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MRI Scans

Also called: Magnetic resonance imaging, NMR, Nuclear magnetic resonance

Magnetic resonance imaging (MRI) uses a large magnet and radio waves to look at organs and structures inside your body. Health care professionals use MRI scans to diagnose a variety of conditions, from torn ligaments to tumors. MRIs are very useful for examining the brain and spinal cord.

During the scan, you lie on a table that slides inside a tunnel-shaped machine. Doing the scan can take a long time, and you must stay still. The scan is painless. The MRI machine makes a lot of noise. The technician may offer you earplugs.

Before you get a scan, tell your doctor if you :

- Are pregnant
- Have pieces of metal in your body. You might have metal in your body if you have a shrapnel or bullet injury or if you are a welder.
- Have metal or electronic devices in your body, such as a cardiac pacemaker or a metal artificial joint

Start Here

- Magnetic Resonance Imaging [<https://www.isrm.org/resources/information-for-patients/>]
(International Society for Magnetic Resonance in Medicine)
- Magnetic Resonance Imaging (MRI) [<https://familydoctor.org/magnetic-resonance-imaging-mri/?adfree=true>]
(American Academy of Family Physicians)
Also in Spanish [<https://es.familydoctor.org/tomografia-por-resonancia-magnetica-trm/?adfree=true>]
- MRI (Magnetic Resonance Imaging) [<https://www.fda.gov/radiation-emitting-products/medical-imaging/mri-magnetic-resonance-imaging>] (Food and Drug Administration)

Related Issues

- Contrast Materials [<https://www.radiologyinfo.org/en/info/safety-contrast>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/safety-contrast>]
- Magnetic Resonance Imaging (MRI) Safety [<https://www.radiologyinfo.org/en/info/safety-mr>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/safety-mr>]
- MRI: Is Gadolinium Safe for People with Kidney Problems? [<https://www.mayoclinic.org/diseases-conditions/chronic-kidney-disease/expert-answers/gadolinium/faq-20057772?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/chronic-kidney-disease/expert-answers/gadolinium/faq-20057772?p=1>]

Specifics

- Body MRI [<https://www.radiologyinfo.org/en/info/bodymr>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/bodymr>]

- **Brain MRI (Magnetic Resonance Imaging)** [<https://www.radiologyinfo.org/en/info/mri-brain>]

 (American College of Radiology; Radiological Society of North America)

Also in Spanish [<https://www.radiologyinfo.org/es/info/mri-brain>]

- **Breast MRI** [<https://www.radiologyinfo.org/en/info/breastmr>] (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/breastmr>]

- **Chest MRI** [<https://www.radiologyinfo.org/en/info/chestmr>]
 (American College of Radiology; Radiological Society of North America)

- **Functional MRI (fMRI)** [<https://www.radiologyinfo.org/en/info/fmribrain>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/fmribrain>]

- **Heart Tests** [<https://www.nhlbi.nih.gov/health/heart-tests>]  (National Heart, Lung, and Blood Institute)
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/estudios-cardiacos>]

- **Knee MRI** [<https://www.radiologyinfo.org/en/info/kneemr>] (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/kneemr>]

- **Magnetic Resonance (MR) Defecography** [<https://www.radiologyinfo.org/en/info/defecography-mri>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/defecography-mri>]

- **MR Angiography (MRA)** [<https://www.radiologyinfo.org/en/info/angiomr>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/angiomr>]

- **MR Enterography** [<https://www.radiologyinfo.org/en/info/MRenterography>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/MRenterography>]

- **MRCP (MR Cholangiopancreatography)** [<https://www.radiologyinfo.org/en/info/mrcp>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/mrcp>]

- **Musculoskeletal MRI** [<https://www.radiologyinfo.org/en/info/muscmr>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/muscmr>]

- **Pelvic Floor MRI** [<https://www.radiologyinfo.org/en/info/dynamic-pelvic-floor-mri>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/dynamic-pelvic-floor-mri>]

- **Prostate MRI (Magnetic Resonance Imaging)** [https://www.radiologyinfo.org/en/info/mr_prostate]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [https://www.radiologyinfo.org/es/info/mr_prostate]

- **Shoulder MRI** [<https://www.radiologyinfo.org/en/info/shouldermr>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/shouldermr>]

- **Spine MRI** [<https://www.radiologyinfo.org/en/info/spinemr>] (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/spinemr>]

- **Tests for Lung Disease** [<https://www.nhlbi.nih.gov/health/lung-tests>]  (National Heart, Lung, and Blood Institute)
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/pruebas-pulmonares>]

