

What is a MRI?

Magnetic Resonance Imaging, or MRI, is an advanced state-of-the-art method that produces very clear pictures, or images, of the human body without the use of X-rays. MRI uses a large magnet, radio waves, antenna and computer to produce these images.



How does MRI work?

The human body is made up of millions of atoms that are magnetic. When placed in a magnetic field, these atoms line up with the field, much like a compass points to the North Pole. Radio waves, tuned to a specific frequency, tip these tiny magnets away from the magnetic field. As they tip, they gain energy. When the radio waves are turned off, the atoms try to realign with the magnetic field, releasing the energy they gained as a very weak radio signals. A powerful antenna picks up these signals and sends them to a computer, which performs millions of calculations to produce a black and white image for diagnosis.

The Advantages of MRI

The average MRI examination takes **45-60 minutes**. During this time, several dozen images may be obtained. These images assist the radiologist in making a diagnosis.

Preparing for the Examination

If you are claustrophobic, please let the scheduler know at the time of scheduling. After you check in, please use the restroom. The technologist will guide you to the MRI preparation area. You will be interviewed about your past medical and surgical history. The technologist will explain the examination process to you in detail and answer any questions you may have.

What Can You Expect During the MRI Exam?

- The technologist will have you lie down on a cushioned table. Once you have been comfortably positioned, the table is moved inside the magnet. You'll be in a tube that is well lit and has good airflow. An intercom system will keep you in constant communication with the technologist throughout the procedure, and in most cases, music is provided.
- During the examination, you may feel a light vibration and hear a rhythmic drumming noise that sounds like a jackhammer. You may feel warmth in the area being scanned.
- You may have contrast injected through a vein to highlight anatomy in your body. This may be a contraindication if you are pregnant, breast feeding, allergic to the contrast, or are in renal failure.
- You should try to **lie as still as possible** because movement will blur the image. When the scan is complete, the technologist will assist you off the table.

For Your Personal Safety

If you are scheduled for an MRI examination, please inform your doctor or the technologist if you have:

- **Pregnant**
- **Breast feeding**
- **A metal plate, or pin, or other metallic implant**
- A pacemaker
- Aneurysm clips
- An artificial heart valve
- An intrauterine device (IUD)
- Any metallic items. Certain metallic items in the body may exclude you from getting an MRI
- Ever done welding or grinding and/or had metal in your eyes (even if removed)

Helping us get a Good Picture of You

To help your doctor make the best diagnosis and to avoid wasting your time, please do not wear:

- Metallic objects such as jewelry
- Hairspray or make-up
- Wired bra
- A hearing aid
- Eyeglasses
- Any removable dental work
- Belts or suspenders

You may also want to avoid drinking coffee or other caffeinated beverages prior to scanning so you are able to lie quietly for several minutes at a time.