



Understanding CT Scans (Computerized Axial Tomography)

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What is a CT scan?

A CT scanner is a special x-ray machine combined with a computer that produces cross-sectional images or "slices" of any part of your head or body. Unlike a standard "flat" x-ray image where some structures block others, a CT scan shows structures within each slice on a three-dimensional plane. As a result, the doctor who views a CT scan can see your entire anatomy.

The CT scan machine is open around you, does not touch you and is not confining. It should not be confused with an MRI scanner that is more of a tunnel-type structure. Even patients who suffer with claustrophobia find CT scans to be fairly simple, fast and easy.

What to expect

A scan takes anywhere from around 10 min. to ½ hour to complete. During that time, you will be asked to lie very still on a table that moves in and out of a round opening called a "gantry". The ring inside the gantry contains an x-ray tube and receptors mounted on the opposite side. As the x-ray tube moves around you, the receptors on the opposite side measure the amount of x-ray that is absorbed. These measurements are fed into a computer that produces the images on a video screen for the radiologist to view. These images are then transferred onto x-ray film.

Since x-rays cannot penetrate metal you may be asked to remove any jewelry, glasses or clothing which have zippers or snaps, etc. You may be asked to put on a hospital gown or often we are able to leave you dressed

in your own clothing simply by moving any metal out of the way. You may wish to wear a sweat suit or clothing without metal parts so that you don't have to change into a gown.

How to Prepare for your CT Scan

When you are scheduled to have a CT scan you will be asked to remain on a clear liquid diet from midnight the night before your scan until the time of your appointment. Clear liquids include such things as Jello® , broth and juices. Avoid dairy products. If your CT scan is scheduled for late in the day, we ask that you have no solid food for at least 4 hours prior to your exam.

If you have medications that you normally take, you should go ahead and take them as prescribed. If you have to have food with your medication you could have a small amount of dry toast or crackers in addition to the clear liquids.

Depending on what part of your body is being scanned, you may be asked to drink a special liquid referred to as oral contrast media, gastrografin, or Redi-CAT. All patients who are having scans of their abdomen and/or pelvis are required to drink this special contrast. This contrast helps to outline your stomach and intestines so those normal structures can be clearly identified and to distinguish them from any abnormality. The oral contrast can be obtained in our department prior to your exam so that you can drink it at home ahead of time. When that is not possible, you will be asked to arrive 1 hour ahead of your scheduled time to drink this contrast once you have arrived in our Department.

IV Dye

Many, but not all, patients who have a CT Scan will need to have a special type of iodine x-ray dye/contrast injected into their veins during the test. This IV contrast helps to highlight certain structures in your body or brain. It helps to visualize veins and arteries and certain tissues, as well as your urinary tract (kidneys, ureter, bladder).

If you have an allergy to iodine or x-ray dye, please inform us or your doctor as soon as possible. If you are pregnant, diabetic or have known kidney problems, please inform us of that as well.

Once your test is complete

After your CT scan has been completed, you will be able to resume all of your normal activities. There should be no ill-side effects to keep you from doing this. You will be able to drive.

The only thing we recommend is that you drink plenty of liquids/water after your test is complete. This is so that the contrast dye can be quickly flushed from your body and you do not become dehydrated.

Getting the results

Once we have obtained all of the CT scan "slices" and viewed them on the computer screen, the images will be transferred to x-ray film for the radiologist to review. He will then send a report to the doctor who ordered the test. That doctor will in turn discuss the results with you. The films will be kept on file in the Radiology Film Room for permanent storage.

Questions or concerns!

Radiology Nurse (434)-982-3362

[Homepage - Patient Information](#)

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<http://www.healthsystem.virginia.edu/internet/radiology/ct/cat-scan.cfm>