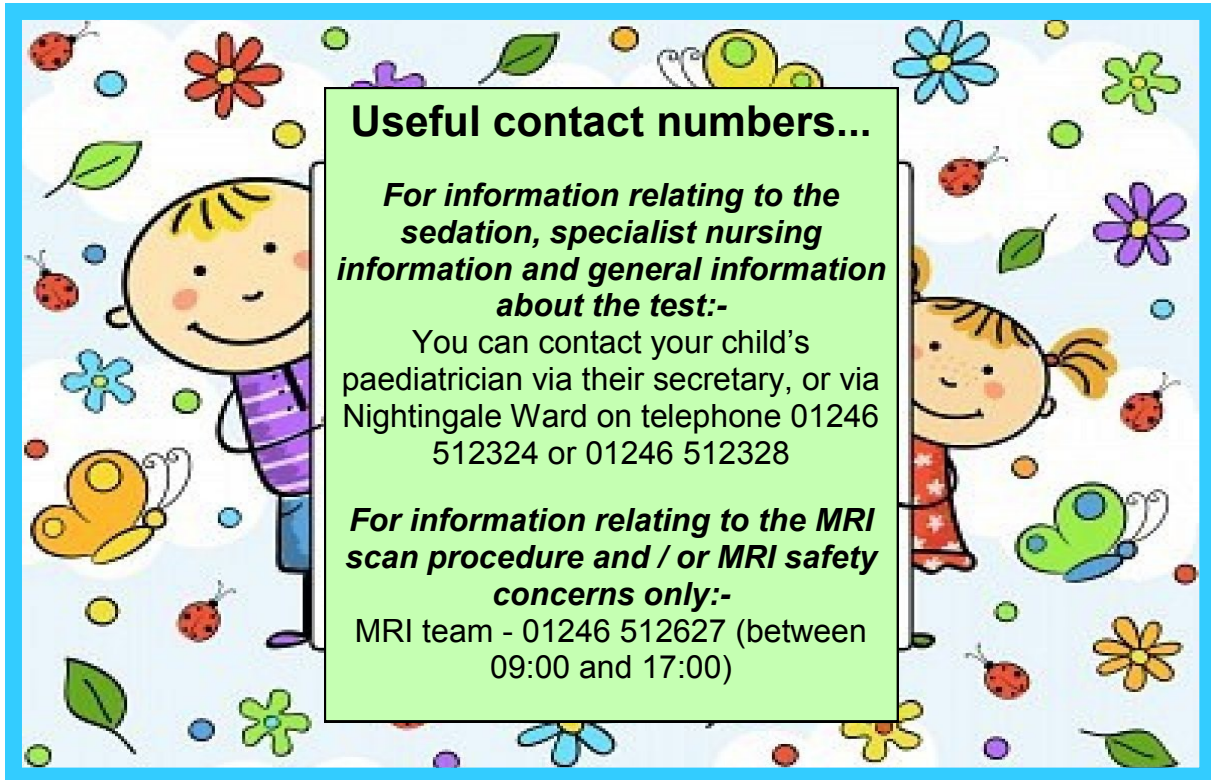


# Your child's MRI investigation here at Chesterfield Royal Hospital





Your child's doctor has requested a Magnetic Resonance Imaging (MRI) scan here at the Chesterfield Royal Hospital.

This information sheet is intended for parents or carers of children under the age of 16 who have been referred for an MRI scan. Please read this information before your child attends for their investigation.

If you have access to the internet, we have also recorded a short film here at Chesterfield Royal to show you what happens before, during and after your child's MRI scan to help you and your child understand what is likely to happen on the day.



Please search for '**Charlie's MRI scan**' or '**A Guide to a children's MRI Scan (Magnetic Resonance Imaging at Chesterfield Royal Hospital)**'.

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## About the MRI scan

MRI combines a powerful magnet with a sophisticated computer to detect small changes in the body's own magnetic field and give detailed images of any part of the human body. No X-Rays are used and there are no known side effects. The MRI scan is a painless procedure and usually takes approximately 15 to 30 minutes to perform.

## When would an MRI scan not be suitable for my child?

Although there are no known side-effects to the MRI scan, the powerful magnet can be very hazardous for certain patients. Therefore some patients cannot be scanned for safety reasons.

