

Information for patients having a CT scan



The Royal College of Radiologists

The leaflet 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 a discussion.

The radiology department

The radiology department may also be called the x-ray or imaging department. It is the facility in the hospital where radiological examinations of patients are carried out, using a range of x-ray equipment, such as a CT scanner, an ultrasound machine and a MRI (magnetic resonance imaging) scanner.

The radiologists are doctors specially trained to interpret the images and carry out more complex examinations. They are supported by radiographers who are highly trained to 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, through which you pass 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, the information passes to a computer which then produces a picture of the internal structure of the body. The pictures are displayed on a TV screen and can be examined by the radiologist.

It takes about 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.

Who will be doing the CT scan?

A radiographer who is highly trained to carry out x-rays and other imaging procedures and a radiologist who is a doctor specially trained to interpret the images and carry out more complex examinations.

Where will the procedure take place?

Generally in the x-ray department.

Are you required to make any special preparations?

You may be given instructions which will relate to the part of the body to be scanned, but the radiographer will explain what will happen.

Are there any risks?

CT scanning involves x-rays. Female patients 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 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 in order to increase the amount 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 doctors 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 it.

Can you bring a relative/friend?

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

When you arrive

Please report to the reception desk at the radiology department.

Upon collection

The radiographer will explain the procedure for your examination. If you are required to remove clothing you will be shown to a private cubicle. You will be asked to put on the surgical gown. You should point out if you have diabetes, asthma or any allergies.

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 hold still during the exam. You may be

given an injection of a contract medium into a vein in your arm. 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 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 procedures.

During the scan, you may be asked to hold your breath or not swallow while each image is being produced. However, if you feel any discomfort or apprehension, please mention it immediately to the radiographer.

Once the scanning is completed 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 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 film will be examined after your visit and a written report on the findings sent to your referring doctor which is normally available in 14 days.

Other sources of information

Websites

For general information about radiology departments, visit The Royal College of Radiologists' website: www.goingfora.com

For information about the effects of x-rays read the National Radiological Protection Board (NRPB) publication: 'X-rays how safe are they?' on the website: http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1194947388410

NHS Direct

For health advice or information you can call NHS Direct on 0845 45647 or visit the website: www.nhsdirect.nhs.uk

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This leaflet has been prepared by the Clinical Radiology Patients' Liaison Group (CRPLG) of The Royal College of Radiologists.

Board of the Faculty of Clinical Radiology

The Royal College of Radiologists, March 2008

Notes for medical staff

This patient information leaflet may be downloaded and, if necessary adapted, for medical use and is also a direct source of information for patients accessing this website. It has been produced by the Clinical Radiology Patients' Liaison Group of The Royal College of Radiologists. If being used for a hospital leaflet, it is recognised that certain other information would need to be included for the patient as described below.

The appointment arrangements

- **Details of investigation**
- **Date, time and location**
- **What the patient should do if they are unable to attend**
- **Contact telephone number(s)**

Special instructions

- **Preparations required before attending**
- **Advice on dealing with personal valuables**

How to find the site

- **Hospital, transport, parking**
- **Department, directions, map**

Special needs

- **Information for those with a disability (parking, nearest drop-off point, transport within hospital)**
- **Special language needs**
- **Help for deaf/hard of hearing, blind/partially sighted**