



Computed Tomography (CT)

Patient Information

The information herein tells you about having a computed tomography (CT) scan. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such discussions. If you have any questions about the procedure please ask the doctor who has referred you for the test or the department which is going to perform it.

Radiologists are doctors specially trained to interpret the images and carry out more complex examinations. They are supported by radiographers who are highly trained professionals and carry out x-rays and other imaging procedures.

What is a CT scan?

A CT scan is carried out by using a special X-ray machine, which produces an image of a cross-section, or slice, of the body. The scanner consists of a 'doughnut-shaped' structure, or gantry, about two feet thick with a hole in its centre, through which you pass while lying on a couch.

A narrow fan-shaped beam of X-rays is produced from inside the gantry and rotates in a complete circle around you. The X-rays pass through your body and are detected by electronic sensors on the other side of the gantry. This information passes to a computer which produces a picture of the internal structure of the body. The pictures are displayed on a screen for examination by the radiographer as well as the radiologist.

It takes about less than a second to produce each slice, which can vary in thickness from one millimetre to one centimetre, depending on how much of the body is being scanned.

Are there any risks?

CT scanning involves the use of X-rays. Women who are or might be pregnant must inform a member of staff in advance. The amount of radiation used is more than an ordinary X-ray of the chest or body and is equal to the natural radiation that we receive from the atmosphere over a period of approximately three years.

Many CT examinations involve you having a contrast medium injected into a vein to increase the quality of information obtained from the scan. The injection usually causes nothing more than a warm feeling passing around your body.

Despite these slight risks, your doctor believes it is advisable that you should have this examination, and do bear in mind there are greater risks from missing a serious disorder by *not* having your scan.

Are you required to make any special preparations?

You may be given or sent instructions which will relate to the part of the body to be scanned, for example, for some abdominal scans patients are asked not to eat anything for a few hours before the scan. Unless you have been told otherwise, you may eat and drink normally before and after the scan.

If you are having a CT scan of your chest/abdomen/pelvis, you may be required to fast for four hours before the scan. You may be asked to drink fluid called oral contrast before the examination is performed. This should be taken slowly over a period of one hour; that is, you should drink approximately one cup every 20 minutes.

Can you bring a relative/friend?

Yes, but for reasons of safety, they may not be able to accompany you into the examination room, except in very special circumstances.

When you arrive

Please go to the reception desk where the front reception will gain some information from you before taking a seat in our waiting room collected by a radiographer or other member of staff.

The procedure for your examination will be explained to you. If you have to undress for the procedure, you will be shown to a private cubicle where you will be asked to put on the

gown provided. You should let the radiographer know if you have diabetes, kidney problems, asthma or any allergies.

Who will you see?

You will see a radiographer and perhaps an assistant. A radiologist or another doctor or a radiographer will give you your injection..

What happens during the CT scan?

You will be taken into the special X-ray room and made comfortable lying on the couch. Straps and pillows may be used to help maintain the correct position and to keep you still during the examination. You may be given an injection of a contrast medium into a vein in your arm a few seconds before the scan starts. The couch will be moved slowly to position the part of your body under investigation within the 'doughnut'.

The radiographers will retire to the control room but you will be able to talk to them via an intercom, and they will be watching you and listening all the time. When you enter the CT scanner special lights may be used to ensure that you are properly positioned. With modern CT scanners, you will only hear slight buzzing, clicking and whirring sounds as the CT scanners revolves during the course of the procedure.

During the scan, you may be asked to hold your breath or not swallow while images are being produced. However, if you feel any discomfort or apprehension, please tell the radiographer immediately.

Once the scanning is complete, you may be asked to wait until it is determined that the images are of high enough quality for the radiologist to read.

Will it be uncomfortable?

No. You will not feel any pain, although you might feel a slight discomfort arising from having to lie still, and of having a full bladder or rectum.

How long will it take?

If you are given fluid to drink on arrival, you might have to wait an hour before entering the scanning room. The scanning process will then take about 10-20 minutes. Unless you are delayed by having to wait, such as for an emergency patient, the total time in the department will be about 90 minutes.

Are there any side-effects?

Not usually, although you might need to visit the toilet again. You can drive home afterwards and may return to work as necessary. If you have had a contrast injection, you should wait at least one hour before driving.

Can you eat and drink afterwards?

Yes.

When will you get the results?

The scan will be examined after your visit and a written report on the findings sent electronically or by fax to your referring doctor during the course of the day. If your results are required immediately our radiologist will call your doctor directly to discuss your results.