

Adult patients having a CT scan of the heart

If you do not believe you should have been referred for this procedure please contact the CT department immediately.

Introduction

This leaflet gives you information about having a CT (Computed Tomography) scan of the heart.

What is a CT scan?

A CT (Computed Tomography) scanner is an X-ray machine which produces images (pictures) of the inside of the body. The scanner is made up of a 'doughnut' shaped structure, about 2 feet thick and a couch on which you will be asked to lie. This couch will pass through the scanner.



Figure 1: CT scanner

Reference No.

GHP11435_01_21

Department

Radiology

Review due

January 2024

A narrow beam of X-rays is produced from inside and rotates in a complete circle around you.

The X-rays pass through your body and are detected by electronic sensors. This information passes to a computer which creates images of the inside of the body.

Patient Information

It takes less than a second to produce each image which can vary in thickness from one millimetre to one centimetre. Depending on how much of the body is being scanned and the scanner used, this can be done quickly. Some scans take less than a minute.

Are there any risks?

It is important that all patients of child bearing age are scanned within the first 10 days of their menstrual cycle. If you are under 56 years of age and your appointment does not lie within this time-frame or you are or may be pregnant please call the CT appointments team to discuss or reschedule. The telephone number is at the top of your appointment letter.

CT scanning does involve X-rays and so has the usual risks associated with ionising radiation. The amount of radiation is equal to the natural radiation we all receive from the atmosphere over a period of about 3 years. This adds very slightly to the risk of, for example, developing a cancer however, Macmillan Cancer Support predict that 1 in 3 of us will develop a cancer at some stage during our lives, so this added risk is very small.

Many examinations involve you having a contrast medium injected into a vein in order to increase the amount of information obtained from the scan. This injection causes a warm feeling passing around your body. There are slight risks with this injection which are an allergic reaction or leaking of the contrast into the tissue around the vein which can be painful.

The doctors in the Imaging/Radiology Department are trained to deal with any complications and again the risk is very small.

If you had a reaction to a previous injection of contrast material given for a kidney X-ray (IVU) or a previous CT scan, it is important that you tell the radiographer at the time of your examination.

Please let us know on the day of your scan if you are being treated for kidney or breathing problems, myeloma, diabetes, severe allergies, or if you have any special needs.

**Patient
Information**

Giving your consent (permission)

We want to involve you in the decision about your care and treatment. We are happy to answer any questions you may have or address any concerns. This is encouraged and we like to know what is important to you and may influence your decisions. You may withdraw your consent at any time.

The Radiology Department plays an important role in the training of future healthcare professionals. The part patients play in this is vital in ensuring we produce the right quality of healthcare professionals for the future. If at any time you would prefer not to have students present please inform the team looking after you. This will not impact on your care in any way.

Are there any special preparations?

You may have a light meal 4 hours before your scan. Please make sure you drink plenty of fluid during the day but avoid caffeine products (coffee/tea/energy drinks/coca cola/chocolate) as this may increase your heart rate.

Take your usual medication as normal on the day of the scan and please bring with you a list of your current medications.

You must remove all items of jewellery from your head and neck before attending for your appointment. We are unable to offer secure facilities for safe storage of valuables in the department. You will be asked to remove them for your scan if worn.

You may also be asked to remove any body piercings. It is helpful if you wear loose, metal free clothing to help us to access your upper arm and chest. Alternatively you may be asked to undress to the waist, a hospital gown will be provided.

Can I bring a relative or a friend?

Yes, but for safety reasons, they cannot join you in the CT scanning room.

When you arrive

The appointment time on your letter includes time for the team to take your pulse and blood pressure before your scan.

Patient Information

You may also be given some medication (a mild beta blocker) in tablet form. This is to reduce your resting heart rate and will give us better scan images. If needed, these tablet(s) will take 1 hour to work.

Please be ready to tell us your height and weight, as this information is important.

