



Magnetic Resonance Angiography (MRA)

This brochure tells you about the benefits and the risks, what happens before, during and after having a MRI + MR Angiography Procedure.

What is a MRI Scan + MR Angiography?

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 lots of pictures of a section (cross sections) of your body similar to a CT scanner, however, it **does not** use x-ray radiation.

MRA (Magnetic Resonance Angiography) uses MRI to look at blood vessels in your brain, neck, heart, lungs, kidneys and legs.

You may be given an injection of a special dye.

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.

(Insert picture of equipment and image)

Benefits associated with an MRI Scan + MR Angiography

- Used for diagnosis to show **very detailed** pictures of inside your head, body, legs and arms.
- Can be used to look at problems with your blood vessels without using surgery.
- **Does not use radiation.**
- Painless.

Risks associated with an MRI Scan + MR Angiography

Your doctor knows the risks of an MRI Scan and will advise you whether the benefits outweigh any possible risk. 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 the MRI Scan+ MR Angiography

- 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 radiology 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 your 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 an MRI Scan + MR Angiography

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.
- A salt water fluid may be passed through the needle so that it does not become blocked before the dye or sedative is injected.

Possible side effects of 'dye':

- You may feel a strange feeling in the area you were injected 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 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+ MR Angiography

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

The costs of MRI + MR Angiography will depend on exactly what is needed and where the scan is performed. When you ring to book your scan, you may wish to ask if it will cost you anything. Otherwise, you can ask staff when you go to have your scan.

Further Information

For more detailed information, please see [Inside Radiology](#), a resource produced especially for consumers by the [Royal Australian and New Zealand College of Radiologists](#).

Or log into the Diagnostic Imaging Pathways website - www.imagingpathways.health.wa.gov.au/includes/consumer.html

If you have questions or require any further information please contact your Doctor.

Consumer Participation

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

- Aboriginal
- Disabled
- 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

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