



## Magnetic Resonance Imaging (MRI) Scans and Procedures

This brochure tells you about a MRI Scan, including MRI + Angiography, MRI + Venography, and MRI + Angiogram. It includes the benefits and the risks, what happens before, during and after having a MRI Scan or procedure.

### What is an MRI Scan?

An MRI (Magnetic Resonance Imaging) scanner uses magnetic fields, radio waves and a computer to take pictures of the inside of your body. It takes many pictures of a section (cross sections) of your body similar to a CT scanner, but **does not** use any radiation.

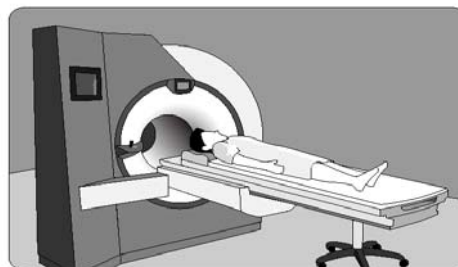
The MRI scanner has a short tunnel in the centre and a flat bed for you to lie on. While you are lying on the bed, it will slowly move into the centre of the tunnel where the pictures are taken. This movement is controlled by MRI staff.

You may be given an injection of a special dye (contrast) into your veins.

Some of the things MRI scans are used to look at are:

#### MRI

- The brain and spinal cord
- Bones and joints
- The back
- Liver and bile ducts



#### MRI + Angiography

MR Angiography uses MRI to look at blood vessels in your brain, neck, heart, lungs, kidneys and legs.

#### MRI + Venography

MR Venography uses MRI to show blood flow in your veins.

## **MRI + Arthrogram**

An MR Arthrogram uses MRI to look at your joints after a special liquid is injected into the joint.

### **Benefits associated with an MRI Scan**

- **Very detailed** diagnostic pictures of inside your head, body, legs, arms and joints.
- Generally painless
- **Does not use radiation**
- MR angiography and venography can show problems, including clots in your arteries and veins without using surgery.

### **Risks associated with an MRI Scan**

Your doctor knows the risks of having a MRI scan. Your doctor will consider the risks before recommending you to have a MRI scan. Possible risks are:

- Usually not recommended in early pregnancy.
- **You must tell staff if you have:**
  - A pacemaker
  - A cochlear implant
  - A spinal stimulator
  - Metal implants, including aneurysm clips, other surgical clips or staples, metal rods or pins in your bones, or false teeth
  - Any pieces of metal in your eyes
  - Kidney disease

**The presence of these objects may add to the risk of having an MRI Scan and may cause it to be cancelled.**

If you are having 'dye', there is a very small risk of:

- An allergic reaction (usually mild and easily controlled by medication).
- Infection at the site of an injection

If you are at all concerned regarding the risks, talk to your doctor before the examination.

### **Preparation for the MRI Scan**

- Bring your referral letter or request form and all x-rays taken in the last 2 years with you.

- Leave the x-rays with the radiology staff as the doctor may need to look at them. The MRI staff will tell you when these are ready to be picked up.
- Wear comfortable, loose clothing.
- Leave all jewellery and valuables at home (metal objects, such as watches, keys, coins and jewellery cannot be taken into the MRI room. Cards with magnetic strips such as bank cards will be erased by most MRI scanners).

If you are having 'dye':

- You may be asked not to eat or drink for a few hours before the MRI Scan

### **Important to tell your doctor before the scan**

- If you are or may be pregnant.
- If you don't like closed in spaces (claustrophobic). Your doctor may then discuss the possibility of you being given something to relax you just before the scan (sedative). If the doctor has decided you need a sedative and written it on the request form, you will need to let the staff know when you book your scan.
- If you are having 'dye' tell the staff about any medical conditions you have, including kidney disease, allergies and asthma (some conditions such as kidney disease may mean you cannot have an MRI with dye).