- **Urography** [<https://www.radiologyinfo.org/en/info/urography>] (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/urography>]

Videos and Tutorials

- **Getting an MRI (For Kids)** [<https://kidshealth.org/en/kids/video-mri.html>]  (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/kids/video-mri.html>]

- **Your Radiologist Explains Magnetic Resonance Angiography (MRA)** [<https://www.radiologyinfo.org/en/gallery/video/947>]
 (American College of Radiology; Radiological Society of North America)

Clinical Trials

- ClinicalTrials.gov: Magnetic Resonance Imaging [<https://clinicaltrials.gov/search?intr=mri&aggFilters=status:not%20rec>]
 (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Facilitators and barriers to participation of patients with treatment resistant depression... [<https://www.ncbi.nlm.nih.gov/pubmed/40713529>]
- Article: Comparison of gadobutrol and meglumine gadoterate for dynamic contrast-enhanced MRI of... [<https://www.ncbi.nlm.nih.gov/pubmed/40691479>]
- Article: Quantitative Multi-Parameter MRI Evaluation of Hashimoto's Thyroiditis Changes After Dietary Interventions. [<https://www.ncbi.nlm.nih.gov/pubmed/40638545>]
- MRI Scans -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Magnetic+Resonance+Imaging%22%5Bmajr%3Aexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bdat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Reference Desk

- RadiologyInfo: Glossary of Terms [<https://www.radiologyinfo.org/en/glossary-index>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/glossary-index>]

Find an Expert

- Food and Drug Administration [<https://www.fda.gov/>]
- RadiologyInfo [<https://www.radiologyinfo.org/>] (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es>]

Children

- Keeping Kids Still during Exams [<https://www.asrt.org/docs/default-source/patientpages/pedimmobilization.pdf>]
(American Society of Radiologic Technologists) - PDF - In English and Spanish
- Pediatric MRI [<https://www.radiologyinfo.org/en/info/pediatric-mri>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/pediatric-mri>]

Women

- MRI Safety during Pregnancy [<https://www.radiologyinfo.org/en/info/safety-mri-pregnancy>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/safety-mri-pregnancy>]

Patient Handouts

- Abdominal MRI scan [<https://medlineplus.gov/ency/article/003796.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003796.htm>]
- Arm MRI scan [<https://medlineplus.gov/ency/article/007358.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007358.htm>]
- Chest MRI [<https://medlineplus.gov/ency/article/003794.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003794.htm>]

- Head MRI [<https://medlineplus.gov/ency/article/003791.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003791.htm>]
- Heart MRI [<https://medlineplus.gov/ency/article/003795.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003795.htm>]
- Leg MRI scan [<https://medlineplus.gov/ency/article/007357.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007357.htm>]
- Lumbar MRI scan [<https://medlineplus.gov/ency/article/007352.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007352.htm>]
- MRI and low back pain [<https://medlineplus.gov/ency/article/007493.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007493.htm>]
- Pelvis MRI scan [<https://medlineplus.gov/ency/article/007355.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007355.htm>]



MEDICAL ENCYCLOPEDIA

- Abdominal MRI scan [<https://medlineplus.gov/ency/article/003796.htm>]
- Arm MRI scan [<https://medlineplus.gov/ency/article/007358.htm>]
- Breast MRI scan [<https://medlineplus.gov/ency/article/007360.htm>]
- Cervical MRI scan [<https://medlineplus.gov/ency/article/007354.htm>]
- Chest MRI [<https://medlineplus.gov/ency/article/003794.htm>]
- Head MRI [<https://medlineplus.gov/ency/article/003791.htm>]
- Heart MRI [<https://medlineplus.gov/ency/article/003795.htm>]
- Knee MRI scan [<https://medlineplus.gov/ency/article/007361.htm>]
- Leg MRI scan [<https://medlineplus.gov/ency/article/007357.htm>]
- Lumbar MRI scan [<https://medlineplus.gov/ency/article/007352.htm>]
- Magnetic resonance angiography [<https://medlineplus.gov/ency/article/007269.htm>]
- MRI [<https://medlineplus.gov/ency/article/003335.htm>]
- MRI and low back pain [<https://medlineplus.gov/ency/article/007493.htm>]
- Pelvis MRI scan [<https://medlineplus.gov/ency/article/007355.htm>]
- Shoulder MRI scan [<https://medlineplus.gov/ency/article/007359.htm>]

Related Health Topics

[Diagnostic Imaging](https://medlineplus.gov/diagnosticimaging.html) [<https://medlineplus.gov/diagnosticimaging.html>]

Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/mriscans.html>] on *MRI Scans*

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