

## WHAT IS MAGNETIC RESONANCE IMAGING (MRI)?

MRI, or magnetic resonance imaging, is a means of “seeing” inside of the body for doctors to find certain diseases or abnormal conditions. MRI does not rely on the radiation (i.e., ionizing radiation) used for an x-ray or computed tomography (CT) scan. The MRI examination requires specialized equipment that uses a powerful, constant magnetic field, rapidly changing local magnetic fields, radiofrequency energy, and dedicated equipment including a powerful computer to create very clear pictures of internal body structures.

During the MRI examination, the patient is placed in the MR system or “scanner”. The powerful, constant magnetic field aligns a tiny fraction of subatomic particles called protons that are present in most of the body’s tissues. Radiofrequency energy is applied to cause these protons to produce signals that are picked up by a receiver within the scanner. The signals are specially characterized using the rapidly changing, local magnetic field and computer-processed to produce images of the body part of interest.

## WHAT IS MRI USED FOR?

MRI has become the preferred procedure for diagnosing a large number of potential problems in many different parts of the body. In general, MRI creates pictures that can show differences between healthy and unhealthy tissue. Doctors use MRI to examine the brain, spine, joints (e.g., knee, shoulder, wrist, and ankle), abdomen, pelvic region, breast, blood vessels, heart and other body parts.

## HOW SAFE ARE MRIS?

To date, over 150 million patients have had MRI examinations. Every year, approximately 10 million patients undergo MRI procedures. MRI has been shown to be extremely safe as long as proper safety precautions are taken. In general, the MRI procedure produces no pain and causes no known short-term or long-term tissue damage of any kind.

## HOW TO PREPARE FOR THE MRI EXAMINATION

There’s no special preparation necessary for the MRI examination. Unless your doctor specifically requests that you not eat or drink anything before the exam, there are no food or drink restrictions. Continue to take any medication prescribed by your doctor unless otherwise directed.

You won't be allowed to wear anything metallic during the MRI examination, so it would be best to leave watches, jewelry or anything made from metal at home. Even some cosmetics contain small amounts of metals, so it is best to not wear make-up. To prevent metallic objects from being attracted by the powerful magnet of the MR system, you will typically receive scrubs to wear during your examination.

Items that need to be removed by patients before entering the MR system room include:

- Purse, wallet, money clip, credit cards, cards with magnetic strips.
- Electronic devices such as beepers or cell phones.
- Hearing aids.
- Metal jewelry, watches.
- Pens, paper clips, keys, coins.
- Hair barrettes, hairpins.
- Any article of clothing that has a metal zipper, buttons, snaps, hooks, underwires, or metal threads.
- Shoes, belt buckles, safety pins.

Before the MRI procedure, you will be asked to fill out a screening form asking about anything that might create a health risk or interfere with imaging. You will also undergo an interview by a member of the MRI facility to ensure that you understand the questions on the form. Even if you have undergone an MRI procedure before at this or another facility, you will still be asked to complete an MRI screening form.

If you are claustrophobic or anxious, medication can be prescribed before your scan to help relax you. Instructions will be given to you as to how to take this medication.

Examples of items or things that may create a health hazard or other problem during an MRI exam include:

- Pacemaker.
- Implantable cardioverter defibrillator (ICD).
- Neurostimulator.
- Aneurysm clip.
- Implanted drug infusion device.
- Foreign metal objects, especially if in or near the eye.
- Shrapnel or bullet wounds.
- Permanent cosmetics or tattoos.
- Dentures/teeth with magnetic keepers.
- Other implants that involve magnets.
- Medication patch (i.e., transdermal patch) that contains metal foil.

Check with the MRI technologist if you have questions or concerns about any implanted object or health condition that could impact the MRI procedure. This is particularly important if you have undergone surgery involving the brain, ear, eye, heart, or blood vessels.

Important Note: If you are pregnant or think that you could be pregnant, you must notify your physician and the radiologist before the MRI procedure.

## **WHAT IS THE MRI EXAMINATION LIKE?**

The MRI examination is performed in a special room that houses the MR system or “scanner”. You will be escorted into the room by a staff member of the MRI facility and asked to lie down on a comfortably padded table that gently glides you into the scanner.

In general, in preparation for the MRI examination, you may be required to wear earplugs or headphones to protect your hearing because, when certain scanners operate, they may produce loud noises. These loud noises are normal and should not worry you.

For some MRI studies, a contrast agent called gadolinium may also be utilized by an injection into a vein.

The most important thing for the patient to do is to relax and lie still. Most MRI exams take between 30 to 45 minutes to complete depending on the body part imaged.

During the scan, you will be asked to remain still. During your MRI examination, the MR technologist will be able to speak to you, hear you, and observe you at all times.

## **WHEN WILL I RECEIVE THE RESULTS OF THE MRI?**

Once the entire MRI examination is completed, the pictures will be read by a radiologist, a specially-trained physician who is able to interpret the scans for your physician.

You will need to schedule a follow-up appointment with your physician to go over your results and discuss your treatment options. If you do not have an appointment scheduled, please contact the Scheduling Department at (813)978-9797.

How can I obtain a copy of the MRI?

If you had your test performed at FOI and would like to obtain a copy of the MRI report

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or a CD of the images, or have a copy sent to another physician, you will need to complete a Release of Medical Records Form. You can obtain this form from any of the Front Desk Representatives.

If you had your test done at an outside facility, you will need to contact that facility directly to obtain a copy of your results.

**FloridaOrtho.com (800) FL-ORTHO**

