

## CT SCAN

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 CT Scan

- The CT scan takes detailed pictures of inside the body called "slices" that are then put together by a computer.
- A parent or guardian is welcome in the scanner room during this test.
- Because this test uses radiation, women who are pregnant or believe they may be pregnant should not be in the exam room when CT scans are done. In this case, please bring another adult who can stay with your child during the scan.
- Teenage patients who are pregnant or believe they may be pregnant should talk to their doctor before they have a CT 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](http://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 scans usually take about 5 to 10 minutes, depending on the body area or part that is undergoing the test.



- CT scans can help doctors find problems in the body that they cannot learn from a physical examination.
- CT scans also let doctors check to see how well the body is responding to treatment.
- CT scans involve radiation exposure.

### Home Preparation

You may want to practice lying still with your child for periods of 5 to 10 minutes at a time prior to your child's scheduled scan. This practice may help prevent your child from needing sedation medication.

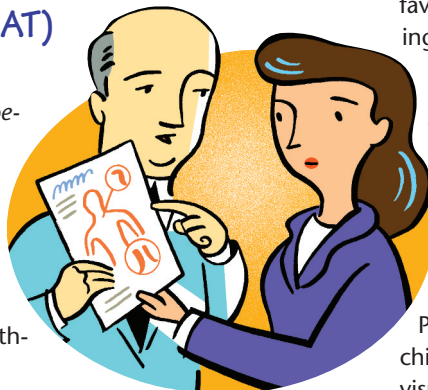
You may want to bring along a "comfort" item—such as a favorite stuffed animal or "blankie"—for your child to hold during the scan.

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 CT. Please follow the specific instructions given to you by your doctor before the scan.

Your child's doctor may order sedation medication for your child, but it may not be needed. The Department of Pediatric Radiology staff will make every effort to relax your child through the use of music therapy, room decorations, and visual distraction during the scan, which can shorten your child's scan time and make sedation unnecessary.

### What Is A Computerized Tomography (CT or CAT) Scan?

A computerized tomography (*toe-MOG-ruff-ee*) scan, also called a CAT scan or CT scan, uses X-rays and a computer to take detailed pictures of the organs and bones. These pictures look like cross-sections or "slices" of the body that are then put together by the computer.



## CT SCAN cont'd

### The CT Scan

The CT scan will be done at the Department of Pediatric Radiology of Children's Hospital by a CT technologist who is specially trained to do CT scans on children. In the scan room, you will see the CT machine, and a long table that will slide into the tube-shaped or tunnel-like scanner where the camera is located.

- Your child will be asked to lie down on the table.
- The CT technologist will place a wide strap across your child's waist to help your child remain still during the test. The CT technologist will help your child place his or head in the headrest.
- The CT technologist will then place a lead cover over your child.
- Once your child is in position on the table, the CT technologist will move the table into the CT scanner so that the right body part is under the camera.
- At times during the CT 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.
- The CT scanner may make some knocking or clicking noises as it takes the pictures.
- Once the scan begins, your child will need to stay very still at all times to make sure the pictures turn out clear. Depending on his or her age, your child may be asked to hold his or her breath for a few seconds. The CT technologist then will tell your child when to breathe out.
- Certain pictures for some CT 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 decision as to whether or not your child will receive contrast will be made by the radiology doctor who will be overseeing the test.
  - Depending on the part of the body that the contrast is needed for, it will be given to your child either by mouth or 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 must drink the contrast, he or she will be given 3 full cups. Your child must drink each cup 30 minutes apart from each other.
  - The nurse or CT technologist can give your child some sweetener to make the contrast taste better, since it has a bitter taste.

- If your child is given the contrast through an IV, 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.
- If your child received medication for relaxation or sleep, he or she will be taken to the recovery area to be watched until the medication wears off and he or she is awake again. If an IV was placed, it will be taken out after the scan by a nurse in the recovery area once your child is awake.
- If your child was awake during the CT scan and an IV was placed for contrast, it will be taken out by a nurse after the test.
- The scan usually takes about 5 to 10 minutes, depending on the body area or part that is undergoing the test.

As a parent, you may have concerns about radiation exposure. Children's Hospital takes every precaution to make sure your child is safe.

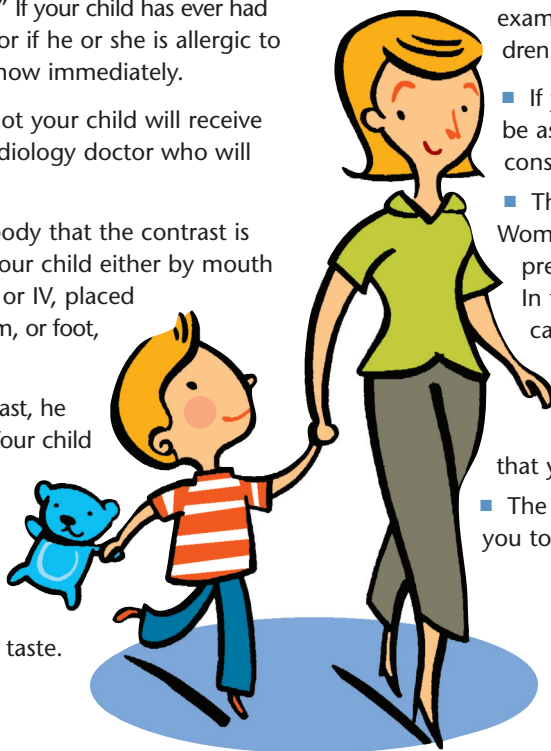
- Our goal is to do the test correctly and thoroughly, while exposing your child to the smallest amount of radiation necessary to do the CT scan.
- Advances in equipment and film have lowered the amount of radiation your child will receive.
- All of the equipment is inspected regularly.

Parts of the body that are not being scanned will be protected with a lead cover when possible.

### 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 CT scan involves the use of radiation. Women who are pregnant or believe they may be pregnant should limit their exposure to X-rays. In this case, please bring another adult who can stay with your child during the scan.
- The most important role of a parent and guardian during the test is to help your child stay calm and relaxed. It is important that your child remains still during the scan.
- The best way to help your child stay calm is for you to remain calm.



## CT SCAN cont'd

- You may bring a favorite toy or something else he or she finds comforting.
- We encourage you to talk to your child and hold his or her hand for reassurance during the scan.
- Please follow the instructions of the doctor, nurse, or CT technologist. They will show you where to sit or stand during the scan.
- You must wear a protective lead apron during the CT scan.
- At times during the scan, the staff will not be in the room with you, but an intercom in the room will allow you to talk to them, and vice versa.
- If your child starts to move or wakes up during the scan, please tell the medical staff by using the intercom.
- 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 needed sedation medication, you should gather all of your belongings after the scan is finished so he or she can be taken immediately to the recovery area. Your child will stay in the recovery area until the medication wears off. 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.

## After the Test

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 and Patient Preparation

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.

Department of Pediatric Radiology  
**Children's Hospital of Pittsburgh of UPMC**  
One Children's Hospital Drive  
4401 Penn Ave.  
Pittsburgh, PA 15224  
412-692-5500

---

To see the list of all available patient procedures descriptions, please visit [www.chp.edu/procedures](http://www.chp.edu/procedures).

