

Your child's cardiac MRI under general anaesthetic

This leaflet aims to answer your questions about your child's cardiac MRI scan under general anaesthetic. It explains the benefits, risks and alternatives of the procedure as well as what you can expect when you come to hospital. If you have any further questions or concerns, please speak to a doctor or nurse caring for your child.

More information about general anaesthesia is available in our leaflet, Your child's general anaesthetic. Please ask your doctor or nurse for a copy, or visit our website:

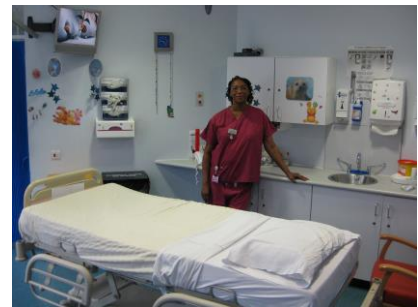
<https://www.evelinalondon.nhs.uk/resources/patient-information/your-childs-anaesthetic.pdf>



MRI anaesthetic area



MRI scanner



MRI recovery area

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 a cardiac MRI scan?

A cardiac MRI scan provides detailed pictures of the structure 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 children. However, if your child has a heart pacemaker or other surgical implant, such as a cochlear implant, he/she cannot be scanned.

You will be asked to complete and sign a safety questionnaire for your child before their scan to make sure it is safe for them to have an MRI.

Many children with a heart condition have had procedures where metal is used, such as a clip, stent, valve or some other heart device. Most of these can be safely scanned but this will be confirmed before your child has the MRI.

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.

There are also risks associated with having a general anaesthetic. Please see our leaflet, Your child's general anaesthetic, for more information. Your child's doctor will talk to you in detail about any risks specific to your child.

Are there any alternatives?

If your child cannot have a scan, for example because they have a cochlear implant, the cardiologist (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?

Please follow the preparation details outlined in our leaflet, Your child's general anaesthetic.

Talk to your child

From a young age, children are keen to talk about what they know about hospitals. Talking to your child before they come for their scan will help them to understand what will happen and give them time to ask any questions.

Pre-admission procedure

You and your child will need to attend a pre-admission appointment before the anaesthetic and scan. This is to make sure that your child is well enough for the anaesthetic.

During this appointment, your child is likely to have an echocardiogram (ultrasound of the heart) and an ECG or electrocardiogram (a recording of the rhythm of the heart). Some children may also need a blood test, especially if they have low oxygen levels or are taking certain heart medicines.

If your child is a baby with a very complicated heart problem, it may be necessary for them to stay in hospital the night before and/or after the scan. You should be advised of this in advance, however sometimes the need for this only becomes clear during the pre-admission appointment.

Your appointment letter will include details of the date and time of the scan, and where to go. If the scan is early in the morning, we can arrange an overnight stay for your child and one parent in the patient hotel. Please contact us if you require this.

What happens before the scan?

Before your child is given the anaesthetic, the radiographer (a specially trained member of the radiology team who performs the MRI scan) will go through your child's safety questionnaire with you. You will be given the opportunity to ask the radiographer any questions you have.

Your child will be given the anaesthetic in the anaesthetic room, which is next to the MRI scanner. Once asleep, your child will be taken into the scanner.

What happens during the scan?

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 tunnel which makes a loud banging noise when it is working. We will give your child headphones to wear to protect their ears while they are asleep.

Will my child need an injection?

Most cardiac MRI scans 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 through the cannula (small plastic tube) that had already been placed in a vein in your child's arm for the general anaesthetic.

This injection is usually very safe, but it can very rarely cause an allergic reaction. The most common symptoms of allergic reactions are headaches, nausea and vomiting, sneezing, wheezing, runny nose, eye irritation, itching, hives, skin rash, swelling of the face, mouth, hands, feet or throat, difficulty in breathing and low blood pressure. Before the scan we will check if your child has had any previous allergic reactions.

Please note that if your child has an allergic reaction, it can be easily treated.

If you would like more information about the injection, please ask the radiographer before the scan.

If your child has any problems with their liver or kidneys, please tell the medical team on your child's admission, as extra tests may be needed before the contrast injection.

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.

Can other tests be done at the same time?

Yes, your cardiologist may request that other tests are performed during the same anaesthetic as the MRI. If this is the case, they will advise you about these tests in advance. Although this means that the whole procedure will take longer, it is better than your child having another anaesthetic.

How long will the scan take?

This depends on how many pictures the cardiologist requires for your child and if any other tests are going to be performed. The whole procedure from going to sleep to waking up usually takes around two to three hours.

Will my child feel anything?

The scan should be completely painless.

How will my child be after the scan?

As soon as the scan is finished, your child will be taken to the recovery room. Here, specially trained recovery nurses will closely monitor your child. You will be taken to the recovery room as soon as your child starts to wake up.

Most children recover quickly from the anaesthetic and are well enough to go home later that same day. However, if your child has a very complicated heart problem and/or low oxygen levels, it is safer to monitor them overnight in hospital following the scan.

If you have a long journey home, for example to Scotland, Wales or the North of England, it may be better not to travel back on the same day as the scan. We can arrange another night's stay in our patient hotel, so please contact us if you require this.

Important

If your child had the injection of contrast dye, an allergic reaction can very rarely occur up to two days after the scan. If this happens, please contact the MRI department where your child had the scan for advice. Alternatively, if it is out of hours, go to your local Emergency Department (A&E).

When will I get the results?

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

The results will then be sent to the cardiologist who referred your child for the scan. He/she will let you know what they are, either by letter or at your child's next clinic appointment.

Contact us

If you have any questions or concerns about your child's cardiac MRI scan under general anaesthetic, please contact the doctor who referred your child for the scan.

If you have any questions about your child's appointment and admission for the scan, please phone the paediatric cardiac secretary, **t: 020 7188 4563** (Monday to Friday, 9am to 5pm). Outside these hours, please leave a message on the answerphone.

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

Useful sources of information

Evelina London Children's Hospital MRI Unit

Provides information about having an MRI scan at the Evelina London Children's Hospital MRI Unit.

w: www.guysandstthomas.nhs.uk/our-services/childrens/services/childrens-mri/overview.aspx

Evelina London Children's Hospital cardiology service

Provides information about children's cardiology services at the Evelina London Children's Hospital.

w: www.guysandstthomas.nhs.uk/our-services/childrens/services/childrens-heart/overview.aspx

Kids First For Health

An award-winning health and hospital information website for children, teenagers and parents run by Great Ormond Street Hospital.

w: <http://www.gosh.nhs.uk/children/about-your-condition/tests-and-treatments/>

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 10am to 5pm, Monday to Friday **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 Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

Get involved and have your say: become a member of the Trust

Members of Guy's and St Thomas' NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, please get in touch.

t: 0800 731 0319 **e:** members@gstt.nhs.uk **w:** www.guysandstthomas.nhs.uk/membership

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