

What is a Computerized Tomography Scan?

Your child's doctor ordered a test called a computerized tomography (toe-MOG-ruff-ee) scan, also called a CAT scan or CT scan. A 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. The amount of radiation used is very small. The Radiology Department at C.S. Mott Children's Hospital uses special techniques and equipment in order to decrease the dose of radiation to the minimum amount needed to perform the study. To learn more about this, check out this Image Gently website: <http://www.imagegently.org/>

How will I prepare my child for the test at home?

- Preparation depends on which part of your child's body will be scanned. You will receive a phone call from us the day before your child's exam with important instructions on food and activities allowed on the day before and the day of your child's CT.
- All girls ages 10-17 must take a pregnancy test is before a CT of the abdomen, pelvis or hips can be taken. Your doctor can order a pregnancy test ahead of time, or it could be done in the radiology department the day of the test.
- You may want to practice lying down with your child and have them practice holding still for a few minutes.

How is the CT scan performed?

The CT scan will be done 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.

The radiology staff and/or our Child Life Specialist will make every effort to relax your child through the use of music therapy, room decorations, and visual distraction during the scan. This will help to shorten your child's scan time and may make sedation unnecessary.

Some children need medicine in order to be able to hold still during the scan, so the test produces the best quality results. If sedation is needed, your child will be scheduled with the anesthesia team. You will receive a phone call one business day before the test, with instructions on what your child can eat and drink before the CT. They will also inform you about when and where to check in.

The test takes place in the CT room. One parent or a caregiver is allowed to be in the room with the child for the entire time. Other family members will wait in the waiting room. The radiology technologist will show you where you can stand during the test. Please follow the directions carefully so that everyone stays safe during the CT. If you are assisting your child at the bedside you wear a lead apron. Parents who are pregnant or think they are pregnant will not be allowed in the room.

What are the diet instructions before the scan?

The child may not eat solid food for **2 hours prior** to the appointment time. They may drink clear liquids up until 30 minutes prior to the appointment time (unless otherwise instructed).

Clear Liquids Allowed:

- Tea/black coffee
- Apple or cranberry juice
- Lemon or Lime Jello-O

- Clear Chicken or Beef Broth
- Clear Sodas (7-UP, Sprite, Ginger Ale)
- Water

What will happen during the scan?

- Your child will lie down on the soft table.
- The CT technologist will place a wide strap across your child's waist to help her remain still and safe during the test. The CT technologist will help your child place his or head in the headrest.
- Parts of the body that are not being scanned will be protected with a lead cover when possible.
- 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 may step out of the scanner room to a nearby room 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 humming 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 need to hold his 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 radiologist who will be overseeing the test.

A **radiologist** is a medical doctor who specializes in the reading and interpretation of X-rays and other medical images.

Your child will receive the contrast either by mouth (drinking), or through an IV (intravenous line), or both. This depends on the part of the body that the contrast is needed for.

- If your child must drink the contrast, you will be asked to arrive 2 hours before the test.
 - If an IV is needed, a nurse will place it a vein in your child’s hand, arm, or foot, depending on his or her age. 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.
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- 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 so we can watch her until the medication wears off and she is awake again. If your child had an IV, we will remove it after the scan in the recovery area.
 - If your child had an IV but was awake during the CT scan we will remove it right after the test.
 - The scan usually takes about 5 to 10 minutes, depending on the body area or part being scanned.

What is the parent's role during the test?

As the parent, you can be a great source of support for your child. If your child is awake, talking to him during the scan will help him feel comfortable and relaxed. We encourage you to ask questions both before and after the study. If you have questions during the study, it is helpful if you can save them until after the study is finished

How will I care for my child after the test?

After the radiologist and technologist finished taking the scans they will check to make sure the pictures are clear. This will take only a few minutes. Please make arrangements with your child's doctor to get the results of your child's test.

I have more questions about CT or CAT scans. Who can I call?

Pediatric Radiology Nurse (734) 936- 7907.

Child Life Specialist (734) 232- 6744

We are available Monday-Friday between 8am-4pm.

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Author: John Rowe, MS, RT (R), (CT)

Reviewers: Mott Radiology Patient Family Centered Care Committee

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