

MRI is a non-invasive medical scanning technique that provides images of the inside of the human body with a high degree of detail and accuracy. Conventional scans use x-rays, ultrasound or radioactive materials to examine internal organs, however MRI uses powerful magnetic fields and radio waves. It is safe and painless.

### The Procedure

The MRI scanner consists of a large magnet that forms a short tube.

A coil is placed around the area of the body to be examined which acts as an antenna for the radio waves.

The patient lies on a table that slides into the magnet at the start of the scan.

During the scan, loud knocking noises are heard due to rapid switching of magnetic fields – earplugs are provided to reduce the noise level.

Scan times vary between approximately 20 minutes and 50 minutes.

An injection may sometimes be required towards the end of the scan.

### Restrictions

MRI scanning was initially developed almost 20 years ago. To the best of our knowledge it is a safe technique with no known side effects, however despite this, some patients cannot be scanned. Certain implanted medical devices such as pacemakers, infusion pumps and nerve stimulators will malfunction or be damaged when placed in a strong magnetic field. As a result, patients with these devices cannot be scanned. Rarely, the presence of artificial heart valves or surgical clips used to treat aneurysms of the brain may prevent scanning, however more recently these have been designed to be MRI compatible.

Metal foreign bodies within the eye also prevent scanning and a plain x-ray may be performed if there is a possibility of foreign bodies being present. Metallic orthopaedic implants such as joint replacements do not prevent MRI

scanning, however if the scans are performed in the region of these implants, the diagnostic accuracy is reduced due to distortion of the images.

### Common Indications for MRI include:

- » Brain – Multiple Sclerosis, brain tumours, pituitary adenoma, epilepsy, developmental abnormalities, acoustic neuroma, ischaemia.
- » Spine – disc protrusion, sciatica, metastasis, cord/ nerve lesions, syrinx, trauma.
- » Musculoskeletal – injuries and disease affecting bone tendons, ligaments, cartilage or bone marrow, tumour, avascular necrosis.
- » Abdomen – cholangiography, tumours of pancreas, kidneys, liver and adrenal glands.
- » Pelvis – prostatic, uterine tumours and rectal tumors.

### Imaging Expertise

At CIG we provide specialised MRI Radiographers to make your examination more efficient and comfortable. Our Radiologists are specialists in the field of MRI diagnosis. Our MRI staff participate in ongoing professional development programs.

“Our Radiologists are specialists in the field of MRI diagnosis.”

### I can see clearly now

The quality of images provided by MRI allows for early and accurate diagnosis for many conditions and disease processes.

The most common areas of the body scanned using MRI are brain, spine and the musculoskeletal system. In addition, angiograms (studies of the arteries in the body) can be performed that often do not require an injection.

MRI examinations can also be performed on many other parts of the human body such as the abdomen and pelvis.

To ensure that we are providing you with the best service, at any stage of the examination if you have any questions or concerns, please ask our staff.

We also welcome any feedback.



### Appointment

Please phone or SMS our friendly booking service on **1300 788 508** or request an appointment online [www.canberraimaging.com.au](http://www.canberraimaging.com.au)

### What to bring

Please bring the following items with you to your appointment:

- Your referral
- Any relevant films
- Medicare card
- Pension / Health Care card

### Your results

Your doctor will receive fast and convenient electronic access to your reports and images. Canberra Imaging Group strongly advise that you return to your referring doctor in order for your doctor to discuss your results with you.