



What is an MRI?

MRI (magnetic resonance imaging) is a safe, non-invasive procedure that uses radio waves, a magnet and computer software to take two- and three- dimensional (3D) images of the inside of the body. Its main advantage is that it can detect various diseases in their early stages, especially in soft tissue.



What does the MRI scanner look like?

The traditional MRI unit is a large cylinder-shaped tube that is surrounded by a circular magnet. You will lie on a moveable examination table that slides into the centre of the magnet.

Our **top of the line 3T MRI** technology provides high patient comfort with its 70cm open bore and short system design of 173cm. The table weight limitation is 250kg for our 3T MRI

IS MRI SAFE?

There are no known risks or side effects associated with MRI.

MRI does not use ionising radiation and so can be done repeatedly without any negative effects.

The powerful magnetic field of the MRI scanner will attract iron-containing objects known as ferrous metal objects and may cause them to move suddenly and with great force towards the MRI magnet. This can pose a possible risk to anyone in the object's "flight path". Great care is taken to ensure that no ferrous metal objects are brought into the MRI area.

Can I have an MRI?

MRI poses no risk to the average patient. Some conditions or implants may make an MRI examination inadvisable such as:

- Heart pacemaker or Cardioverter Defibrillator (ICD)
- Cerebral aneurysm clip (metal clip on a blood vessel in the brain)
- Implanted insulin pump (for treatment of diabetes), narcotics pump (for pain medication), or implanted nerve stimulators ("TENS") for back pain
- Metal in the eye or eye socket
- Metal shrapnel in the body
- Cochlear (ear) implant for hearing impairment
- Severe lung disease
- Uncontrolled gastroesophageal reflux (a condition causing severe heartburn)
- Artificial Heart Valves

Every MRI patient will be screened prior to entering the MRI area to ensure that there is no health risk.

Patients who have metal implants or any of the following medical devices can be safely imaged with MRI:

- Surgical clips or sutures
- Artificial joints
- Staples
- Most heart valve replacements
- Disconnected medication pumps
- Vena cava filters
- Brain shunt tubes for hydrocephalus
- CABG –Coronary Artery Bypass Graft
- Implanted spine stabilisation rods
- Dental braces

One of the major advantages of the 3T MRI is the reduction of artefacts around any metal implants and dental braces to enable diagnostic studies previously not recommended.

How do I prepare for my scan?

You do not need to do anything special to prepare for your scan. However, if you are having a scan where contrast is required, you will be instructed to fast for 4-6 hours without food or drinks, except for water, prior to your appointment time. If you are over the age of 60, you will require a creatinine blood test in order to establish your renal function. Premedication may be required if you are asthmatic or have any allergies to food or medication. On the day of your appointment you will need to arrive about 15 minutes before your appointment time to complete an MRI safety questionnaire. It is very important to be accurate when answering the questions.



We may ask you to provide further information about any implants you may have before a decision on safety can be made.

It is very important to bring the request form from your Clinician, all post-surgery documentation as well as any previous related imaging reports and images on CD or film with you on the day of your MRI study for the Radiologist to review and compare for a comprehensive impression of your health.

How long will the scan take?

The scan will usually last approximately 30 minutes for each part of the body being scanned

What can I expect during my scan?

A specially qualified MRI Technologist will position you on the examination table in a comfortable position and will explain the procedure to you. MRI Devices that contain coils capable of sending and receiving radio waves may be placed around or



adjacent to the area of the body being scanned.

Minimal immobilisation may be used to maintain the correct position and to help you keep still. The MRI Technologist will provide you with a patient alarm button so

that you can call the Technologist at any time if required.

It is important that you remain perfectly still while the images are being recorded and you may be asked to hold your breath during some sequences, which is typically no more than 24 seconds.

You will know when images are being recorded because you will hear a tapping or thumping sound when the coils that generate the radiofrequency pulses are activated. You will be given earplugs or headphones to reduce the noise of the scanner depending on the part of your body being scanned.

Will I need an injection?

Some patients may need a 'contrast' injection to make the images clearer, usually in parts of the body which have poor natural contrast. Contrast is a special liquid that highlights the tissue to make subtle differences or disease easier to see. Gadolinium is the key component of the contrast material most often used in MRI. When this substance is present in the body, it alters the magnetic properties of nearby water molecules, which enhances the quality of MR images.

You will only feel a pinprick as the needle is inserted into your vein. You may feel a cold sensation up your arm during the contrast injection and might experience slight numbing. This feeling will subside after a few seconds.

Allergic reactions to contrast are rare. However, if you feel nauseas or extremely itchy during the scan, tell your Technologist immediately. Following an imaging exam with contrast material, the material is

absorbed by the body and eliminated through urine.

Can I be sedated?

No sedation will be given to any patients at Allied Medical Center. For claustrophobic patients and children, a relative or friend may be permitted to stay with you during the MRI study. The relative or friend will be required to complete a MRI safety questionnaire and to undergo the same safety procedures as you to ensure no risk to your relative or friend.

What happens after my scan?

You may eat and drink as usual and return to your normal daily routine straightaway. If you have had an injection, we advise you to drink plenty of fluids, especially water, to help flush the contrast out of your system.

When will I get my results?

Your study will be reported within 24 hours and a written report will be sent to your referring Clinician upon completion. You will be asked to wait a few minutes while we burn your images on a CD which will be given to you to take back to your Clinician at your follow-up appointment. Your Clinician will discuss the findings with you.

Any other questions?

If you have any other questions, worries or doubts do not hesitate to ask one of our staff.

We want you to feel as comfortable as possible.