

MRI scans: Patient Information

What is MRI?

Magnetic resonance imaging (MRI) is a technique that uses a magnetic field and radio waves to create detailed images of the organs and tissues within your body. It is a very detailed test which complements other imaging tests that are used by haematologists.

Most MRI machines are large, tube-shaped magnets which create a magnetic field when you lie inside the machine. The magnetic field temporarily aligns the water molecules in your body, and Radio waves cause these aligned particles to produce very faint signals, which are used to create cross-sectional MRI images of your body.

The MRI machine can also be used to produce 3-D images that may be viewed from many different angles.

Why has an MRI been ordered?

MRI is useful because it is a non-invasive way for your doctor to examine your organs, tissues and skeletal system. It produces excellent images of the brain and spinal cord, the spinal bones, and other internal organs in your trunk and chest.

What are the risks of MRI scans?

Because the MRI is a very strong magnet, the presence of metal in your body may be a safety hazard or affect a portion of the MRI image. You must tell the technologist if you have any metal or electronic devices in your body, such as:

- Metallic joint prostheses
- Artificial heart valves
- An implantable heart defibrillator
- A pacemaker
- Metal clips to prevent aneurysms from leaking
- Cochlear implants
- A bullet, shrapnel or any other type of metal fragment (including metal filings in the eye from grinding injuries)

Risks to unborn babies

Please also inform the technologist if you think you're pregnant, because the effects of magnetic fields on unborn babies aren't well understood. Your doctor may recommend choosing an alternative

exam or postponing the MRI.

Risks to kidney or liver function.

Some MRI tests require injections of dye or contrast, which can have effects on kidney and liver function if these organs are already impaired. Please discuss any kidney or liver problems with your physician and the technologist.

Do I have to fast for my MRI?

Some MRI scans do require fasting. Check with your doctor or the organising radiology staff prior to your test.

What do I need to do to prepare?

Before an MRI exam, it is usually OK to eat normally and continue to take your usual medications, unless otherwise instructed. You will be asked to change into a gown and to remove any metal including:

- Jewelry
- Hairpins
- Eyeglasses
- Watches
- Wigs
- Dentures
- Hearing aids
- Underwire bras

What happens during the test?

The MRI machine looks like a tunnel that has both ends open. You lie down on a movable table (or gurney) that slides into the opening of the tunnel. A technologist monitors you from another room and you can talk with each other by microphone.

The procedure is painless. You don't feel the magnetic field or radio waves, and there are no moving parts around you. It is noisy however, and it is good to be prepared for some unusual sounds during the test. You may hear the internal part of the magnet producing tapping, thumping, whirring and other noises. You may request earplugs or music to help block out the noise.

If you are worried about feeling claustrophobic inside the MRI machine, talk to your doctor beforehand. He or she may make arrangements for you to receive a sedative before the scan.



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How long does an MRI take?

An MRI typically lasts less than an hour. You lie as still as you can, because movement can blur the resulting images. Sometimes the technologist will be asked to inject dye into your vein to enhance the appearance of certain tissues or blood vessels in the images.

What happens after the test?

If you haven't been sedated, you may resume your usual activities immediately after the scan.

When do I get my results?

MRI scans are reported by specialist radiologists, and the reports will be sent to your referring haematologist. You should make an appointment to discuss your results in the week following the test.