

Information for parents, carers and children

Having an MRI (Magnetic Resonance Imaging) Scan

A decorative graphic at the bottom of the page consisting of three overlapping, wavy bands of blue. The top band is a light blue, the middle is a medium blue, and the bottom is a dark blue.

The initial information in this leaflet is aimed at parents and carers. There is a separate section at the end of the leaflet to share with your child.

Your child is having an MRI scan

Having an MRI scan can be a daunting process for children, and for parents and carers too. Being unsure of what to expect, can make you feel anxious and worried. This leaflet provides information to help prepare and support your child before and during the MRI scan. There is also additional information at the end of this leaflet for you to read with your child.

What is an MRI scan?

Magnetic Resonance Imaging (MRI) is the name given to a technique which takes very detailed pictures of the inside of your body. It uses a powerful magnetic field and radio waves, together with an advanced computer system to build up a series of images. The scanner is an open-ended tube, surrounded by a large circular magnet.

Important information

It is very important to contact us before coming for your appointment if your child has or has had **any** of the following:

- A cardiac pacemaker or implanted defibrillator
- A neuro-stimulator
- A cochlear implant
- An aneurysm clip
- A shunt in their head
- An implanted mechanical pump
- A penetrating eye injury with metal fragments
- Any surgery which involved placing metal implants

Or if any of the following apply:

- **You need an interpreter.** If an interpreter is required, please tell us this when you receive your child's appointment so that we can arrange an official interpreter for you
- Your child has had a previous allergic reaction to MRI contrast agent (dye)

If you fail to inform us of any of the information above, we may not be able to perform the scan on the day of the appointment.

Is there any preparation before the MRI?

The scan may be carried out in your child's clothing if it is suitable. If possible, ensure your child wears comfortable clothing without any metal zips or buttons. Your child can bring along a soft toy and take it into the scanner with them as long as there is no metal inside it or on it. Encourage your child to ask questions to help reduce any fears they may have. If you cannot answer the questions, the MRI team will be able to help. Your child can eat and drink as normal on the day of their scan unless a member of the MRI team has told you otherwise.

What will happen when we arrive in the MRI department?

When you arrive at the MRI department you should go to the reception desk where you will be booked in and asked to have a seat in the waiting area. Please let us know prior to the appointment or on arrival if you and your child need a quiet area to wait.

You will then be taken to an interview room where a member of the MRI team will check some details with you. The MRI team member will also complete a safety questionnaire for you and your child to make sure you are both safe to enter the MRI scan room. These safety questionnaires are made up of questions regarding yours and your child's history of operations and procedures. We need to check this because of the scanner's strong magnetic field and the need to know about medical implants before entering the scan room.

You will also be asked to remove anything that may contain metal before entering the scan room. You will be provided with a locker to put your belongings into whilst you accompany your child.

Here are some examples of things that should not be taken into the scanner room:

- Mobile phones, keys, coins
- Jewellery, watches, hair clips
- Any cards with a magnetic strip (e.g. credit cards) will be damaged so do not take these in with you

What will happen during the MRI?

During the scan your child will be lying on the scanning table. You will be able to sit with your child in the scan room during the MRI.

Equipment known as coils will be placed over the area being scanned. The purpose of the coil is to improve the quality of the MRI images. The radiographer will ensure your child is comfortable with the use of pads and pillows. The body area being scanned needs to be in the centre of the scanner to get the best possible images. The scanner is very noisy whilst it acquires the images and ear protection is always provided in the form of ear plugs and/or headphones. The MRI radiographer will talk to your child using an intercom. If your child feels scared or uncomfortable during the scan, you or your child can squeeze a buzzer that will alert the MRI radiographer. During the scan your child may require an injection of a contrast agent. This can give the radiologist (doctor who looks at MRI scans) more information about the body area being scanned.

Can my child take a break during the scan?

Normally, there are no breaks as it is best for the body area being scanned to be in the same place throughout the scan. MRI scans usually take between 30 minutes to an hour, dependent upon the type of scan being undertaken. Visualisation techniques can be used to help

your child manage the MRI, such as your child picturing themselves in a place they like to be, for example, a playground.

If your child does not tolerate the MRI, the doctor or team that referred your child for the MRI will be informed and they will decide on what will happen next.

Are there any risks to having the MRI scan?

MRI poses no risk when appropriate safety guidelines are followed. All members of staff follow appropriate safety measures before, during and after the scan.

What is a contrast agent?

A contrast agent is a colourless liquid which is used to improve the image quality from an MRI scan. It makes parts of the image appear brighter and increases the level of detail on the scan. This helps doctors to make a faster and more reliable diagnosis.

