



Preparing for your magnetic resonance imaging (MRI) exam

Learn more about the procedure and what you can expect



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MRIs

➤ Why am I getting an MRI?

MRI is a non-invasive way for your doctor to see detailed images of the inside of your body, including your organs, tissues and skeletal system. It may be used to help diagnose a number of problems or for monitoring purposes.

Most MRI machines are large, cylinder-shaped tubes surrounded by a circular magnet. They have a movable table for you to lie on that slides into the centre of the tube, which is open at both ends. The scanners are also well-lit and have air conditioning.

➤ How does MRI technology work?

Unlike with an x-ray, MRI machines do not use radiation.

Instead, MRI uses a strong magnet and computer-generated radio waves to temporarily realign water molecules in the body. As these molecules return to their normal alignment, they give off an energy that is captured by the MRI scanner to create cross-sectional images – just like slices of bread.



Metal and electronic items can interfere with the magnet in the MRI machine. Before entering the exam room, you may be asked to change into a gown and will need to remove items such as jewelry, hairpins, eyeglasses, dentures, hearing aids and mobile phones. Let the technologist know if you have any medical or electronic devices in your body, as these may also pose a risk.

➤ What can I expect from my MRI procedure?

It is understandable if you feel some nervousness about having an MRI. This is normal and you can always talk to a healthcare professional about any concerns. Rest assured, the great majority of exams are done without any difficulty and staff is on hand to support you should you require assistance.

Procedures can vary from 15 minutes to over an hour, depending on the type of exam and equipment used. You will usually be alone in the scanner room, but a technologist will be monitoring you from another room. You can talk with the technologist at any time using a two-way intercom.

You will hear and feel loud tapping, thumping or other sounds when the images are being recorded. It's important to stay still during this time to ensure the images produced are not blurry. Some facilities may offer earplugs or headphones to block the noise, or they may play music.

Contrast agents



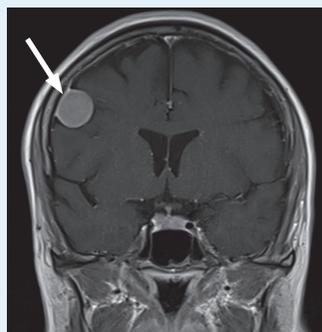
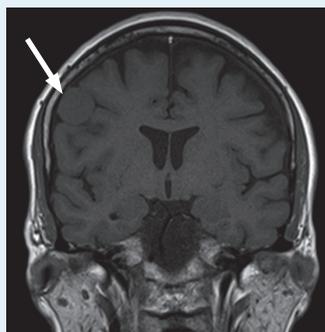
Do I need a contrast agent for my MRI?

Your doctor will decide if you need a contrast agent, depending on what information they are looking for in the scan.

A contrast agent is a special substance used to enhance the appearance of certain structures or tissues in the body. The agent helps differentiate one tissue from another by increasing their “contrast.” This makes it easier for your doctor to see any potential abnormalities.

Contrast agents are given by an injection into a vein or artery. There are several types of contrast agents, but the ones most often used in MRI exams contain a substance called gadolinium.

MRI scans of the brain without a contrast agent (left) and with a contrast agent (right). You can see how much clearer the different tissues are in the second image and how the contrast agent helped point out the abnormal tissue.



Images courtesy of PD Dr. med. Alexander Huppertz, Klinikum Ernst von Bergmann, Potsdam, Germany

What happens in the body after contrast agents are injected?

After the exam, the contrast agent exits through your urine or bowel movements.

Tiny traces of certain contrast agents may stay in different organs, including the brain, after your scan. There are no known negative effects from this, but it may be something your doctor takes into consideration when selecting the right contrast agent for you.

Contrast agents are safe. Side effects can occur, but not everyone will experience a reaction. These side effects can range from mild to severe, but severe reactions are uncommon.

Serious allergic or other reactions to contrast agents can also occur, but these reactions are rare. If a reaction occurs, the radiology department is fully prepared to manage it. Talk to the technologist or healthcare professional if you have any concerns.

> My MRI exam is scheduled for:

Date: _____ Time: _____

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