

Information for Consumers - Magnetic Resonance Imaging (MRI)

This article tells you about a magnetic resonance imaging (MRI) scan, including MRI + angiography, MRI + venography and MRI + arthrogram. It includes the benefits and the risks, what happens before, during and after having a MRI scan or procedure.

What is a MRI scan?

A MRI 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

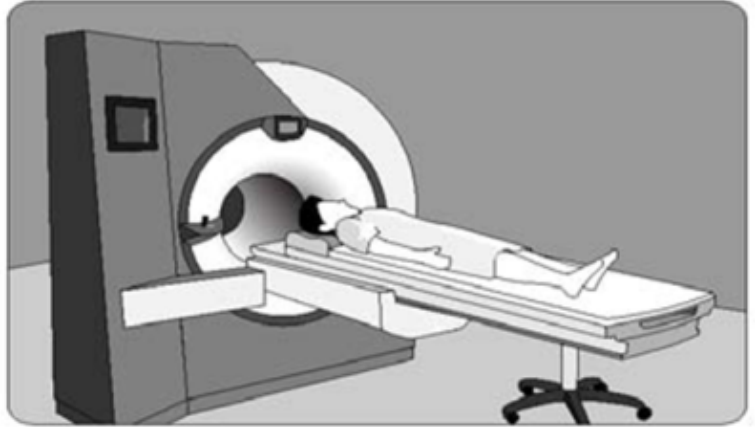
MR Venography uses MRI to show your veins.

MRI + arthrogram

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

Benefits associated with a 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 a 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:

- Often not recommended in early pregnancy
- **You must tell staff if you have**
 - A pacemaker
 - A cochlear implant
 - A spinal stimulator
 - Metal implants, including aneurism clips, other surgical clips or staples, metal rods or pins in your bones, or false teeth
 - Any pieces of metal in your eyes
 - **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 a 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 please access MRI from InsideRadiology at: www.insideradiology.com.au

This is a resource produced especially for consumers by the Royal Australian and New Zealand College of Radiologists: www.ranzcr.edu.au

A guide to gathering information that you may need for making informed decisions is published by the Consumers' Health Council of Australia at: <https://chf.org.au>

Or for other relevant information access the Diagnostic Imaging Pathways website at: www.imagingpathways.health.wa.gov.au/index.php/consumer-info



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

All feedback, comments and suggestions regarding consumer information at Diagnostic Imaging Pathways are welcome. Please direct them to the following email address: dipfeedback@health.wa.gov.au

Disclaimer

This article is intended as general information only. The Department of Health cannot accept any legal liability arising from its use. The information is kept as up-to-date and accurate as possible, but please be warned that it is always subject to change

Copyright

© Copyright 2017, Department of Health Western Australia. All Rights Reserved. This article and its content has been prepared by The Department of Health, Western Australia and is protected by copyright.

Date reviewed: July 2017

Date of next review: July 2019