MRI safety is extremely important and our MRI team will ask you to read and complete an MRI safety questionnaire relating to your child and anyone else who may enter the MRI examination environment. This asks you questions to find out if your child has any '**contra-indications**' for an MRI scan (any reasons why your child cannot have a scan).

However, **before** your child comes for their scan, please be aware that we **cannot** scan patients who have had any of the following:-

- ✦ Cardiac Pacemaker or Cardioverter defibrillator
- ✦ Cochlear Implant
- ✦ Neurostimulator
- ✦ Aneurysm clip

Please telephone the MRI team on 01246 512627 **immediately** if your child has any of the above.

There may be other safety reasons why your child **might not** be able to have a scan if they have had any of the following:-

- ✦ Occlusive clip/staple
  - ✦ Implanted drug infusion pump
  - ✦ Hydrocephalus shunt
  - ✦ Metal fragments or shrapnel in the eye
  - ✦ Heart valve
  - ✦ Intravascular stent / filter / coil
  - ✦ Ocular (eye) Implant
  - ✦ Retinal tack
  - ✦ Any other metallic or magnetic implant
  - ✦ Metal Fragments or shrapnel in the body  
(Dental fillings do not contain ferrous material and are therefore not a problem)
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Please telephone the MRI team and we will ask you further questions to find out whether we can do the scan.

In practice, very few patients are unable to have their scan due to safety reasons.

### **About possible sedation for the MRI scan**

For this MRI investigation, it will be necessary for your child to lie perfectly still during the MRI procedure to enable the teams to acquire good, clear pictures. To help your child lie still, they will be given some medicine which will make your child sleepy. Giving medicine in this way is called **oral sedation**.

The oral sedation medicine we will use for your child will be either Chloral Hydrate or Midazolam. The doctor will also need to examine your child to ensure they are well enough to take the medicine and weigh them to ensure they are given the correct amount of medicine.

Prior to having oral sedation, it is necessary for your child to have an empty tummy.

### **Sedation - what happens next?**

To some children the oral sedation medicine does not taste very nice and the nurse will help to mask the flavour with your child's favourite juice. You can help your child by being positive and encouraging them to take this medicine. The nurse will then closely monitor your child whilst they are drowsy or sleepy.

Once your child has had their oral sedation, you will need to encourage them to sit quietly. The play specialist/nurse will provide you and your child with a quiet area and give you some suitable toys e.g. DVD, books etc to encourage rest and sleep.

Your child may go through an 'agitated' stage as a normal part of the process and so don't worry if this occurs.

Once your child is asleep and settled, the nurse will ensure that your child is ready for their MRI scan.

### **About possible General Sedation for the MRI scan**

Sometimes, oral sedation is not suitable for your child and the Anaesthetist may plan a **general anaesthetic**. You will be informed in advance of this and the anaesthetist or specialist nursing team will fully explain the procedure to you. There are two ways of starting a general anaesthetic, either:-

- ✦ Giving anaesthetic drugs through the cannula (small plastic tube placed in a vein)
  - ✦ Breathing anaesthetic gases and oxygen through a mask
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The Anaesthetist will stay with your child throughout the MRI scan, constantly checking on your child, checking monitors and adjusting the anaesthetic if required. The Anaesthetist will ensure that your child is breathing easily. He or she might do this by simply tilting your child's head back and lifting the chin or by placing a small tube in the airway.

