

CT plays a significant role in the detection, diagnosis and treatment of vascular diseases that can lead to stroke, gangrene or kidney failure.

How Should I Prepare for the Procedure?

You should wear comfortable, loose-fitting clothing for your CT exam. Metal objects can affect the image, so avoid clothing with zippers and snaps. You may also be asked to remove hairpins, jewelry, eyeglasses, hearing aids and any removable dental work, depending on the part of your body that is being scanned. You may be asked not to eat or drink anything for one or more hours before the exam. Women should always inform their doctor or x-ray technologist if there is any possibility that they are pregnant.

How Does the Procedure Work?

In many ways, CT scanning works like other x-ray examinations. Very small, controlled amounts of x-ray radiation are passed through the body, and different tissues absorb the radiation at different rates. Each time the x-ray tube and detector make a 360 degree rotation and an x-ray passes through your body, the image of a thin section or slice is acquired. You might think of it like looking into a loaf of bread by cutting it into thin slices. When the image slices are reassembled by computer, the result is a very detailed, multidimensional view of the body's interior.

A relatively new technique, spiral (helical) CT has improved the sensitivity of CT for the detection of many diseases. With spiral CT, refinements in detector technology support faster, higher-quality image acquisition with less radiation exposure. It is typically eight to 10 times faster than conventional CT. Such speed is beneficial in all patients, but especially in elderly, pediatric or critically ill patients, who may have difficulty holding their breath for long periods.

How is the Procedure Performed?

The technologist begins by positioning you on the CT table. Your body may be supported by pillows to help you hold still and in the proper position during the procedure. As the study proceeds, the table will move slowly into the opening in the center of the CT scanner. Depending on the area of your body being examined, the increments of movement may be so small that they are almost undetectable, or large enough that you will feel the sensation of motion.

A CT examination often requires the use of different contrast materials to enhance the visibility of certain tissues or blood vessels. The contrast material may be injected directly into your blood stream, given orally, or administered by enema, depending on the type of examination. Before administering the contrast material, the radiologist or technologist will ask whether you have any allergies, especially to medications or iodine, and you will be alone in the room during the procedure; however, the technologist can see, hear and speak with you at all times. For pediatric patients, a parent may be allowed in the room with the child to alleviate fear, but will be required to wear a lead apron to prevent radiation exposure.

Who Interprets the Results and How Do I Get Them?

A *radiologist*, who is a physician experienced in CT and other radiology examinations, will analyze the images and send a signed report with his or her interpretation to your primary care physician. Your physician's office will inform you about how to obtain your results. At some facilities, new technology also allows for distribution of diagnostic reports and referral images over the Internet.

Like other physicians, a radiologist must have graduated from an accredited medical school, passed a licensing examination, and completed at least four years of residency. Radiologists are usually board

certified by either the American Board of Radiology or the American Osteopathic Board of Radiology.

A radiologic technologist has undergone two to four years of formal training, leading to a certificate, associate's degree, or bachelor's degree. With additional training, a technologist can specialize and work almost exclusively with specialized radiographic equipment. The American Registry of Radiologic Technologists certifies radiologic technologists.

For additional details about CT of the body and other radiological procedures, please visit www.radiologyinfo.org or consult your physician.



www.adclinic.com

What is CT of the Body?

CT, sometimes called CAT scanning, uses special x-ray equipment to obtain image data from different angles around the body, and then uses computer processing of the information to show a crosssection of body tissues and organs.

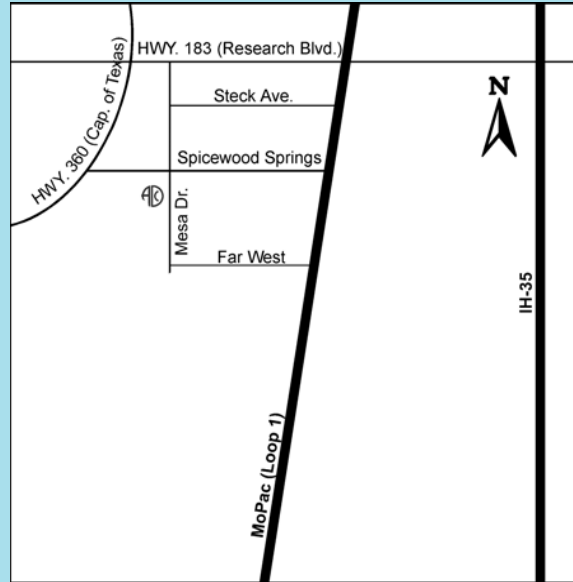
CT is particularly useful because it can show several types of tissue-lung, bone, soft tissue, and blood vessels-with great clarity. Using specialized equipment and expertise to create and interpret CT scans of the body, radiologists can more easily diagnose problems such as cancers, cardiovascular disease, infectious disease, trauma and musculoskeletal disorders. CT of the body is a patient-friendly exam that involves little radiation exposure.

What are Some Common Uses of the Procedures?

Because it provides detailed, cross-sectional views of all types of tissue, CT is one of the best tools for studying the chest and abdomen. It is often the preferred method for diagnosing different cancers, including lung, liver and pancreatic cancer, since the image allows a physician to confirm the presence of a tumor and to measure its size, precise location, and the extent of the tumor's involvement with other nearby tissue.

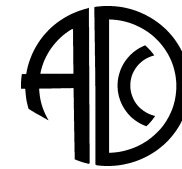
CT examinations are often used to plan and properly administer radiation treatments for tumors, and to guide biopsies and other minimally invasive procedures. CT can clearly show even very small bones, as well as surrounding tissues such as muscle and blood vessels. This makes it invaluable for the diagnosis and treatment of problems and injuries to the hands, feet and other skeletal structures. CT images can also be used to measure bone mineral density for the detection of osteoporosis, a condition of reduced bone mass.

In cases of trauma, CT can quickly help the physician identify injuries to the liver, spleen, kidneys or other internal organs. Many dedicated shock-trauma centers have a CT scanner in the trauma department.



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CT of the Body



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