

Information for patients having an MRI scan



The Royal College of Radiologists

The leaflet tells you about having a magnetic resonance imaging (MRI) Scan. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

Whether you are having an MRI scan as a planned or an emergency procedure, you should have sufficient explanation before you sign the consent form.

The radiology department

The radiology department may also be called the x-ray or imaging department. It is the facility in the hospital where radiological examinations of patients are carried out, using a range of x-ray equipment, such as a CT (computed tomography) scanner, an ultrasound machine and a MRI scanner.

Radiologists are doctors specially trained to interpret the images and carry out more complex examinations. They are supported by radiographers who are highly trained to carry out x-rays and other imaging procedures.

What is an MRI

MRI (magnetic resonance imaging) is the name given to a technique which builds up pictures of an internal cross-section of the part of the body under investigation. The large machine contains a 'tunnel', about four feet long, through which a patient lying on the attached couch can pass.

It uses a magnetic field and radio waves, together with an advanced computer system to build up a series of images, each one showing a thin slice of the area being examined.

These images are very detailed can show both bones and soft tissues in the body and can therefore give a great deal of information. By means of the computer, the 'slices' can be also be obtained in any direction.

Detailed MR images allow physicians to better evaluate parts of the body and certain diseases that may not be assessed adequately with other imaging methods such as x-ray, ultrasound, or computed tomography (also called CT or CAT scanning).

Are there any risks?

As far as is known at present, this is an extremely safe procedure. It does not involve the use of x-rays. You are placed in a very powerful magnetic field, and consequently if you have any small pieces of metal inside your body, you should inform the radiographer as in some cases you may not be able to have the examination.

If you have had a history of metal fragments in your eyes, it is necessary to have an ordinary x-ray done to prove there are no bits left. If you have a pacemaker, metal heart valves or metallic clip on an artery at the base of your brain, then there is a risk that these may move during an MR scan, and a different examination will need to be arranged instead. However, any shrapnel or metal sutures, such as stitches, that have been in place for a long time may not create a problem.

For female patients, if you are or might be pregnant, you must make sure the doctor referring you or a member of staff in the radiology department knows as soon as possible in advance. MR scans may not be advisable in early pregnancy, unless there are special circumstances.

Are you required to make any special preparations?

Usually you don't need to make any special preparation for an MR scan. Unless you have been told otherwise, you may eat and drink normally before and after the scan. For abdominal and pelvic scans, you may be asked to drink a fairly large amount of fluid before the scan, to help identify your stomach and bowel.

Can you bring a relative/friend?

Yes, but for reasons of safety they may not be able to accompany you into the x-ray room, only in very special circumstances.

When you arrive

Please go to the reception desk in the part of the radiology department where MR scanning is carried out, after which you will be shown where to wait until collected by a radiographer or other member of staff.

Upon collection

You will be shown to a private cubicle where you may be asked to take off your outer garments and remove jewellery (except your wedding

ring), cash, keys, credit cards and watches etc. This is because anything containing metal may interfere with the magnetic field of the MRI unit. Metal and electronic objects are not allowed into the examination room.

You may be asked to put on the surgical gown and dressing gown provided, but you may wish to bring your own dressing gown. You should place your clothes and personal belongings either in a basket, which you will keep with you, or in a secure locker.

Who will you see?

You will be cared for by a small team including a radiographer who will perform the examination. The radiologist may be look at the results on the computer screen, as it is happening, or may simply look at a recording of the images later, before writing a report.

What happens during the MRI?

You will be taken into the special room and made comfortable lying on the couch. Straps and pillows may be used to help you stay still and maintain your position during imaging. You may be given a contrast medium (a dye) which helps to produce a more detailed image. The

contrast medium would be injected into a vein in your arm, which occasionally causes a warm feeling for a short while.

The couch will be moved slowly to position the part of your body under investigation within the 'tunnel'. The radiographers will retire to the control room but you will be able to talk to them via an intercom, and they will be watching you all the time. It is important that you remain completely still while the images are being recorded. During the scan, you may well find the machine very noisy and you will probably be given ear plugs and/or earphones. If you feel uncomfortable or worried, do mention it immediately to the radiographer.

Upon completion you may put on any clothes you have taken off, but may be asked to wait a little longer while the radiologist is satisfied that the scans have been successfully completed.

Will it be uncomfortable?

Apart from any machine noise you will not be aware of anything happening. Most patients do not mind lying with their body within the 'tunnel', but some find it claustrophobic. If this makes you feel worried

do tell the radiographer straight away. However, if you suffer badly from claustrophobia, you should talk to the radiology department as soon as possible ahead of your appointment.

How long will it take?

The process of taking the images on the screen usually takes about 20–30 minutes and unless you are delayed by such as emergency patients, your total time in the department is likely to be about 45 minutes.

Are there any side-effects?

No. You can drive home afterwards and return to work as necessary.

Can you eat and drink afterwards?

Yes, do so normally.

When will you get the results?

After the scan, the images will be examined further by the radiologist, who will prepare a report on their findings. This may take some time to reach your referring doctor, but is normally less than 14 days. You

could ask the radiographer or radiologist for some indication of timing.

Finally...

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure, before you sign the consent form.

Other sources of information

Websites

For general information about radiology departments, visit The Royal College of Radiologists' website: www.goingfora.com

NHS Direct

For health advice or information you can call NHS Direct on 0845 45647 or visit the website: www.nhsdirect.nhs.uk

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This leaflet has been prepared by the Clinical Radiology Patients' Liaison Group (CRPLG) of The Royal College of Radiologists.

Board of the Faculty of Clinical Radiology

The Royal College of Radiologists, March 2008

Notes for medical staff

This patient information leaflet may be downloaded and, if necessary adapted, for medical use and is also a direct source of information for patients accessing this website. It has been produced by the Clinical Radiology Patients' Liaison Group of The Royal College of Radiologists. If being used for a hospital leaflet, it is recognised that certain other information would need to be included for the patient as described below.

The appointment arrangements

- **Details of investigation**
- **Date, time and location**
- **What the patient should do if they are unable to attend**
- **Contact telephone number(s)**

Special instructions

- **Preparations required before attending**
- **Advice on dealing with personal valuables**

How to find the site

- **Hospital, transport, parking**
- **Department, directions, map**

Special needs

- **Information for those with a disability (parking, nearest drop-off point, transport within hospital)**
- **Special language needs**
- **Help for deaf/hard of hearing, blind/partially sighted**