

# Magnetic Resonance Imaging (MRI)

An information guide



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## What is Magnetic Resonance Imaging (MRI)?

MRI is a modern imaging technique which gives detailed images of the human body.

It uses a very strong magnet and radio waves to produce images without the use of ionising radiation.

The images show both bone and soft tissues to help your Doctor diagnose and treat your problem.

## Is it safe?

MRI scans are one of the safest imaging tools. There are no known risks or side effects with MRI. Repeat examinations may be performed without any adverse effects.

If there is any chance you may be **pregnant** please notify your Doctor / ring the number on your appointment letter.

There is no evidence that MRI scans pose any risk during pregnancy but they are performed on a clinical risk vs benefit basis and this must be decided by a consultant.

## **Is an MRI scan suitable for me?**

Most people can safely have an MRI scan, but there are some reasons why you may not be able to for your own safety.

**Please note** we have a weight limit of 250kg. You will be asked to complete and sign a safety questionnaire before your scan to make sure it is safe for you to be scanned.

You **cannot** have an MRI scan within the North East Sector of Northern Care Alliance Group if you have:

- A cardiac pacemaker/defibrillator.
- An aneurysm clip.
- A neuro-stimulator.
- A cochlear/inner ear implant.
- A programmable VP shunt.
- A Breast expander.
- Metal fragments in your eyes/shrapnel inside your body – this may need an x-ray to confirm.

**If you have any of the above please ring us on the number on your appointment letter.**

We need to know about it so that we can check the safety of it for undergoing an MRI scan. If you have an implant card or any paperwork relating to the implant/surgery please notify your Doctor and bring this with you to your appointment.

**If you have had any surgery, intervention , tattoos or semi-permanent makeup in the last 6 weeks please ring the number on your appointment letter.**

## **Before your scan**

Unless your appointment letter states otherwise, you may eat and drink as normal before your scan. Please continue to take your normal medication.

If we are scanning your head/neck region, please **do not** wear any makeup.

**Remove all** body piercings, hair extensions containing metal and jewellery before attending your scan.

***Do not bring any valuables.***

Please be aware that we **cannot** look after any children while you have your scan so please arrange childcare.

If you require an interpreter please contact the Interpretation & Translation service on 0161 627 8770 to arrange an interpreter. NCA policy states that we **cannot** allow any friends or relatives to interpret for you.

If you have any mobility issues please contact our booking centre on 0161 778 2233 to ensure this is taken into account when booking your appointment.

Complete the safety questionnaire and bring this, along with any information you have about any implants inside your body, to your appointment.

Please feel free to bring a CD of your choice to listen to during your scan, alternatively you may listen to a radio station.

## **What does an MRI scan involve?**

On arrival in the X-ray/Radiology department, you will be greeted by a receptionist who will direct you to the MRI waiting area.

Your safety screening questionnaire will be verbally checked by a member of staff to ensure you are suitable for an MRI scan, and the examination will be explained to you.

You will be asked to change into a hospital gown/scrubs and place your belongings in a secure locker. You will be asked to remove all metal including hearing aids, metal dentures, watches, glasses, coloured contact lenses and hair accessories, if you have not done so already.

The MRI scanner is like a large tunnel, open at both ends. You will be laid on an automated bed that moves into and out of the scanner.

Depending on the body part being examined, you may go into the scanner either head or feet first, as this needs to be in the centre of the machine. A piece of equipment called a 'coil' which acts like an aerial may be placed over the body part to receive the images.

The scan itself can last anywhere between 10 and 60 minutes. It is made up of several sequences ranging from a few seconds to 10 minutes.

MRI scans are very sensitive to movement, and like when taking a photograph, any movement will blur the images, so it is important that you keep your body very still during the scan. If you happen to move it may be necessary to repeat the scan which will prolong the scan.

MRI scans are very noisy. You will hear various loud noises including knocks, bangs and buzzing. The scanner and bed may vibrate a little.

All of this is normal and that means the scanner is doing its job correctly. Earplugs will be provided to protect your hearing, and headphones will be given, through which you will hear music.

The Radiographer will not be directly with you during the MRI scan as they are required to operate the scanner from a computer in an adjoining room.

However, they can see you at all times through a window and via a video system. They will be able to communicate with you via an intercom. You will be given a call button to use if you need to get the Radiographer's attention.

If you are nervous, a friend or family member may accompany you into the scan room if you wish. They will be required to complete and sign the same safety screening questionnaire as you before entering the room, and remove any metal.

Some scans require you to repeatedly hold your breath for short periods of time. You will be given verbal instructions about when and what to do.

For the majority of MRI scans you will be able to leave straight after the scan has finished.

## **Giving your informed consent**

It is your decision whether or not to have the scan, and you can change your mind at any time.

We want to involve you in all decisions about your care and treatment. If you decide to have the scan, by law we must ask you to consent to the examination.

