

INFORMATION FOR PATIENTS

MRI SCAN



WHAT IS AN MRI SCAN?

MRI (Magnetic Resonance Imaging) is a non-invasive medical imaging technique which uses magnetic fields, radio-waves and sophisticated computers to generate cross-sectional images of the human body. The detail of these images is so good that the scanner can see even tiny abnormalities. This accuracy helps in the early detection of injury and disease, facilitating effective treatment planning.

WHAT CAN BE SCANNED?

MRI can offer a definitive diagnosis of many medical conditions and is particularly useful for:

- > **Orthopaedic Conditions:** provides excellent imaging of joints such as the knees, shoulders, ankles and wrists.
- > **Neurological Conditions:** provides excellent imaging of the brain, spinal cord, eyes and inner ears.
- > **General Medical Conditions:** allows abdominal structures to be clearly visualised e.g. liver, kidneys and pancreas.
- > **Imaging blood vessels**

ARE THERE ANY RISKS?

Clinical experience has shown MRI to be a safe and effective clinical investigation. The lack of published evidence of any adverse effects following the use of MRI has led researchers to conclude, or at least assume, that the incidence of any associated health risks are either too low to deserve further study, or are non-existent.

(Ref: Ordidge, R.J. , Fullerton, G. and Norris, D.G. (2002) British Journal of Radiology; 73: 1 – 2.)

Most people are able to have an MRI scan. However, for your own safety and to ensure that the images are of the highest possible quality, before you arrive for your scan we will need to ask you some important questions.

Please let us know before you arrive if you:

- > Have a cardiac pacemaker.
- > Have an artificial heart valve.
- > Have a neuro-stimulator.
- > Have had previous brain surgery.
- > Have a cochlear implant.
- > Have had any surgery involving metal implants within the last 6 weeks.
- > Have ever had an ANY accident which resulted in METAL FRAGMENTS entering your EYES.
- > Are pregnant or breast feeding.

If you have had a history of metal fragments entering your eyes, it will be necessary for you to have an X-ray before your MRI, to prove that there are no particles remaining in your eye. If you have a pacemaker, metal heart valve(s) or a metallic clip on an artery at the base of your brain (aneurysm clip), then there is a risk that these may move during an MRI scan, and a different examination will need to be arranged instead. However, any shrapnel or metal sutures that have been in place for a long time may not create a problem.

For female patients, if you think you are, or might be, pregnant you must make sure that the doctor referring you, or a member of staff in the Radiology Department, knows as soon as possible. MRI scans may not be advisable in early pregnancy, unless there are special clinical circumstances.

If you are unsure about your suitability for an MRI scan, please call the Radiology Department on 01749 333 600.

IS THERE ANY SPECIAL PREPARATION NEEDED BEFORE THE MRI SCAN?

You should carry on with normal everyday living before your MRI scan appointment. You may eat and drink as normal. You should continue to take your prescribed medicines as usual.

You may be more comfortable if you attend in loose clothing (which should not contain any metal zips, clips or fastenings). Alternatively there are clean patient gowns available in the Radiology Department for you to wear.

You may bring a CD of your own choice to listen to during the scan.

You will be asked to remove all metal items such as jewellery, coins, mobile phones, keys and credit cards, so we advise that you only bring these items with you if absolutely necessary

CAN I BRING A RELATIVE OR FRIEND?

Yes, you may be accompanied, providing that the necessary safety form has been completed satisfactorily by your accompanying relative or friend.

WHERE DO I REPORT TO WHEN I ARRIVE AT THE TREATMENT CENTRE?

Please report to the reception desk at the main entrance. The receptionist will direct you to the Radiology Department waiting area. The Radiology Department will have been informed of your arrival by the receptionist and after a short period of time a member of staff will come and see you.

WHO WILL CARRY OUT THE MRI SCAN?

You will be cared for by a Radiographer who will perform the scan. A Radiologist (a doctor specialising in the interpretation of medical images) will look at the results of your scan on the computer screen as it is happening, or may look at a recording of the images later, before writing a report on the findings of the scan. The Radiology report will be sent to your Specialist and to your GP.

