

CT- Computed Tomography

What is a CT?

A computed tomography (CT or CAT) scan allows doctors to see inside your body. It uses a combination of x-rays from different angles and computer processing to create pictures of your organs, bones, and other tissues. It shows more detailed information than a regular X-ray.

Why is a CT performed?

A CT can be performed on any part of your body to get visualization of internal organs, bones, or blood vessels to rule out any abnormalities. A CT is used to diagnose disease or injury as well as to plan medical, surgical or radiation treatment.

How do I prepare for a CT?

For CT's of the abdomen or pelvis with contrast, you will be asked to refrain from eating or drinking 3 hours prior to the scan, except the barium and necessary medications. Drink the 1st bottle of contrast 2 hours prior to the appointment, and then the 2nd bottle 1 hour prior. Instructions may vary for pediatric patients under 12 years of age. Please contact the imaging department for contrast pick up.

In some people, contrast can cause side effects such as:

- Feeling of warmth or flushing
- Metallic taste
- Lightheadedness
- Nausea
- Itching
- Hives

Patients with a history of hypertension, diabetes, kidney problems, or over age 70 will need to have recent labs within 30 days of scan to check BUN and creatinine levels to ensure it is safe to receive contrast.

What to expect during a CT?

Depending on which part of your body is being scanned, you may be asked to wear a gown, remove metal objects, dentures, or eyeglasses that could interfere with image results.

At times, your physician may order a special dye called contrast material to help highlight the areas of your body that need to be examined. The contrast appears white on the pictures taken to help emphasize soft tissues like blood vessels, intestines or other body parts. The contrast is made of iodine or barium sulfate which can be injected through an IV into a vein or orally by drinking a liquid. Afterwards, it is encouraged to drink plenty of

fluids to help remove the contrast material from your body and flush out your kidneys. Patients taking metformin may be asked to hold their dose at the discretion of their physician.

Any movement can cause images to blur and lead to inaccurate results, so review with your physician if a sedative would be recommended prior to your scan, especially for infants or toddlers.

A radiology technologist will perform the CT scan. During the test, you'll lie on a narrow table inside a large, open, doughnut-shaped CT machine. As the table slowly moves through the scanner, the X-rays rotate around your body. It's normal to hear a whirring or buzzing noise. Movement can blur the image, so you'll be asked to stay very still. Pillows and straps may be used to help you stay in the correct position. You may need to hold your breath at times.

How long does a CT take?

The procedure doesn't take very long, and it's painless. How long the scan takes will depend on what parts of your body are being scanned. It can take anywhere from a few minutes to a half-hour. If contrast is ordered with the CT, then there will be specific preparatory instructions depending on which body part needs to be scanned.

Are there any risks or side effects associated with CT scans?

There is a small risk of exposure to radiation which may damage DNA and lead to cancer. Radiation effects add up over time and with multiple exposures. The amount of radiation is greater than you would get during a plain X-ray because the CT scan gathers more-detailed information. The low doses of radiation used in CT scans have not been shown to cause long-term harm, although at much higher doses, there may be a small increase in your potential risk of cancer.

Radiation exposure in small children is more harmful because they are still growing. Any women that are pregnant should inform their physician to see if there are any alternatives to consider to reduce the exposure to an unborn child such as an ultrasound or MRI.

Although rare, allergic reactions to contrast dye could occur. More common reactions, if any occur are mild rashes or itchiness. Very rarely, the dye can trigger a life-threatening reaction so any allergies to medications, seafood or iodine are important to relay to your physician.

How will my results be communicated?

After your results are reviewed, interpreted, and signed off by the radiologist, a report will be sent to the ordering physician. Your physician will review the report and communicate any findings to you.

How can I get a copy of my CT scan?

Imaging results can be downloaded onto a CD for you to keep or share with other physicians. At times, electronic medical records allow other physicians to view the images

if they have the same electronic system. Please allow 24 hours for film requests. Contact the imaging department for all film requests 540-785-7200. Films can be picked up at requested location. Charges may apply when requesting personal records.

Additional considerations:

It is not recommended to bring children under the age of 14 to your appointment unless accompanied by another responsible adult.

If appointments must be cancelled, please give us 24 hours' notice. If this is not possible, notify the office ASAP that you are not able to keep the appointment.

Please arrive 10-15 mins prior to appointment to allow time for the check-in process and appropriate questionnaires to be completed.