Just before your scan, a small cannula (thin tube) will be put into a vein in your arm. This is to allow for a contrast injection which will help us identify the blood vessels in your heart. Please let the radiographer know if you are afraid of needles or if you have suffered light headiness during previous injections.

Who will I see?

You will be cared for by a small team including a radiographer, a nurse and a radiologist.

What happens during the CT scan?

To obtain the best images of your heart the radiographers will monitor your heart rate.

You will be asked to lie down on the CT examination couch (bed) then 3 to 4 small stickers (electrodes) will be placed onto your chest and connected to a heart monitor. Depending on your heart rate, and in addition to the tablets you may be given before the scan, you may also need another low dose of short-acting beta-blockers. These will be administered via the cannula in your arm.

You will also have a spray medication under the tongue to help with the quality of the images. The spray under your tongue may give you a minor headache or dizziness but it will go quickly.

The bed will move slowly in and out of the 'doughnut' as imaging takes place.

The radiographers will be in the adjoining control room where they will be able to see and speak to you via an intercom. You will need to lie still during the examination.

During the scan you may be asked to hold your breath or not swallow. If you feel any discomfort or have any worries please tell the radiographer straightaway.

**Patient
Information**

After the CT scan

You should rest quietly and drink plenty of water in the department for 20 minutes after the scan. If you have had beta blockers and your blood pressure is low you may be asked to remain in the department for longer.

You should not operate heavy machinery or drive if you experience tiredness or reduced heart rate after the beta blockers. It is recommended that you ask someone to drive you home after the scan. If this is not possible you should remain in the department until these feelings have settled.

Please contact NHS 111 for advice if you have any of the following symptoms after you leave the hospital following your scan:

Wheeziness, tightness or pains in the chest, skin rash, itchy spots, dizziness, fever, swelling or pain in your legs, pain or swelling near the injection site.

Will the scan be uncomfortable?

You should not feel any pain, although some people do have slight discomfort from having to lie still.

Most patients do not mind lying with part of their body within the gantry but if this makes you feel anxious please tell the radiographer straight away.

How long will the scan take?

The whole scanning process will take about 20 minutes. Unless you are delayed due to an emergency patient, your total time in the department may be up to 2 hours.

Are there any side effects?

You may experience a warm sensation and feeling as if you need to pass urine when you are given the contrast injection. This is normal and will only last a short time.

If you have been given beta blockers your heart rate will have been reduced so we will monitor you for 20 minutes after the scan.

**Patient
Information****Can I eat and drink afterwards?**

Yes, you can eat and drink as normal.

When will I get the results?

After your visit the radiologist will look at your CT scan and prepare a report on the findings. These will be sent to your referring doctor.

Interpreters

If you need an interpreter for your procedure please contact the department so we can try to arrange this.

Cancelling your appointment

If you are unable to attend your appointment we would be grateful if you could contact us as soon as possible. We can then offer your appointment to another patient and arrange another date and time for you.

If you have had diarrhoea and/or vomiting please cancel your appointment unless you have been free of symptoms for 48 hours. Please ring the CT Appointments Officer on the number shown on your appointment letter, between 9:00am and 4:30pm, Monday to Friday.

If you do not believe you should have been referred for this procedure please contact the CT department immediately. Please ring the number shown on your appointment letter.

**Patient
Information**

Contact information

If you have a query about having the CT scan, please ring the CT Appointments Officer on the number shown on your appointment letter Monday to Friday, 9:00am and 5:00 pm

We are pleased that we can offer state of the art technology for diagnosis. However, radiology equipment needs constant updating and there is a charitable fund for this. If you would like to make a donation, please send a cheque to the appropriate address below. Cheques are payable to GHNHSFT.

Please send your donation to:
Administration Manager
Dept of Radiology (Imaging 1)
Gloucestershire Royal Hospital,
London Road
Gloucester
GL1 1NN

Content reviewed: January 2021