If needed, the contrast agent is injected into your child's vein via a cannula (a thin plastic tube) during the scan. The cannula is inserted through your child's skin into a vein using a needle. Once the cannula is in place the needle is removed, leaving the thin plastic tube in the vein. This should be comfortable and will only be in place until the scan is finished.

If your child is aged 12 or below, we will arrange for you to attend Ward 8 for the insertion of your child's cannula. For children over the age of 12, the arrangements for the insertion of a cannula are considered on a case-by-case basis.

An anaesthetic cream may be applied to your child's arm to numb the area before the cannula is put in. This cream normally takes 30–45 minutes to work.

Usually, the cannula will be removed after the MRI has finished.

Is the MRI contrast agent safe?

MRI contrast agent is not suitable for everybody. The radiologist will decide if it is appropriate for your child. As with all medication, a very

small number of patients may be allergic to MRI contrast agent. Allergic reactions are rare. When they do occur, most of them are mild. The radiographer will discuss possible reactions with you at your child's appointment. Please inform the radiographer if your child has had a previous allergic reaction to a contrast agent or has felt unwell after an injection of contrast agent. Most reactions occur within 30 minutes of the contrast agent being injected, but they can happen up to several days following the injection.

Small amounts of MRI contrast agent may remain in the brain or other tissues after an injection. This is more likely to occur following multiple injections of MRI contrast agent. There is currently no evidence that these small amounts cause any harm.

What will happen after the scan?

If your child has had an injection of contrast agent, we will ask you to remain in the department for 30 minutes after the injection. There are no side effects from the scan itself.

When will I get my child's scan results?

The radiographer will not be able to give you the results of your child's scan on the day as the MRI images will need to be interpreted carefully by a radiologist. The results will be sent back to the person who referred your child for the scan.

Contact details

Please contact us on the following numbers should you have any questions or concerns:

MRI reception: **01772 522167**

MRI bookings: **01772 523999/01772 522014**

Patient pathway coordinator: **01772 528124**

Please read the following section with your child.



YOU ARE HAVING AN MRI SCAN – Here is what happens

Hi there, this leaflet is to tell you about your MRI scan.
MRI is a safe way of looking inside your body.

The MRI scanner is a big tube with a hole in the middle. It is very light inside the scanner, and you will have plenty of room.

MRI works like this:

- The machine is a giant magnet
- We use invisible radio waves and signals to make the pictures
- When we turn the scanner on and off it makes lots of noise
- The computer turns the magnet's signal into a picture

Before your MRI scan



When you arrive in the MRI area, our reception staff will ask for your name. You will be asked to take a seat and wait for a person from the MRI team to call your name.

A member of the MRI team will ask your parent or guardian some questions before the scan starts.

For most scans, you can wear your own clothes, as long as they do not have any metal buttons or zips. We may ask you to get changed into a hospital gown.

Before your scan, you and your parent or guardian must remove any metal objects such as watches, jewellery, hair clips, hearing aids, glasses, coins or anything else from your pockets.



We may need to check how heavy you are, or how tall you are, before you have your scan.

During your MRI scan

When you are ready, you will be helped to lie on the scan table and the MRI team will make sure you are comfortable.



You may have a piece of equipment over the body part we are scanning to make the pictures better.

The table slides gently into the scanner until the part of the body that needs to be scanned is in the middle of the tube.

You will be able to have somebody stay with you the whole time.



It is very important that you keep **VERY** still as any movement will spoil the pictures. You can close your eyes and pretend you are at the seaside or the playground, or somewhere else you love to go. Where will you choose?

It's just like playing statues! How good are you at keeping still?

During the scan you will hear some funny noises: these are from the machine.

I think it sounds like a motorbike – listen carefully and decide what you think it sounds like.



We will give you some earplugs and headphones to reduce the noise. An MRI scan can sometimes take a long time.

You will hear a member of our MRI team talking to you in between the loud noises. You can talk back when the noise is off.

We then check on the computer to make sure we have the images we need.



After your MRI scan



The pictures will be looked at by one of our doctors who is specially trained in looking at MRI scans.

The results will be sent to the team that asked us to perform the scan.

Sources of further information

www.lancsteachinghospitals.nhs.uk

www.nhs.uk

www.accessable.co.uk

www.patient.co.uk

<https://patient.info/childrens-health>

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All our patient information leaflets are available on our website for patients to access and download:

www.lancsteachinghospitals.nhs.uk/patient-information-leaflets

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If you want to stop smoking, you can also contact Smokefree Lancashire on Freephone **08081962638**.

Please ask a member of staff if you would like help in understanding this information.

This information can be made available in large print, audio, Braille and in other languages.

Department: Radiology/Interventional Radiology

Division: Diagnostics and Clinical Support

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