This confirms that you agree to having the procedure and understand what it involves. This is called verbal consent and may only involve the Radiographer checking you are booked for the correct scan.

Please remember you may ask the Radiographer any questions you have at any time before, during or after the scan.

If you **do not** wish to have the scan or are undecided, please tell the Radiographer or phone the number on your appointment letter as soon as possible.

Please bear in mind that not having the scan may delay your diagnosis as the Doctors may not have all the information they need.

## **Who performs the MRI scan?**

The scan is done by a specially trained Radiographer who will explain exactly what is going to happen, and will be present throughout your scan.

The images will then be sent electronically for reporting and interpretation by a specialist Doctor or Advanced Practitioner Radiographer.

## **Will I need an injection?**

Some examinations require an injection. You will be asked questions to ensure it is safe for you to receive it, and your consent will be sought. A small cannula will be placed in a vein in your arm and remain there for the duration of the scan.

The injection may be of a contrast media, called Gadolinium.

This is used routinely for a lot of MRI scans and provides the Doctors with more information. Most people do not notice anything except a cool feeling up their arm as the injection goes in. This is normal.

There is a small risk of a reaction to the contrast, such as itching, nausea or vomiting. These are usually soon after the injection. Please inform the Radiographer if you experience any symptoms.

In the unlikely event that you experience adverse symptoms after hours, please contact your local A&E department. If you are breastfeeding we advise that you do not breastfeed for 24 hours after receiving the contrast injection as a safety precaution. It is advised that you express and discard the breast milk during this time, so you may wish to express enough prior to your scan to use after.

Some abdominal/pelvic examinations require an injection of a muscle relaxant called Buscopan® which reduces your bowel motion to prevent it blurring the images.

Your eyes are made of the same sort of muscle so your vision may become slightly blurred for a short period of time. This should wear off by the end of the examination, but if it hasn't we may advise you to remain in the department until it does.

Very rarely, patients can develop pain and redness in both eyes within 24 hours of the test. If this happens please attend your local A&E department for a check-up.

## **Will I need to drink an oral preparation?**

Some abdominal examinations looking specifically at the small bowel may also require you to drink an oral preparation called Klean-prep® prior to being scanned.

You may be asked to attend the department an hour before your scan time to drink this. The purpose of the drink is to open up the folds within your bowel to enable the entire small bowel to be examined in detail.

Klean-prep® can cause you to have loose bowel stools for a day or two. It can cause nausea and a feeling of fullness/bloating in your stomach, abdominal cramps, vomiting and soreness of the bottom.

Rarely people are allergic to Klean-prep® and may experience a skin rash. Any side effects should not last long.

## **Does the scan hurt?**

No. The most difficult part is keeping still, so get as comfortable as possible before the examination starts and try to relax.

The insertion of the cannula can be a little uncomfortable but is short lived.

## **What if I am claustrophobic?**

Please inform the Radiographer if you feel claustrophobic or anxious.

If you feel it is necessary, you may wish to visit your GP prior to your MRI appointment, to enquire about being prescribed a mild oral sedative to help you relax.

We cannot prescribe this medication in the MRI department, so please make appropriate arrangements prior to your scan.

## **What are the alternatives?**

If an MRI is not suitable for you, or you decline the MRI scan, your Doctor may request a different type of examination such as a CT or ultrasound scan.

## **When and how do I get my results?**

You will not immediately receive your results.

The results will be sent to the clinician that referred you for the MRI scan, and they will contact you for follow up.



**If English is not your first language and you need help, please contact the Interpretation and Translation Service**

Jeśli angielski nie jest twoim pierwszym językiem i potrzebujesz pomocy, skontaktuj się z działem tłumaczeń ustnych i pisemnych

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To improve our care environment for Patients, Visitors and Staff, **Northern Care Alliance NHS Group** is Smoke Free including buildings, grounds & car parks.

For advice on stopping smoking contact the Specialist Stop Smoking Service on 01706 517 522

**For general enquiries please contact the Patient Advice and Liaison Service (PALS) on 0161 604 5897**

**For enquiries regarding clinic appointments, clinical care and treatment please contact 0161 624 0420 and the Switchboard Operator will put you through to the correct department / service**

The Northern Care Alliance NHS Group (NCA) is one of the largest NHS organisations in the country, employing 17,000 staff and providing a range of hospital and community healthcare services to around 1 million people across Salford, Oldham, Bury, Rochdale and surrounding areas. Our Care Organisations are responsible for providing our services, delivering safe, high quality and reliable care to the local communities they serve.

The NCA brings together Salford Royal NHS Foundation Trust and the hospitals and community services of The Royal Oldham Hospital, Fairfield General Hospital in Bury, and Rochdale Infirmary (currently part of The Pennine Acute Hospitals NHS Trust).

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