WHAT WILL THE PROCEDURE INVOLVE?

When you arrive for your appointment, we will ask you to complete a safety questionnaire, if you haven't already done so. This is to ensure that you are safe to be scanned. The Radiographer will check this through with you before your scan begins. Please feel free to ask any questions you may have at this stage.

The MRI procedure is completely painless and usually takes about 30 minutes. You may be asked to change for your scan if you are wearing clothing with any metal zips, clips or fastenings.

You will also be asked to remove any metal items such as jewellery, coins, keys, mobile phones, credit cards, spectacles, hairpins, metal dentures, body piercings, and possibly make-up (mascara contains iron!). There is a locker outside the scan room for safe keeping of such items.

To carry out your scan the Radiographer will position you on the scanning couch. In order to help us obtain accurate images, a scan coil may be placed around that area of your body which is to be scanned. The Radiographer will make you as comfortable as possible before moving you on the couch into the scanner, to ensure that you lie still throughout the scanning procedure.

Once the couch has been moved into position a series of scans will be performed, each lasting approximately five minutes. During the scan you will not feel anything untoward, but you will hear a series of loud knocking and banging noises. These noises are perfectly normal and are generated by the scanner whilst it creates the images of your body. To reduce the noise of the scanner, you will be given some earplugs or ear defenders to wear. (Music can be played to you, if you so wish, during the scan to help you feel relaxed and to reduce the noise of the scanner). You may also feel the scanner couch moving slightly during the scan, and once again this is perfectly normal.

Between each five minute scan, the Radiographer will communicate with you through a two-way intercom system to ensure you are alright and to tell you how long the next scan will take.

A friend or family member may sit with you during the scan, providing we have established that it is safe for them to do so.

It is sometimes necessary to give you an injection into a vein in your arm. The fluid injected (known as 'Contrast') highlights the blood supply in your body to assist the Radiologist with providing a more accurate scan report.

WILL THE MRI SCAN BE UNCOMFORTABLE?

Apart from the noise of the scanner you will not be aware of anything happening. Most patients do not mind lying within the scanner, but some patients find it claustrophobic.

We understand that if you suffer from claustrophobia, you may be very anxious about having a MRI scan. However, the Treatment Centre operates a state-of-the-art MRI scanner and the room is well lit and ventilated to

ensure your scan is performed in comfortable and pleasant surroundings. If we are scanning areas below your hips, it is not necessary for your head to be inside the scanner.

A Radiographer will be able to see and hear you at all times.

You will be given an emergency bell to contact the Radiographer at any point during the scan.

If it would help you, a relative or friend may accompany you during your scan providing it is safe for them to do so.

You may wish to discuss this with your GP or the specialist who referred you for your MRI scan or with the Radiology Department staff.

HOW LONG WILL THE MRI SCAN TAKE?

The scan usually takes about 20-30 minutes and unless you are delayed, for example by emergency patients, your total time in the department is likely to be no longer than 60 minutes.

ARE THERE ANY SIDE-EFFECTS AFTER THE MRI SCAN?

MRI does not use ionising radiation to create images of your body, but uses a combination of magnetic fields and radio waves.

There are no after-effects from your scan and you can carry on with everyday life as normal immediately afterwards. You may drive and return home or to work immediately afterwards and may eat and drink normally.

If you are worried about any aspect of your scan, please call the Radiology Department before your appointment, and we will be pleased to discuss any concerns you may have and to answer any questions.

WHERE WILL THE RESULTS OF MY MRI SCAN BE SENT?

One of our Consultant Radiologists studies the images produced during your MRI scan examination and provides a diagnostic report.

Your results will be sent back to your referring GP and Specialist at the Treatment Centre, and are normally available in less than a week. You should ask the Radiographer for some indication of the time that this will take.

WHAT IF I HAVE ANY QUESTIONS?

If you have a query about your MRI scan, please call the Radiology Department between 9am and 5pm, Monday to Friday on 01749 333 600.

This leaflet was adapted from an original document compiled by the Royal College of Radiologists.