

MR Defecography

Magnetic resonance (MR) defecography is a noninvasive test that uses magnetic resonance imaging to obtain images at various stages of defecation to evaluate how well the pelvic muscles are working and provide insight into rectal function. It is used to help determine the cause of fecal incontinence, constipation, and other conditions such as pelvic organ prolapse that may interfere with a person's ability to pass stool.

Tell your doctor about any health problems, recent surgeries or allergies and whether there's a possibility you are pregnant. The magnetic field is not harmful, but it may cause some medical devices to malfunction.

Most orthopedic implants pose no risk, but you should always tell the technologist if you have any devices or metal in your body. Guidelines about eating and drinking before your exam vary between facilities. Unless you are told otherwise, take your regular medications as usual. Leave jewelry at home and wear comfortable clothing. You may be asked to wear a gown. If you have claustrophobia or anxiety, you may want to ask your doctor for a mild sedative prior to the exam.



What is MR defecography?

Magnetic resonance imaging (MRI) is a noninvasive test doctors use to diagnose medical conditions.

MRI uses a powerful magnetic field, radiofrequency pulses, and a computer to produce detailed pictures of internal body structures. MRI does not use radiation (x-rays).

Detailed MR images allow doctors to examine the body and detect disease.

Magnetic resonance (MR) defecography is a special type of MR imaging, where images are obtained at various stages of defecation. It produces detailed images during a bowel movement and provides information about the structure and function of the rectum (<http://www.radiologyinfo.org>) and the pelvic floor, a network of muscles that stretches between the pubic bone and spine and the abdominal organs it supports.

What are some common uses of the procedure?

Physicians use MR defecography to:

- obtain information about how well the pelvic muscles are working during a bowel movement.
- provide insight into rectal function.
- determine the cause of incontinence.
- determine the cause of constipation.
- diagnose and evaluate diseases affecting rectal function and pelvic floor disorders (<http://www.radiologyinfo.org>) (also called pelvic floor dysfunction), such as hernia, pelvic organ prolapse or rectal prolapse, a condition where part or all of the rectum wall slides out of place.
- provide information for surgical and treatment planning.

Who interprets the results and how do I get them?

A radiologist, a doctor trained to supervise and interpret radiology exams, will analyze the images. The radiologist will send a signed report to your primary care or referring physician, who will share the results with you.

What are the benefits vs. risks?

Benefits

- MR defecography helps assess pelvic floor abnormalities that can be difficult to diagnose through physical examination and other tests such as anal manometry, computed tomography (<http://www.radiologyinfo.org>), colonoscopy (<http://www.radiologyinfo.org>) and sigmoidoscopy (<http://www.radiologyinfo.org>).
- MRI is a noninvasive imaging technique that does not involve exposure to radiation.
- MR images of the muscle and pelvic organs are clearer and more detailed than with other imaging methods. This detailed assessment makes MRI an invaluable tool.
- MRI can help physicians evaluate both the structure of an organ and how it is working.
- MRI can detect abnormalities that might be obscured by bone with other imaging methods.

Risks

- The MRI examination poses almost no risk to the average patient when appropriate safety guidelines are followed.
- Although the strong magnetic field is not harmful in itself, implanted medical devices that contain metal may malfunction or cause problems during an MRI exam.

What are the limitations of MR defecography?

High-quality images depend on your ability to remain perfectly still and follow breath-holding instructions while the images are being recorded. If you are anxious, confused or in severe pain, you may find it difficult to lie still during imaging.

A person who is very large may not fit into certain types of MRI machines. There are weight limits on the scanners.

Implants and other metallic objects can make it difficult to obtain clear images. Patient movement can have the same effect.

A very irregular heartbeat may affect the quality of images. This is because some techniques time the imaging based on the electrical activity of the heart.

Present data show no convincing evidence that non contrast MRI harms the fetus of a pregnant woman. However, if the need for the exam is not time sensitive your doctor may delay the exam until after delivery. MRI gadolinium contrast agents are generally avoided during pregnancy except in very specific circumstances. Your doctor will discuss the benefits and risks of any MRI procedure with you. Doctors may perform MRI after the first trimester to assess the fetus for findings that are not fully evaluated by ultrasound.

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