

# Your child is having an MRI scan without sedation or general anaesthetic

A photograph of a female nurse in a light blue NHS uniform, smiling as she adjusts a white plastic headrest on an MRI scanner table. The scanner's gantry is visible in the background. The nurse's uniform has a name tag that reads 'NHS Great Ormond Street Hospital for Children'.

Information for families

Great Ormond Street Hospital for Children  
NHS Foundation Trust

**This information sheet from Great Ormond Street Hospital (GOSH) explains about having a magnetic resonance imaging (MRI) scan, how to prepare for it and what care your child will need afterwards.**

## **What is an MRI scan?**

An MRI (magnetic resonance imaging) scan uses a magnetic field rather than x-rays to take pictures of your child's body. The MRI scanner is a hollow machine with a tube running horizontally through its middle. Your child will lie on a bed that slides into the tube. An MRI scan usually lasts between 20 minutes and an hour.

Please watch our podcast (short video film) about having an MRI, available at [www.gosh.nhs.uk/medical-conditions/procedures-and-treatments/your-child-is-having-an-mri-scan/video-your-child-is-having-an-mri-scan](http://www.gosh.nhs.uk/medical-conditions/procedures-and-treatments/your-child-is-having-an-mri-scan/video-your-child-is-having-an-mri-scan) or on the GOSH channel on YouTube.

If you would like further advice about preparing your child for the scan, please ring the department's play specialist on the number on the back of the leaflet.



## Are there any alternatives?

Your child may need this scan so that their doctors can get detailed pictures of the size and shape of part of your child's body. Various types of scan such as CT, ultrasound and x-rays can show the size and shape of parts of your child's body but not in as much detail as an MRI scan. The information from the scan is then used to help with diagnosis and plan their treatment.

## When you receive your appointment letter

If you are unable to keep this appointment, please inform the department as soon as possible beforehand. Sometimes, we can offer the appointment to another child on the waiting list. As so many children and young people need to use our services, we have had to introduce a policy where if a child cancels or does not attend two appointments in a row, we will close their referral and inform their GOSH consultant.

## The day of the scan

When you arrive at the hospital, you should report to the MRI department. Some scans need additional preparation – information about whether your child needs any additional preparation is in your appointment letter. Your appointment time is 30 minutes before the scan is scheduled. We need this time to prepare you and your child, for instance, completing the metal check described below and to apply some local anaesthetic cream in case your child needs an injection.

Children having the scan without sedation or general anaesthetic do not need to 'fast' or stop eating and drinking before the scan unless stated in the appointment letter.

Your child should wear clothes without zips or metal poppers for the scan – otherwise they will need to change into a gown. Before the scan starts, the nurse or radiographer will check you or your child do not have a pacemaker, metal implants or clips, dental braces, a history of metal fragments in the eyes or any allergies. We will ask you to sign a form to confirm this. If, for any reason, we cannot confirm whether or not your child has any metal implants or equivalents, we will have to cancel the scan as it would be



unsafe to continue. If you are wearing a medication patch, for instance, for pain relief or to quit smoking, please remove this before you go into the scanner room. You will also need to leave metallic objects like jewellery, watches, keys, pens or cards with metallic strips like bank cards and train tickets in the lockers outside the scanner room.

You are welcome to stay with your child during the scan, but if you are in the first three months of pregnancy, you should let us know beforehand. If your daughter is 12 years old or older, we will ask her about her periods and any possibility she could be pregnant. Your child will be able to watch a DVD during the scan, so please bring along any favourites. It can also help if your child has a favourite toy to hold as well.

## What does the scan involve?

Your child will need to lie on the bed for the scan. Depending on the part of their body being scanned, they may need to have a coil over part of their body or wear a head coil (this will not touch their head).

When your child is in the correct position, the radiographer will move the bed inside the scanner and then go into the control room. The scanner will make a continuous knocking sound throughout the scan, which can be

quite loud, but we will give you and your child ear protectors to minimise any discomfort. If your child is watching a DVD, or listening to a CD, this will distract from the noise too.

The radiographer will warn you and your child when a loud noise is due by talking to them through an intercom. When the scan has finished, the radiographer will move the bed out of the scanner and your child can get up and leave.



## Medicines given during an MRI scan

We may give your child some medicine during the MRI scan to make the image clearer. The radiographer will tell you which medicines your child has had in case of later side effects. The medicines we use most often at GOSH include:

**Secretin** – This is a naturally occurring hormone that increases the volume of juice within the duct of the pancreas. It is given as an injection. Possible side effects include: loose or runny poo, cramp-like stomach ache, headache, skin itching and a rash.

### **Hyoscine butylbromide (Buscopan®)**

– This medicine relaxes the smooth muscle of the intestine. Possible side effects immediately after the injection include: dilated pupils, dry mouth, flushing of the skin, dislike of bright light and palpitations. In the hours following the injection, other side effects may occur: constipation, urinary retention and urinary urgency.

**Furosemide** – This medicine increases the production of urine immediately after injection. Possible side effects include: low blood pressure and dehydration. You can reduce these side effects by encouraging your child to drink plenty of fluids in the hours after the scan.

**Mannitol** – This medicine is only used for specific bowel examinations and allows clear imaging of the wall of the bowel. A common side effect is loose or runny poo, so in the first few hours after the scan, your child should have access to a toilet. Dehydration may also occur, so ensure plenty of fluids in the hours following the scan.

**Gadoteric acid (Dotarem®)** – This is a 'dye' that makes blood vessels and any inflammation show up more clearly on the pictures. It is given as an injection. A possible side effect is hypersensitivity, but this will normally be an immediate effect. There are no reported long term side effects of gadoteric acid.

## Are there any risks?

There are no risks associated with MRI scans. They are painless with no lasting effects. The scanner does not touch your child during the scan. MRI scans are not suitable for people with certain metal implants inside them (such as pacemakers) because the scanner emits a strong magnetic field. This is why we carry out a thorough metal check before your child has the scan.

## What happens afterwards?

In most cases, your child will be able to go home straight after the scan has finished. The radiologist (doctor specialising in scans) will send a report of the scan to your child's doctor in time for their next appointment. If you have not been given a follow up appointment to see your consultant, please contact their secretary after two weeks.





**If you have any questions or concerns, please contact:**  
**Radiology Play Specialist: 020 7405 9200 ext. 0301**  
**MRI Bookings: 020 7813 8510**

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