

Patient Information for Magnetic Resonance Imaging (MRI)

Your doctor has requested that you have a Magnetic Resonance Imaging examination or MRI. This is a new and safe method of imaging inner body structures. It does not involve the use of X-rays or radioactivity. Instead, magnetic fields and radio waves are used to generate signals from the body. These signals are collected by receivers or 'coils' designed specifically for each body part. Computers process these received signals to form images of the inside of the head, body, or limbs. Our radiologist will study your images and send a report to the paying party.

The Welcome Back Clinic upright MRI machine is the first of its kind in Canada. Its unique design allows people to sit, stand or bend so that images can be taken in the position that is causing their symptoms. Almost any structure in the body can be imaged. The person can sit and watch television in a quiet, open, comfortable environment while the scan is being performed. MRI scans can be arranged within a matter of days. Results can be available within 3-5 days.

PRECAUTIONS: Due to the use of strong magnetic fields, certain metallic implants or electronic devices may be disrupted. It is essential that you inform your doctor or our office, before your appointment date, if you have any of the following:

- **pacemaker or other electronic stimulatory device**
- **brain aneurysm clip**
- **ear or eye implant**
- **artificial heart valve**
- **metallic stent, coil, catheter, or filter in any blood vessel**
- **any history of eye injury involving metal or metal fragments**
- **surgery in the past 6 weeks**

In some cases we may need to review your operative reports, prior to arranging an appointment to determine the MRI compatibility of your particular implant device. Orthopedic hardware such as hip pins or bone screws are generally made of non-magnetic materials. They may cause some MR image distortion if located in the region of interest but are not at risk of being dislodged.

Please also contact us:

- if you are or may be pregnant. Although there are no known biological effects related to fetal MRI exposures, as a safety precaution, pregnant patients are generally not imaged using this method.
- if you have worked as a metal worker, machinist, or welder. You may be asked to have an eye X-ray prior to your MR exam to rule out the presence of metal fragments in or near the eye.
- if you have had surgery in the past 6 weeks.

PREPARATION: There are no special dietary restrictions or preparations. You may eat and take any medications as normal. Other preparations:

1. Metal on the body or in clothing may influence magnet fields and 'scramble' essential data. You may choose to arrive wearing clothing with no metal snaps or zippers, or you can change into a pair of our hospital pajamas. You will also be asked to remove all jewelry, watches, hair pins, coins, credit cards, etc. Gold is non-magnetic, so if rings cannot be removed, they may be worn into the magnet. A locker will be provided for safe-keeping of your belongings. For head and neck imaging, dentures must be removed, but these can be retained until just prior to imaging.

2. Avoid wearing eye makeup as some forms employ metallic pigments that may cause MR image distortion and eye irritation. Please contact us if you have tattooed eyeliner as it may contain metallic pigments.

3. For the protection of other patients and staff who may have allergies, we have a strict **NO FRAGRANCE POLICY**. On the day of your MRI appointment **DO NOT APPLY ANY SCENTED PRODUCTS**: cologne, after shave, perfume, aroma therapy, scented hair products, scented body lotions, etc. Our clinic policy defines that if you arrive for your appointment wearing scented products you may be asked to reschedule.

If you know that you suffer from severe anxiety or claustrophobia (fear of small spaces), e.g. you cannot ride in elevators or airplanes, you may wish to take some mild sedation. You must make arrangements for this sedation with your own doctor. The MRI department does not dispense medications. If taking sedation you cannot drive yourself home afterwards. Please have someone accompany you or plan to return home via public transit or a taxi.

YOUR MR EXAMINATION: The experience of having an MR examination is similar to that of a CT or CAT scan, which you may have had already. A technologist will position you on the scanning table/chair and will secure the region of interest. Please feel free to mention any special physical limitations you may have and to suggest ways to make your examination more comfortable. Once positioned, you will then be advanced to the center of a large magnet. You will hear knocking sounds when imaging commences (this expected loud knocking sound is caused by rapidly switching secondary magnetic fields used to locate MRI signals). The technologist will remain in contact with you throughout your examination visually and through an intercom system. You may also contact the technologist at any time by pressing a call bell.

The most important thing to remember is to keep very still while you hear the knocking sound. If you move, the images will be blurred and therefore not helpful for your diagnosis. The total exam times vary from 20 minutes to 2 hours, and are made up of segments lasting about 5 minutes each. Sedation is seldom necessary. In fact, most patients, after settling, take the opportunity to relax. You may watch TV during your scan.

Benefits of a Multi-Positional MRI Exam

Here are two scans of a patient with low back pain. The patient had surgery but the pain and symptoms continued to get worse.



Patient lying down

Patient upright

The image on the left was made with the patient lying down. It shows a normal alignment of the vertebrae.

The image on the right, which was done in an upright MRI scanner such as the one at the Welcome Back Centre revealed that the patient had dramatic spinal instability.

Following the scan, the individual underwent a second surgery which targeted the problem and the patient has been pain-free ever since.

The upright MRI scanner at The Welcome Back Centre may discover problems which other MRI scanners miss completely. The additional information revealed by upright MRI can be a valuable tool in surgical planning.