

Radiology

MRI - Paediatric sedation

Introduction

Your doctor has advised that you have an MRI scan. MRI is a test which uses a powerful magnet and a computer to produce detailed images of any part of the body. It does not use X-rays. An MRI scan is performed by a radiographer.

This leaflet will explain what to expect in your MRI appointment and how you should prepare.

Please use the contact information on your appointment letter if you have any questions or concerns. If you feel unhappy with your care, please ask to speak to the superintendent radiographer.

Please read this leaflet carefully. It will help you prepare correctly for your MRI appointment

Points to remember

- Please bring any sprays or inhalers that your child may be taking with you to the appointment.
- If your child is on medication from a doctor, please continue to administer it as normal.
- We also ask you to leave any valuable possessions at home.
- Please arrive at the hospital **2 hours before** your child's appointment time.
- **Please go directly to the children's ward (Ward 15/16)** which is



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situated on the first floor.

- We may not be able to scan your child if you arrive late. We will rearrange your appointment for another time if this happens.
- **Please do not let your child eat or drink anything for at least 4½ hours before the examination.**
- If we are unable to find out the MRI compatibility of any device which is within or attached to your child's body we will not perform the scan. A new appointment will be made once the correct information is made available to the department.

Preparation

- It is recommended that your child attends for their examination in clothing that contains no metal fastenings, zips or decoration. If this is not possible, a hospital gown will be provided.
- Complete the safety questionnaire for your child that has been sent to you. Bring it with you to the appointment.

MRI risks

No short-term harmful effects from MRI scans are known. The use of magnetic fields is not thought to be harmful, although long term side effects are unknown.

What is gadolinium contrast (dye)?

- Gadolinium contrast media (sometimes called MRI contrast Media or 'dye') are chemical substances used in magnetic resonance imaging (MRI) scans. When injected into the body, gadolinium contrast medium enhances and improves the quality of the MRI images (or pictures).
- The contrast medium is injected intravenously (into a vein) as part of an MRI scan and eliminated from the body through the kidneys.

Why do I need to have gadolinium contrast medium?

Gadolinium contrast is sometimes called "MRI contrast media" or "dye." When injected into the body, gadolinium contrast helps improve the quality of the MRI scan pictures. This helps a specialist doctor when they assess the pictures and provide a report to your doctor or specialist.

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Gadolinium contrast is injected into a vein (intravenously) before your MRI scan and eliminated from the body through the kidneys.

Side effects from the gadolinium contrast medium

Gadolinium contrast is very safe. Side effects or reactions are uncommon but can happen. The most common side effects are headache, nausea and dizziness. These occur in a small minority of patients only, but if they do, they will be noticed within minutes of the injection.

An itchy skin rash might appear a few minutes after a gadolinium contrast injection in approximately 1 in 1000 patients. The rash will usually resolve by itself.

Severe allergic (anaphylactic) reactions to gadolinium contrast are extremely rare. These severe reactions can involve difficulty breathing and swelling of the lips and mouth. They occur in around 1 in every 10,000 patients who have gadolinium contrast injection.

If you have had a history of a previous allergic reaction to a gadolinium contrast injection, or a severe allergic reaction to another material, please tell your doctor and the radiology team.

If you experience any symptoms of allergic reaction during your appointment, you will be checked by a doctor before being sent home.

Nephrogenic systemic fibrosis (NSF) is a rare condition associated with gadolinium contrast when given to patients with severe kidney (renal) disease. Its onset can occur days, weeks or months after receiving gadolinium contrast. Most cases occur within 6 months of the last dose. This has become extremely uncommon as we check patient's kidney function routinely before any scan. Since radiology facilities began routinely screening patients for kidney disease, and withholding gadolinium from those with severe renal disease, NSF has become extremely uncommon.

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If you do have a history of kidney disease, please be sure to tell the staff at the MRI practice, so that they can check whether the disease is severe enough to mean that you should not receive gadolinium. This might involve a simple blood test of kidney function (eGFR).

A very small amount of gadolinium contrast stays in your body. About 1% of the injected dose which stays in the tissues, mostly in the bones with very small amounts in the brain. This seems to be more likely with certain forms of gadolinium contrast that have a higher risk for NSF. There are no known adverse effects from these very small amounts of retained gadolinium. This finding has made radiologists more careful and selective in recommending gadolinium contrast, only when it is likely to assist the diagnosis.

Safety

It may not be possible for some patients to have this examination due to the strong magnetic field produced by the MRI scanner. Patients who have a pacemaker, ear implants, surgical clips or any implants within their head or body should contact the MRI department using the phone number on your appointment letter.

If you have had an accident involving metal fragments penetrating your eyes, you should contact the MRI department using the phone number on your appointment letter. You will need to have an X-ray of your head to confirm there are no metal fragments remaining. This must be arranged before your MRI scan.

Pregnancy in a person accompanying their child: Although the risk to an unborn child is minimal, you will be asked to confirm that you are not pregnant before the examination can proceed. If you are pregnant, you will not be able to accompany your child in the room where the scan takes place.

What will happen when you arrive?

- On arrival at the hospital please report directly to the children's ward (ward15/16) with your child.

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- The nurses will arrange for your child to be examined by one of their doctors before giving them some oral sedation.
- Please make sure that your child has no metal on their clothing prior to them falling asleep.
- Once the sedation has been given, you and your child will be escorted to the MRI department for the scan.
- We will check your safety questionnaire with you.

During your MRI examination

- The radiographer will help your child onto the MRI scanner table. This table moves into the open-ended MRI scanner. The radiographer operating the scanner can see your child during the scan. It is important for the child to remain very still to help us get good quality pictures. The scan may take 20 minutes to 1 hour depending on the part of the body being examined.
- If one of the parents wishes to do so they may stay in the scanning room with the child whilst the scan is being done. In this instance the parent will have to sign a safety questionnaire and also make sure that they are appropriately dressed to enter the scan room safely.
- During the scanning, there will be rhythmic tapping sounds which may become quite loud; this is normal. You and your child will be given headphones or earplugs to protect their ears from the noise.

After your examination

- Once the examination is complete, you and your child will be taken back to the children's ward where your child will be observed until it is deemed safe for them to go home.
- If you have any problems after the examination please contact your GP.

How do I get the results?

The results will not be given to you immediately. They will be sent to the doctor who referred you to us for this examination once a formal report has been generated.

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More Information

If you have any questions or require more information, please contact the MRI department using the contact details on your appointment letter.

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact the telephone number on your appointment letter and we will do our best to meet your needs.

The Trust operates a smoke free policy.

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Document History

Department:	Radiology
Contact:	27122
Updated:	May 2024
Review:	May 2026
Version:	11
Reference:	HIC/LFT/201/06