

# CT Scan of the Chest



## What is a computed tomography (CT) scan of the chest?

A computed tomography (CT) scan of the chest is a type of imaging test. It uses X-rays and a computer to make detailed pictures of the inside of your chest. These images are better than regular X-rays. They can give more details about injuries or diseases of the chest organs.

In a CT scan, an X-ray beam moves in a circle around your body. It takes many images of the lungs and inside the chest. A computer processes these images. They are then displayed on a monitor.

During the test, you may receive a contrast dye. This will make parts of your body show up better in the image.

## Why might I need a CT scan of the chest?

A CT scan of the chest may be done to check for:

- Blockages
- Injuries
- Trauma
- Bleeding inside the chest
- Infections
- Inflammation
- Other health problems
- Tumors and other lesions
- Unexplained chest pain

A CT scan may be done when an exam or other test, such as an X-ray, doesn't give enough information.

This test may also be used to guide needles during biopsies of organs or tumors in the chest. A biopsy is when a small sample of tissue is removed. It is looked at under a microscope in a lab. CT scans can also be used to guide the removal of a sample of fluid from the chest. They are also useful in keeping an eye on chest tumors and other health problems of the chest before and after treatment.

There may be other reasons that you need a CT scan of the chest. Talk with your healthcare provider about the reason for your scan.

## What are the risks of a CT scan of the chest?

You may want to ask your healthcare provider about the amount of radiation used during the CT scan. It's a good idea to keep a record of your past history of radiation exposure. Tell your healthcare provider about past CT scans and other types of X-rays. Your risks of radiation exposure may be linked to the total number of X-rays you have had over a long period of time.

Also tell your healthcare provider if you:

- Are pregnant or think you may be pregnant. Radiation exposure during pregnancy may lead to birth defects. If you are breastfeeding, ask if you should pump and save breastmilk to use after the scan. If contrast is used, ask when to resume breastfeeding.
- Have ever had a reaction to any contrast dye. If contrast dye is used, there is a risk for an allergic reaction.

- Have kidney failure or other kidney problems. In some cases, the contrast dye can cause kidney failure. This may be more likely if you have an underlying kidney problem or are dehydrated.
- Tell your healthcare provider if you are taking the diabetes medicine metformin. You may be told to stop taking this medicine before the scan.
- Have any other health problems. There may be other risks, depending on your overall health.

Certain things may make a CT scan of the chest less accurate, such as:

- Barium in the esophagus from a recent barium study
- Body piercing on the chest
- Metal objects within the chest, such as surgical clips or a pacemaker

## How do I get ready for a CT scan of the chest?

- Make a list of questions and concerns you have about the chest CT scan. Talk about these with your healthcare provider before the scan. You may want to bring a family member or trusted friend along with you to help you remember your questions and concerns.
- If your scan involves the use of contrast dye, you may be asked to sign a consent form. Read the form carefully and ask questions if something is not clear.
- Tell the technologist if you:
  - Have ever had a reaction to any contrast dye
  - Are allergic to iodine or shellfish
  - Are pregnant or think you may be pregnant
  - Have any body piercings on your chest or abdomen
- Usually, you don't need to fast before a CT scan, unless a contrast dye is going to be used. You will then be given special instructions ahead of time.
- Dress in clothes that give access to the area or are easy to take off.
- Your healthcare provider may give you other instructions to get ready.

## What happens during a CT scan of the chest?

You may have a chest CT scan as an outpatient. Or you may have it as part of your stay in a hospital. Procedures may vary based on your health problem and your hospital's practices.

Generally the chest CT scan follows this process:

1. You will be asked to take off any clothing, jewelry, or other objects that may get in the way of the procedure.
2. If you are asked to take off clothing, you will be given a gown to wear.
3. If you need to have a scan done with contrast, an IV line will be started in the hand or arm. This is so the contrast dye can be injected. For oral contrast, you will be given a liquid contrast preparation to drink.
4. You will lie on your back with your arms above your head on a scan table. The table slides into a large, circular opening of the scanning machine. Pillows and straps may be used to keep you still during the scan.
5. The technologist will be in another room where the scanner controls are located. But you will be able to see the technologist through a window. Speakers inside the scanner will let the technologist talk to you

and hear you. You will have a call button. Use it to tell the technologist if you have any problems during the scan. The technologist will be watching you at all times. They will be in constant communication.

6. As the scanner starts to move around you, X-rays will pass through the body for short amounts of time. You will hear clicking sounds. These are normal.
7. The X-rays absorbed by the body's tissues will be picked up by the scanner and sent to the computer. The computer processes these images and displays them on a screen. A radiologist can then look at them.
8. You will need to stay very still during the scan. You may be asked to hold your breath at various times.
9. If contrast dye is used, you will be removed from the scanner after the first set of scans. A second set of scans will be taken after the contrast dye has been given.
10. If contrast dye is used, you may feel some effects when the dye is injected into the IV line. These effects include a flushing sensation, a salty or metallic taste in the mouth, a brief headache, nausea, and vomiting. These effects often last for only a few moments. Tell the technologist if you feel pain or tingling at the IV site after contrast is injected.
11. You should tell the technologist if you have any trouble breathing, sweating, numbness, or heart palpitations.
12. When the procedure is done, you will be removed from the scanner.
13. If an IV line was put in, it will be taken out.
14. You may be asked to wait for a short period of time while the radiologist looks at the scans to make sure they are clear.

The CT scan itself causes no pain. But having to lie still for the length of the scan might cause some discomfort or pain, especially after a recent injury or surgery. The technologist will make sure the scan is as quick and as comfortable as possible.

## What happens after a CT scan of the chest?

If contrast dye was used during the scan, you may be watched for some time afterward. Your healthcare provider will watch for any side effects or reactions to the contrast dye. These include itching, swelling, rash, or trouble breathing.

Tell your healthcare provider if you have any pain, redness, or swelling at the IV site after you get back home. These could be signs of an infection or other type of reaction.

If you are given contrast by mouth, you may have diarrhea or constipation after the scan.

You don't need any special care after a CT scan of the chest. You may go back to your usual diet and activities, unless your healthcare provider says otherwise.

Your healthcare provider may give you other instructions, based on your health.

## Next steps

Before you agree to the test or procedure make sure you know:

- The name of the test or procedure
- The reason you are having the test or procedure
- What results to expect and what they mean
- The risks and benefits of the test or procedure
- What the possible side effects or complications are
- When and where you are to have the test or procedure

- Who will do the test or procedure and what that person's qualifications are
- What would happen if you did not have the test or procedure
- Any alternative tests or procedures to think about
- When and how you will get the results
- Who to call after the test or procedure if you have questions or problems
- How much you will have to pay for the test or procedure

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