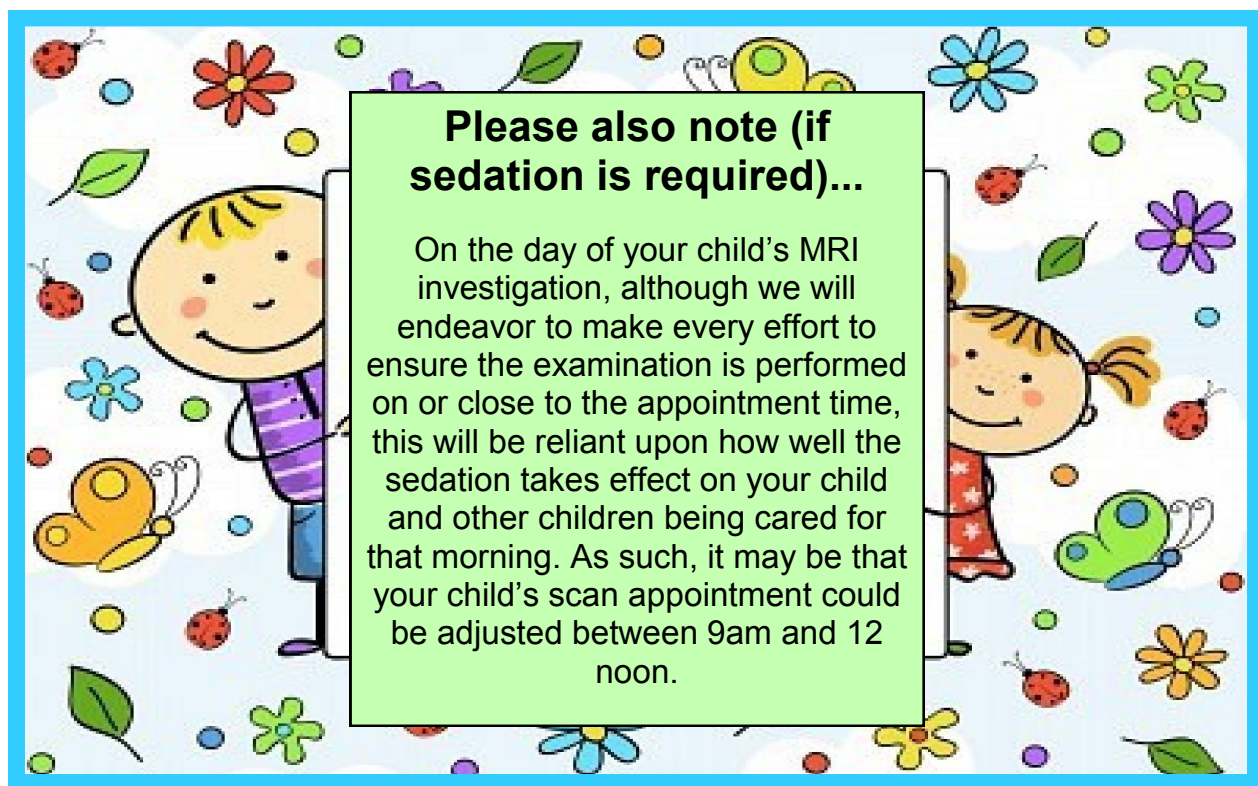
At the examination, the Anaesthetist will stop giving anaesthetic drugs and your child will slowly wake up. When the Anaesthetist is sure that your child is recovering, they will be taken into the recover room in the MRI suite.

### **During the scan**

Once the scan is underway a 'tweeting', vibrating or knocking noise can be heard, but we will give your child noise cancelling headphones so this is not so loud. You can also bring a CD for your child to listen to during the scan if this will help.

It is very important that you encourage your child to keep their entire body still during the scan as movement during the scan may result in lower quality or blurred images.

Usually 4 or 5 different types of scans, called sequences, are taken during the whole examination and each one lasts between approximately 2 and 5 minutes depending on what the doctor has asked for. The complete MRI examination should take approximately 15 to 30 minutes.



**Please also note (if sedation is required)...**

On the day of your child's MRI investigation, although we will endeavor to make every effort to ensure the examination is performed on or close to the appointment time, this will be reliant upon how well the sedation takes effect on your child and other children being cared for that morning. As such, it may be that your child's scan appointment could be adjusted between 9am and 12 noon.



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Your child will be supervised at all times throughout the scan by the MRI team, Anaesthetist and Specialist Paediatric Nurse.

### **What happens after the MRI scan and sedation?**

Once the MRI scan has been completed, your child may continue to sleep for some time. Encourage this continued sleep, as trying to wake your child up at this stage can be unhelpful and distressing to your child.

When your child does wake, they may at first be a little unsteady on their feet. Once awake, your child will need to have something to eat and drink and be back to their 'normal self' before they can go home.

If you have any questions about the oral sedation medicine before your child's admission, please contact Nightingale Ward on **01246 512324** or the Medicines helpline on **01246 512665**



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