



MRI or Magnetic Resonance Imaging is an advanced imaging technique, which uses a very strong magnet and radio frequency energy to produce images in any plane through the body.



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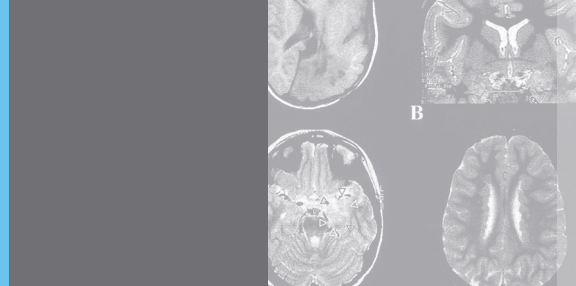
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MRI
 MAGNETIC
 RESONANCE IMAGING



COMMITTED
TO PROVIDING
HIGH QUALITY
DIAGNOSTIC
MEDICAL IMAGING

What is MRI?

MRI or Magnetic Resonance Imaging is an advanced imaging technique, which uses a very strong magnet and radio frequency energy to produce images in any plane through the body. MRI does not use x-rays. Extensive research has shown MRI to be safe and the magnetic field and radio waves used have no known side effects.

The images produced can demonstrate a wide range of anatomy or pathology. MRI pictures show the soft tissues of the body including muscles, nerves, brain, discs, ligaments and cartilage.

Preparation for MRI

For most types of scan there is no other preparation required. Food, drink and medication can be continued.

There are some exceptions to this such as abdominal MRI and MRCP (for liver and bile ducts). The preparation for these scans involves nothing to eat or drink for a period of time prior to the scan. An MRI examination of the small bowel involves drinking some contrast prior to the scan. If you are booked for one of these scans you will be informed of the preparation on booking.

If you are taking medication for pain please take this prior to your scan, as you will need to be as still and comfortable as possible during the scan.

Attending for your MRI scan

All patients (or a relative, if the patient is unable to) must fill out the MRI Safety Questionnaire so we can assess if there are any metal devices in your body that could harm you during the scan or interfere with the pictures.

All patients, regardless of type of examination, are changed into a gown, with all external metal objects

removed. Please ensure that if you wear lots of jewellery or have body piercings that your jewellery is removed prior to arriving for your appointment. There is a locker provided for valuables. If a parent needs to accompany their child for a scan they will also be asked to complete a safety questionnaire and remove all metal objects.

What happens during the scan?

During the scan you will be lying inside the tunnel of a large donut shaped scanner. A piece of equipment called a coil will be placed over the area being imaged. It is important that you keep still during the scan because even slight movement can blur the pictures and reduce their usefulness. Every effort will be made to ensure that you are comfortable during your scan. The MRI scanner will make some loud buzzing and tapping noises during the scanning and earplugs or headphones will be provided. A buzzer will be provided for urgent contact with the MRI radiographer.

Music is provided during the scan if you wish or you may bring your own CD or an ipod.

For some scans a mirror can be provided and you can watch TV or a DVD. You may bring your own DVD.

How long does the MRI take?

Most MRI scans take between 20 and 40 minutes. The MRI radiographer will communicate with you during the scan through an intercom system.

Safety Issues

Due to the strong magnetic fields used, patients, relatives and accompanying staff need to be aware of several important safety issues.

1. Absolute contraindications – who cannot have an MRI scan?

Patients with implanted cardiac pacemakers, certain infusion pumps, certain brain aneurysm clips, cochlear implants or metal foreign bodies in the eye will not be admitted to the scan room due to risk of injury to the patient.

2. External metal objects

No loose metal objects can be taken inside the scan room. This includes things such as jewellery, keys, paper clips and scissors. They can be attracted to the magnetic field and can become dangerous missiles.

No electronic devices can be taken inside the scan room. This includes things such as infusion pumps, mobile phones, pagers, watches and credit cards. The magnetic field may irreversibly damage these items.

3. Internal metal objects

Patients with implanted electronic devices as listed above under absolute contraindications will not be scanned because there is a danger of injury to the patient if the device malfunctions due to the magnetic field.

Some intracerebral aneurysm clips are magnetic and unsafe in the MRI scanner; however, there are a number of MRI safe aneurysm clips manufactured now. The MRI radiographer will need to be informed of the make and model of the aneurysm clip on booking, to check if it is safe for the patient to be scanned.

Patients with metal fragments within the eyeball will not be admitted to the scan room because movement of the metal by the magnetic field may injure the patient's eye. An x-ray can be taken prior to the MRI scan if you think you have metal inside your eye.

Some types of cardiac and abdominal stents are not safe for MRI. If you have a stent, please inform us on booking.

Other surgically implanted metal devices, such as those used in orthopaedic or abdominal surgery are mostly MRI compatible, but still need to be checked with the MRI radiographer.

4. Pregnancy

If you are pregnant, please contact us so that our radiologist can discuss your scan with your referring doctor.

There are no known harmful effects of MRI on the foetus, however MRI scans are usually postponed during the first trimester of pregnancy, unless your doctor and our radiologist consider the MRI scan urgent and the best test for your condition.

Claustrophobia

If you have experienced claustrophobia, or have trouble in enclosed spaces you may ring and speak to someone at the MRI department before your appointment date as the staff have a number of ways to help with claustrophobia.

If you require sedation please inform us at the time of booking so a specific booking can be arranged. Sedation is given by a radiologist via an intravenous cannula in a vein in the arm or hand. You will need to fast for 4 hours prior to the appointment and you must have someone to drive you home. After completion of the scan you will need to remain under observation for a time to make sure the sedation has worn off.

When will I get my results?

A radiologist will interpret the pictures taken during your MRI scan and this may take some time as there are many types of complex images taken. The report will usually be available to your referring doctor the next working day after the scan.