

What is an MRI?

Magnetic Resonance Imaging (MRI) is a diagnostic imaging technique that combines a powerful magnetic field with computer technology to produce exquisitely detailed images of your body's soft tissue (organs, muscles, fat). Because certain atoms in our cells respond, or resonate, slightly in the presence of magnetic fields, MRI is able to use that response to create an amazingly clear, detailed computer representation of internal organs, muscles, connective tissue, and the central nervous system. Using cross-sectional imaging of the body along multiple planes (like slices of bread), the clarity of these images is far greater than is available with conventional CT scans, X-rays, or even myelograms, allowing your physician to make an earlier and more accurate diagnosis. MRI is noninvasive (except in cases where contrast agents are injected).

How should I prepare for my MRI?

Most MRIs require little advance preparation, but a few things can help assure your comfort and safety in the MRI environment.

1. We ask all patients to change into a hospital gown for their MRI. **THIS MAY INCLUDE UNDERGARMENTS, DEPENDING ON THE AREA OF BODY BEING SCANNED.** Certain invisible metallic micro-fibers in athletic wear and other garments have been reported to heat during an MRI scan, which can result in skin burns. Changing out of street clothes helps minimize the risk of burns associated with these fibers.
2. When possible, leave jewelry and other valuables at home.
3. Remove any patch medications or any external mechanical devices, or let us know if you've been medically instructed not to.

Although an MRI is completely safe and painless, some people should not undergo an MRI, or will need to make special arrangements. Any of the following conditions may interfere with your MRI. Please call us immediately if you are scheduled for an MRI and:

- Have a cardiac pacemaker
- Have a prosthetic heart valve
- Have ever held a job in a metal-working industry or have been exposed to metallic dust or splinters
- Have suffered a shrapnel wound
- Have any metallic chips or splinters in the eye
- Are pregnant, or think you might be
- Weigh more than 300 pounds
- Suffer from claustrophobia
- Other items we need to know about:
 - a surgical clip, bone or joint replacement, or any metallic implant
 - Implants of any kind, heart, penile, medication administration
 - Pacemaker or internal defibrillator and leads or abandoned leads
 - Magnetic eyelashes
 - Medication patch, e.g. pain, hormonal, nicotine, etc.
 - Hearing aids
 - Medication administration pumps or on body injectors, e.g. insulin, chemotherapy, pain medication
 - On body monitor, e.g. blood glucose monitor
 - Metal clips, e.g. Aneurysm clip
 - Nerve or tissue stimulators, e.g. Vagus Nerve Stimulator, Deep Brain Stimulator, TENS unit
 - Tissue expanders
 - Stents, filter or coils or a programmable shunt
 - Wire mesh implant e.g. hernia
 - Metallic slivers, shavings, shrapnel, or other foreign body in tissue or eyes
 - Surgical staples, clips or metallic sutures
 - Dentures, partial plates, bridge or dental implants
 - Body piercing, jewelry, hardware or dermal piercing
 - Tattoos or permanent makeup
 - Joint replacements, prosthetics
 - Pins, screws, nail, wires or plates
 - IUD, diaphragm, or pessary
 - Radiation seeds or implants

What if I am claustrophobic?

Claustrophobia is a serious condition that may prevent patients from having a medically necessary MRI scan. At Shields, our staff and our equipment help patients minimize their anxiety and complete their scans successfully.

If you are prone to claustrophobia or panic attacks, or are in any way concerned about how you could react during the scanning procedure, talk to your doctor about medication options and choosing the least confining MRI option for your scan, such as one of Shields' high-field, open-bore MRI machines.

Many of our patients have struggled with claustrophobia and had a positive experience with a Shields' technologist who eased their minds. Review patient testimonials [here](#). Review patient testimonials [here](#).

OPEN-BORE TECHNOLOGY: Throughout the Shields network, 17 locations offer high-field, open-bore MRI machines, including two advanced 3T open-bore MRIs. These machines have wide opening and a short bed, so, for scans below the chest, most patients can be scanned with their head out of the machine.

PATIENT CARE: Our imaging technologists assist patients with claustrophobia every day and are specially trained to help keep patients relaxed. We provide:

- Comfortable positioning with warm blankets and pillows (depending on scan type)
- Ongoing communication with the technologist throughout the scan
- Headphones with Sirius satellite radio and your choice of relaxing music
- The option to have a family member or friend accompany you for support

