Pelvic Floor MRI



Dynamic pelvic floor magnetic resonance imaging (MRI) is a noninvasive test that uses a powerful magnetic field, radio waves and a computer to produce detailed pictures of the pelvic floor, a network of muscles that stretches between the pubic bone and spine and the abdominal organs it supports. It is used to obtain information about the pelvic floor's structure and the function of the muscles within it and to identify any abnormalities or damage.

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 loose, 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 a pelvic floor MRI?

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.

Dynamic pelvic floor MRI provides detailed pictures of the pelvic floor, a network of muscles that stretches between the pubic bone and spine, and the abdominal organs it supports, including three distinct areas or compartments:

- the anterior (front) compartment, including the bladder (http://www.radiologyinfo.org) and urethra (http://www.radiologyinfo.org)
- the middle compartment, including the vagina (http://www.radiologyinfo.org) , cervix (http://www.radiologyinfo.org) and uterus (http://www.radiologyinfo.org)
- the posterior (rear) compartment which includes the rectum (http://www.radiologyinfo.org) .

During dynamic pelvic floor MRI, images are obtained while the patient is contracting or squeezing the pelvic muscles and while the pelvic muscles are relaxed.

What are some common uses of the procedure?

Physicians use dynamic pelvic floor MRI to:

- obtain information about the structure of the pelvic floor and how well the pelvic muscles are working

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- determine which compartments of the pelvis are damaged and to help identify specific pelvic muscle defects
- provide information for surgical and treatment planning
- diagnose pelvic floor dysfunction (http://www.radiologyinfo.org) (also called pelvic floor disorders), including:
  - one or more of the pelvic organs falling out of position (a condition called prolapse).
  - the stretching or tearing of the pelvic floor which may cause urinary incontinence (http://www.radiologyinfo.org) , fecal incontinence (https://www.radiologyinfo.org/en/info/fecal-incontinence) , pelvic pain and/or constipation.

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

- MRI is a noninvasive imaging technique that does not involve exposure to radiation.
- MR images of the soft-tissue structures of the body—such as the heart, liver and many other organs—are clearer and more detailed than with other imaging methods. This detail makes MRI an invaluable tool in early diagnosis and evaluation of cancer.
- MRI has proven valuable in diagnosing a broad range of conditions, including heart and vascular disease, stroke, and joint and musculoskeletal disorders.
- 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.
- Dynamic pelvic floor MRI allows physicians to assess the pelvic floor and pelvic organs at the same time, both while the muscles are relaxed and contracting, which is especially helpful when evaluating disorders that involve more than one area or compartment.

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 a pelvic floor MRI?

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.

All muscles can be seen on MRI, but not all ligaments. The radiologist will use the muscle findings to make assumptions about tears within the ligaments.

Present data show no convincing evidence that non contrast MRI harms the fetus of a pregnant woman. However, if the need for

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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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