



MR Spectroscopy

How to prepare for your procedure

An MR spectroscopy exam is used to obtain pictures and graphs of the brain. Read this handout to learn about how the exam works, how the exam is performed, how to prepare for the exam, what to expect during the exam, and how to get your results.

What is MR spectroscopy?

Magnetic resonance imaging (MRI) uses radio waves and a strong magnetic field instead of X-rays to provide pictures of the brain. MR spectroscopy uses graphs to study abnormalities of the brain.

How does the exam work?

MRI is a unique exam. Unlike standard X-rays, radioisotope studies, and even CT scanning, it does not rely on radiation. Instead, MRI uses radio waves and a strong magnetic field to create sharp pictures – even different types of tissue within the same organ can be seen. An MRI exam most often consists of two to six sets of pictures, each lasting 2 to 15 minutes. Each set shows a cross-section of the body part.

How should I prepare for the exam?

Because the strong magnetic field used for MRI will pull on any magnetic metal object in the body, tell MRI staff if you:

- Have a prosthetic hip, heart pacemaker (or artificial heart valve), implanted port, infusion catheter (with brand names such as Port-o-cath, Infusaport, Lifeport), intrauterine device (IUD), or any metal plates, clips, pins, screws, or surgical staples in your body.
- Have tattoos or permanent eyeliner.
- Have a bullet or shrapnel in your body.
- Have ever worked with metal.
- Have tooth fillings or braces. These items are usually not affected by the magnetic field, but they may distort pictures of the face or brain.
- Have drug allergies.
- Have had any surgeries.
- May be pregnant.

In most cases, surgical staples, clips, plates, pins, and screws pose no 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 detect any metal objects.

Remove any items that might affect MRI pictures, including hairpins, jewelry, glasses, hearing aids, and any removable dental work.

How is the exam performed?

1. You will be placed on a sliding table and a device called a surface coil will be placed around your head.
2. After moving you inside the MRI unit, the technologist will leave the room, and the MRI pictures are taken.
3. You will be able to talk with the MRI technologist at any time, using an intercom.
4. Based on how many pictures are needed, the exam will take about 30 to 60 minutes, although a very detailed study may take longer.
5. You will be asked not to move while pictures are being taken.
6. Some patients will require an injection of a contrast material to make certain tissues or blood vessels easier to see. A small needle with an intravenous (IV) line is placed in an arm or hand vein. The contrast material is injected about two-thirds of the way through the exam.
7. When the exam is over, you will be asked to wait until the pictures are reviewed for quality. More pictures will be taken as needed.

What will I feel during the MRI exam?

- MRI causes no pain, but you may feel uneasy from being closed in or from the need to remain still.
- You may notice a warm feeling in the target area. This is normal, but if it bothers you, tell the MRI technologist.
- You may feel discomfort at the needle site if a contrast injection is needed, and you may notice a cool sensation at the site during the injection.
- For many patients, the loud tapping or knocking noises heard at certain phases of the exam are annoying. Earplugs or headphones for music may help.

Questions?

Call 206-598-6200

Your questions are important to us. Call your doctor or health care provider if you have questions or concerns. UWMC Clinic staff are also available to help at any time.

**Imaging Services
206-598-6200**

Who interprets the results and how do I get them?

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

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