

MRI: Heart Scan

How to prepare and what to expect

This handout explains how an MRI scan of the heart works, how it is done, how to prepare for it, what to expect during the scan, and how to get your results.

What is MRI?

Magnetic resonance imaging (MRI) is a way to take pictures of your internal organs and tissues. It uses radio waves and a strong magnet to provide clear and detailed pictures. Even different types of tissue within the same organ can easily be seen in an MRI picture.

How does the scan work?

An MRI scan of the heart usually involves taking 10 or more sets of pictures. Each set lasts 14 seconds to 7 minutes and will show a different section of your heart.

For Your Safety

Health Review

We need to know about certain **health conditions** before giving you an MRI scan. Please tell us if you:

- Have any problems with your liver or kidneys
- Need a liver or kidney transplant
- Are on dialysis
- Have allergies to any drugs or contrast material
- Have had any surgeries
- Are pregnant or may be pregnant

Metal Review

We also need to know if you have any **metal in or on your body** before we give



An MRI scan of the heart.

you an MRI scan. The strong MRI magnet will pull on any *ferromagnetic* object, such as iron and some other metals.

If you have any metal on or in your body, an MRI can harm you. Even small amounts that will not harm your body can distort the MRI picture.

Please tell MRI staff if you have:

- Aneurysm clips, a heart pacemaker (or artificial heart valve), an implanted port, an infusion catheter (with brand names such as Port-o-cath, Infusaport, or Lifeport), an intrauterine device (IUD), any metal plates, clips, pins, screws, or surgical staples, a prosthetic hip, or any implanted metal object in your body

In most cases, surgical staples, clips, plates, pins, and screws are not a risk during MRI if they have been in place for more than 4 to 6 weeks. If there is any question of metal fragments, an X-ray may be done to check for them.

- Tattoos or permanent eyeliner
- Medicine patches
- A bullet or shrapnel in your body
- Ever worked with metal

Please also **remove any other items that might contain metal** and affect your MRI pictures. These include:

- Hairpins
- Jewelry
- Glasses, hearing aids, and any removable dental work

How do I prepare for the scan?

- Starting 12 hours before your scan time, do **not** have caffeine in any form. This includes coffee, tea, chocolate, some pain remedies, energy drinks, some sodas, and more. Check the label on all products.

How is the scan done?

- The MRI technologist will put *cardiac electrodes* on your chest.
- You will lie on a sliding table and a device called a *surface coil* will be placed around your chest.
- The MRI technologist will move you inside the MRI unit and then leave the room to take the MRI pictures.
- You will be able to talk with the technologist at any time through an intercom.

- The entire scan usually takes 30 to 90 minutes.
- We will ask you to hold very still as each picture is taken. We may also ask you to hold your breath for many of the scans.
- Sometimes, an injection of a *contrast material* is used to make certain tissues or blood vessels easier to see. If you need the contrast:
 - Your doctor will talk with you about it before your scan.
 - You will receive the injection about halfway through the scan.
 - It will be injected through a small needle and an *intravenous (IV)* line in your arm or hand vein.
- After the scan, you will be asked to wait until the pictures are checked for quality. More pictures will be taken, if needed.
- After the scan is over, the electrodes and surface coil will be removed.

What will I feel during the scan?

- MRI does not cause pain.
- Some patients who have an MRI in an enclosed unit may feel confined or uneasy (*claustrophobic*). Please tell the doctor who referred you for the MRI if you are claustrophobic. You may receive medicine to help you relax.
- You may notice a warm feeling in the area where the pictures are taken. This is normal. If it bothers you, please tell the MRI technologist.
- You will hear loud tapping or knocking noises during the scan. We will provide earplugs and headphones with music to help block some of these sounds.
- If a contrast injection is needed, you may feel discomfort at the injection site. You may also feel a cool sensation at the site during the injection.

Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns.

- UWMC Imaging Services: 206.598.6200
- Harborview Imaging Services: 206.744.3105

Who interprets the results and how do I get them?

A radiologist skilled in MRI will review and interpret your MRI images. The radiologist will not talk with you about the results, but will send a report to your primary care or referring doctor. This doctor will give you the results.