AT CHILDREN’S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this test, and we invite you to participate. Please read the following information to learn about the scan and how you can help.

Fast Facts About the MRI Scan

- It takes very clear, detailed pictures of body parts and organs.
- A parent or guardian is welcome in the exam room and scanner room during this test.
- This test does not involve the use of radiation.
- Women who are pregnant or believe they may be pregnant should not be in the exam room when MRI scans are done. In this case, please bring another adult who can stay with your child during the scan.
- Because MRI scans use powerful magnets, it is very important to know if your child has any metal in his or her body. Metal can include a pacemaker; a heart valve replacement or cardiac stent; a pin to repair a broken bone; any kind of dental or ear implant; and all ear and body piercings. Your child must also remove any jewelry or hair accessories that contain metal.
- Teenage patients who are pregnant or believe they may be pregnant should talk to their doctor before they have an MRI scan. This information will be kept confidential.
- Young children who may be unable to stay still for the entire scan can be given sedation (se-DAY-shun) medication to help them sleep during the scan. If your child’s doctor has recommended sedation for your child, please refer to the patient guide, “Parent Information on Sedation for Radiologic Studies,” which is available from your child’s doctor or online at www.chp.edu/clinical/radiology_patient_proc.php.
- When sedation is needed, there are special rules for eating and drinking before the test. These rules are outlined in detail in the “Parent Information on Sedation” guide.
- The MRI scan may take between 30 to 120 minutes, depending on the body area or part that is undergoing the test.
- Intravenous contrast is frequently used for this test. It is very important to know if your child is allergic to iodine or has had a prior contrast reaction.

What is Magnetic Resonance Imaging (MRI)?

Magnetic resonance (REZ-oh-nentz) imaging, or MRI, is a test that uses powerful magnets, invisible radio waves, and a computer to scan the body and take clear, detailed pictures of organs and other structures.

- MRI gives doctors very detailed pictures of tendons, blood vessels, and other organs, such as the brain, because the imaging waves pass through the bones.
- These detailed pictures give doctors information that they cannot learn from a physical examination.
- This scan does not involve radiation exposure.

Home Preparation

You may want to bring along a “comfort” item—such as a favorite stuffed animal or “blankie”—for your child to hold during the scan.

Depending on what part of your child’s body is being scanned, there may be important instructions on things to do or not do the day before and the day of your child’s MRI scan. Please follow the specific instructions given to you by your doctor before the scan.
MRI Scan cont’d

The MRI Scan

Your child’s scan will be done by an MRI technologist who is specially trained to do MRI scans on children, and the results will be read by the radiology doctors at the Department of Radiology at Children’s Hospital.

In the scan room will be the MRI machine. You will see a long table that will slide into the tube-shaped or tunnel-like scanner where the camera is located.

Prior to the test, your child will be screened for any metal inside or outside his or her body. If your child’s clothing contains metal, he or she may be asked to change into a hospital gown. You and your child will be able to safely keep any personal belongings that contain metal in a locker during the scan.

- Your child will be asked to lie down on the table.
- The MRI technologist will place a wide strap across your child’s waist to help your child stay still during the test. If your child is having a scan of his or her head, the MRI technologist will help put his or her head into an open “headcoil,” which looks like a helmet.
- Once your child is in position on the table, the MRI technologist will move the table into the MRI scanner so that the body part that is being tested is under the camera.
- The MRI machine will make loud banging and knocking noises during the scan. You and your child will be given a set of foam earplugs to help protect your ears from the noise of the scanner.
- If your child does not need sedation, he or she may also select either music CDs or a movie to watch with special MRI goggles and headphones, instead of earplugs.
- At times during the MRI scan, the staff will not be in the scanner room with you, but will be in a room nearby where the equipment controls are located. They will be able to see you and your child through a large window, and will be watching him or her constantly during the scan. An intercom system will allow you to talk to them, and vice versa.
- Once the scan begins, your child will need to stay very still at all times to make sure the pictures turn out clear. At certain times, your child will be asked to hold his or her breath for a few seconds. The staff will then tell your child when to breathe out.
- Certain pictures for some MRI scans require a special liquid dye.
  - This liquid dye is called “contrast.” If your child has ever had a reaction to any contrast dye, or if he or she is allergic to iodine, please let your doctor know immediately.
  - The contrast will be given to your child by a nurse through an intravenous line, or IV, placed in a vein in your child’s hand, arm, or foot, depending on his or her age.

- If your child is awake during the MRI, just after the contrast goes into the vein, he or she may feel a flush of warmth as well as a funny taste in the back of his or her mouth. The warm feeling and the funny taste are normal and will go away shortly.
- When the scan is finished, the table will slide out of the scanner. Any monitoring equipment will be disconnected, and your child will be helped off of the table.
- If your child received sedation medication for the scan, he or she will be moved to the recovery area after the scan and will stay there until the medication wears off. If an IV was placed for sedation, it will be taken out by a nurse in the recovery area once your child wakes up from the medication. The length of time it takes the medication to wear off will vary, as some children take longer than others to become alert. The minimum amount of time spent in recovery is 1 hour.
- If your child was awake during the MRI and an IV was placed for contrast, it will be taken out by a nurse after the scan.

A Parent’s/Guardian’s Role During the Scan

We welcome your help and support during this scan. One parent or guardian is invited to join your child in the exam room and scan room. Other adults and children must stay in the waiting area. If your child will be having sedation, you will be asked as the parent or legal guardian to sign a consent form before the sedation is given.

- The most important role of a parent or guardian during the scan is to help your child stay calm and relaxed. It is important that your child stays still during the MRI.
- The best way to help your child stay calm is for you to stay calm.
- We encourage you to talk to your child for reassurance during the scan.
- Please follow the instructions of the nurse or MRI technologist. They will show you where to sit or stand during the scan.
- If your child starts to move or wakes up during the scan, please tell the medical staff by using the intercom system.
- If an IV must be placed, you can help by reassuring and calming your child. Please tell the staff of ways that they might also help in keeping your child calm.
- Please do not distract the medical team or interrupt the scan in any way.
- We welcome your questions, but please ask them either before or after the scan.
- If your child is given sedation, please gather all of your belongings after the scan is finished so your child can be taken immediately to the recovery area.
After the Test

A pediatric radiology doctor will look at and interpret the MRI scan, and a report of your child’s scan will be sent to the doctor who ordered it, usually within 48 hours. If the results are urgent, the referring doctor will be contacted immediately.

- Please contact the doctor who ordered the scan for the results.
- If your child did not receive sedation, then no special follow-up care for your child is necessary.
- If your child did receive sedation, please refer to the “Parent Information on Sedation” guide for follow-up care.

Special Needs

If your child has any special needs or health issues you feel the doctor performing the scan needs to know about, please call the Department of Pediatric Radiology at Children’s Hospital of Pittsburgh before the test and ask to speak with a nurse. It is important to notify us in advance about any special needs.

Preparing your child beforehand, as well as comforting your child during the test, will help your child have a more positive experience. Sometimes it is difficult to know how to explain tests to children. If you have any questions about ways to prepare or support your child, or feel your child will have difficulty during the test, please call the Department of Pediatric Radiology at Children’s Hospital of Pittsburgh and ask to speak with the child life specialist.

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To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.