Just before the MRI Scan:

- You may be given a gown to wear during the procedure.
- You will be asked to remove any metal objects.
- You may be given a sedative if you don't like closed in spaces. (claustrophobic). The sedative will relax you and may make you feel sleepy.

### **Consent**

You have the right to refuse an examination and may do so if you wish. You may be asked to complete a consent form.

### **What happens during a MRI Scan**

The staff will ask you to lie on the bed, and will place a receiver around the part of your body being scanned. Straps or pillows may be used to help you keep still during the scan, however you will be able to remain comfortable.

If you are having dye or sedative injected, MRI staff will put a needle into a vein in your hand or arm.

Possible side effects of 'dye':

- You may feel a slight coolness and a flushing for a few seconds.
- Part of your body may feel warm - if this bothers you, tell the staff.

The MRI machine makes a lot of noise during the scan, which may sound like thumping or humming. You will be given earplugs or headphones to block out the noise or listen to music. (In most MRI centres you can bring your own CD to listen to).

The staff will leave the room where they can control the movement of the bed from behind a screen. They can see, hear and speak to you at all times. You will be able to speak to them at all times. They will tell you what is happening, when to hold still and if you need to take a deep breath and hold it. If you get stiff, need to move or are feeling closed in (claustrophobic), tell the staff.

The MRI staff will use a remote control to slowly move you into the tunnel of the MRI scanner.

When the scanning is finished you will be asked to wait while the staff check the pictures.

The scan, including getting you ready, takes between 30 minutes to one hour.

## **When will I get the results?**

The amount of time it takes for you to get your results will differ depending on where you get your scans done. The radiology doctor will look at the pictures and write a report. The pictures may be on films or on a CD.

Ask whether you should wait to take the pictures and report with you, or whether they will be sent to your doctor.

Your doctor will need to discuss the report with you. You will need to make an appointment to do this.

## **After the MRI Scan**

You will be able to go soon after the MRI is finished and can continue with normal activities.

If you had 'dye':

- Staff will need to take out the needle if it is still in your arm.
- Staff will give you any special instructions
- The dye will pass out of your body in your urine. You will not notice it as it is colourless.
- Drink plenty of fluid to help get rid of the dye.

## **If you had a sedative:**

- Staff will need to take out the needle if it is still in your arm.
- **You must not drive a car or take public transport and must have someone with you for 24 hours afterwards.**
- **You must not operate machinery on the day of the scan**

## **Costs**

For an Australian patient in a Public Hospital in Western Australia

- Public patient – No cost to you unless advised otherwise
- Private patient – Costs can be claimed through Medicare and your health insurance provider

For a patient in a Private Hospital or Private Imaging Site in Western Australia or a patient outside Western Australia

- Ask your doctor or the staff where you are having your test done what the cost will be

## **Further Information**

For more detailed information on an MRI, please see the [Magnetic Resonance Imaging brochure](#) from [Inside Radiology](#), a resource produced especially for consumers by the [Royal Australian and New Zealand College of Radiologists](#).

If you would like to look at other relevant brochures, please see the Diagnostic Imaging Pathways website - [www.imagingpathways.health.wa.gov.au/includes/consumer.html](http://www.imagingpathways.health.wa.gov.au/includes/consumer.html)

or

If you have questions or require any further information please contact your doctor or speak to the staff where you are going to have your procedure.

## **Consumer Participation**

This information has been reviewed by representatives from the following groups:

- Aboriginal people
- People with Disabilities
- Seniors
- CALD (Culturally and Linguistically Diverse)
- The Health Consumers' Council.

## Feedback

The Division of Imaging Services, Royal Perth Hospital is committed to providing a friendly and professional service. If you would like to provide feedback on this information sheet, please send to:

Quality Coordinator  
Imaging Services  
Royal Perth Hospital  
GPO Box X2213  
Perth WA 6000

### Website

For more information go to [www.imagingpathways.health.wa.gov.au](http://www.imagingpathways.health.wa.gov.au)

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