 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 provided 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.

What happens during the scan?

In the scanner your child will be asked to lie on the scanner bed. Your child 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 that we are scanning 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 headphones to wear to reduce the noise. Your child can listen to music while they are being scanned and they can watch a DVD – so **please bring in a CD or a DVD of your choice**. You can also bring a favourite soft toy, and as long as there is no metal on it, it can go into the scanner with your child.

How long will the scan take?

This depends on how many pictures the cardiologist requires for your child. Most cardiac MRI scans take between 45 and 60 minutes.

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.

What happens afterwards?

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 resume their usual activities.

The pictures taken during the scan are carefully studied by the cardiologist who will produce a detailed report.

Important: If your child has had the injection of contrast dye, very rarely an allergic reaction can occur up to two 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. Alternatively, if it is out of hours, contact your local emergency department (A&E) department.

When will I get the results?

You will be given some feedback immediately after the scan, however it takes some time for the doctor to examine the scan in full. 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 of the results and any action that may need to be taken.

Useful sources of information

Evelina London's MRI webpage – provides information about having an awake MRI scan at the Evelina Children's Hospital MRI unit.

w: www.evelinalondon.nhs.uk/mri

Evelina London's cardiology service website – provides information about children's cardiology services at the Evelina Children's Hospital MRI unit.

w: www.evelinalondon.nhs.uk/heartservices

Contact us

If you have any questions about your child's cardiac MRI appointment please phone

t: 020 718 81142 (Monday to Friday, 9am–5pm).

If you have any questions about the results of the scan, or you need to contact your child's cardiologist please phone the consultants' secretaries on **t:** 020 7188 8552 (Monday to Friday, 9am–5pm).

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit **w:** 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.

t: 020 7188 3003, Monday to Friday, 10am-5pm

e: 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.

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

t: 020 7188 3514 (complaints) **e:** 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. **t:** 020 7188 8815 **e:** 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. **t:** 111

NHS website

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

Was this leaflet useful?

We want to make sure the information you receive is helpful to you. If you have any comments about this leaflet, we would be happy to hear from you. Fill in our simple online form, **w:** www.guysandstthomas.nhs.uk/leaflets, or **e:** patientinformationteam@gstt.nhs.uk

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A list of sources is available on request