

Medical Imaging

Computerized Tomography (CT) Scan

Computed tomography is commonly referred to as a CT scan. CT uses X-rays to produce pictures or images of inside the body. The CT machine moves an X-ray around the patient to produce multiple detailed images at different angles. CT provides greater detail of soft tissue such as organs or blood vessels than a traditional X-ray. CT can also be used for a tissue or fluid biopsy.

How do I prepare for a CT Scan?

- If you are having a computed tomography angiography (CTA), you will be given specific instructions when you make your appointment.
- **Precautions:** If you are pregnant or think you may be pregnant, please check with your doctor before scheduling the exam. We will discuss other options with you and your doctor.
- **Clothing:** You may be asked to change into a patient gown. If so, a gown will be provided for you. A locker will be provided to secure all personal belongings. Please remove all piercings and leave all jewelry and valuables at home.
- **Contrast Media:** CT scans are most frequently done with and without a contrast media. The contrast media improves the radiologist's ability to find structures that are abnormal and understand normal anatomy better too.
- Some patients should not have iodine-based contrast media. If you have problems with your kidney function, please inform us in advance. We may be able to perform the scan without the contrast media, or may be able to find an alternate imaging exam.
- You will be asked to sign a consent form that will detail the risks and side-effects associated with contrast media injected through an intravenous (IV) line (small tube placed in a vein).
- The most common type of CT scan with contrast is the double contrast study that will require you to drink a contrast media before your exam begins in addition to the IV contrast. The more contrast you are able to drink, the better the images are for the radiologist to visualize your digestive tract.
- **Allergy:** Please inform the access center representative when you schedule your scan if you have had an allergic reaction to any contrast media. IV contrast will not be administered if you have had a severe or anaphylactic reaction to any contrast media in the past. Mild to moderate reactions warrant a plan that includes taking medication prior to the CT examination. These plans will be discussed with you in detail when

you schedule your exam. Any known reactions to a contrast media should be discussed with your personal physician.

- **Eat/Drink:** If your study was ordered without contrast you can eat, drink and take your prescribed medications prior to your exam. If your doctor orders a CT scan with contrast, do not eat anything three hours prior to your CT scan. We encourage you to drink clear liquids. You may take your prescribed medications prior to your exam.
- **Diabetics:** Diabetics should eat a light breakfast or lunch three hours prior to the scan time. Depending on your oral medication for diabetes, you may be asked to discontinue use of the medication for 48 hours after the CT examination. Detailed instructions will be given following your examination.
- **Medication:** All patients can take their prescribed medications as usual.

What happens during a CT scan?

- If you are to have a CT scan done with contrast, an intravenous (IV) line will be started in the hand or arm for injection of the contrast media. For oral contrast, you will be given a liquid contrast preparation to swallow. In some situations, the contrast may be given rectally.
- You will lie on a scan table that slides into a large, circular opening of the scanning machine. Pillows and straps may be used to prevent movement during the procedure.
- The technologist will be in another room where the scanner controls are located. However, you will be in constant sight of the technologist through a window. Speakers inside the scanner will enable the technologist to communicate with and hear you. You may have a call button so that you can let the technologist know if you have any problems during the procedure.
- As the scanner begins to rotate around you, X-rays will pass through the body for short amounts of

time. You will hear clicking sounds, which are normal.

- The X-rays absorbed by the body's tissues will be detected by the scanner and transmitted to the computer. The computer will transform the information into an image to be interpreted by the radiologist.
- It will be important that you remain very still during the procedure. You may be asked to hold your breath at various times during the procedure.

What happens after a CT scan?

- If contrast media was used during your procedure, you may be monitored for a period of time for any side effects or reactions to the contrast dye, such as itching, swelling, rash or difficulty breathing.
- If you notice any pain, redness, and/or swelling at the IV site after you return home following your procedure, you should notify your doctor as this could indicate an infection or other type of reaction.
- Otherwise, there is no special type of care required after a CT scan. You may resume your usual diet and activities unless your doctor advises you differently. Your doctor may give you additional or alternate instructions after the procedure, depending on your particular situation.