

Radiology Department

MRI: Paediatric Sedation

Introduction

You have been advised by your doctor that your child needs to have a MRI scan. This leaflet will explain what the examination involves. It may not answer all your questions, so if you have any queries or concerns, please call the telephone number on your appointment letter. If you feel unhappy with any part of your care please ask to speak to the Superintendent Radiographer.

Please read this leaflet carefully to make sure you successfully prepare for the examination.

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 **two hours before** your appointment time.
- **Please go directly to the children's ward (Ward 15/16)** which is situated on the first floor.
- If you are late for appointment there is a possibility that we may not be able to scan you, in these incidences you will be offered an appointment at another time.
- **Please do not let your child eat or drink anything for at least 4½ hours before the examination.**
- If we are unable to ascertain the MRI compatibility of any device which is within or attached to the child's body we will not perform the scan. A new



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appointment will be made once the correct information is made available to the department.

What is a MRI?

MRI is a test which uses a powerful magnet and a computer to produce detailed images of any part of the body. The MRI scanner does not use X-rays. This part of the examination will be performed by a radiographer

Preparation

- It is recommended that your child attend for their examination in clothing that contains no metal fastenings, zips or decoration. If this is not possible, a hospital gown will be provided.
- Please complete the enclosed safety questionnaire for your child and bring it with you to your appointment.

Risks of MRI

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

Risks of Contrast

What is gadolinium contrast medium?

- 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 medium is used to improve the clarity of the images or pictures of your body's internal structures. This improves the diagnostic accuracy of the MRI scan. For example, it improves the visibility of inflammation, tumours, blood vessels and, for some organs, blood supply.

If I have side effects from the gadolinium contrast medium injection, when will they occur? What can be done to treat or prevent these side effects?

- Gadolinium contrast medium is generally very safe. Side effects or reactions are uncommon, but can happen. The most common side effects of headache, feeling sick (nausea) and dizziness occur in a small minority of patients only, but if they do occur they will be noticed within minutes of the injection.
- Less often, in around 1 in 1000 patients, an itchy skin rash might appear a few minutes after the injection. The rash will usually settle down by itself.
- Severe allergic (anaphylactic) reactions to gadolinium contrast medium have occurred, but are extremely rare. These severe reactions, which might involve difficulty breathing and swelling of the lips and mouth, occur in around 1 in every 10,000 people who have gadolinium.
- If you have had a history of a previous allergic reaction to a gadolinium contrast injection, or a severe allergic reaction to some other material, please tell your referring doctor and/or the radiology facility where you are having the MRI, as this will affect whether a further gadolinium injection is recommended.
- If you experience any symptoms of allergic reaction during your appointment time you will be examined by a medical doctor before being sent home.
- Nephrogenic systemic fibrosis (NSF) is a rare condition associated with gadolinium contrast medium given to patients with severe renal (kidney) disease. Its onset occurs days, weeks or months after receiving gadolinium, with almost all cases occurring within 6 months of the last dose. Since radiology facilities began routinely screening patients for kidney disease, and withholding gadolinium from those with severe renal disease, NSF has become extremely uncommon. 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.
- Recently, it has been recognised that very small amounts of at least some forms of gadolinium contrast (about 1% of the injected dose) are retained in the tissues, mostly in the bones, with tiny amounts in

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the brain. This seems to be more likely with the same forms of gadolinium contrast that have a higher risk for NSF. At this stage, there are no known adverse effects from these very small amounts of retained gadolinium. This finding has made radiologists more careful to recommend gadolinium contrast only where it is likely to help the diagnosis.

Safety

Pregnancy in a person accompanying their child: Although the risk for the 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.

It may not be possible for certain 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 telephone number on your appointment letter to check whether or not their scan can be performed.
- Patients who have had an accident involving metal fragments penetrating your eyes should contact the MRI department using the telephone number on your appointment letter. You will need to have a plain X-ray of your head to confirm there are no metal fragments remaining in your eyes. This must be arranged before your MRI scan can be safely performed.

What will happen when I arrive?

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

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- A Radiographer or Radiology Department Assistant will go through the safety checklist with you.

During your MRI examination

- The radiographer will help your child onto the MRI scanner table which will move into the open ended MRI scanner. The radiographer operating the scanner can see your child throughout the scan. It is important for the child to remain very still to ensure good quality images. The scan may take 20 minutes to one 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.

Further Information

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

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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.

To give feedback on this leaflet please email feedback@uhcw.nhs.uk

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