Mersey and West Lancashire Teaching Hospitals
NHS Trust

Having a Cardiac CT scan

Patient leaflet

If you need this leaflet in a different language or accessible format please speak to a member of staff who can arrange it for you.

اگر به این بروشور به زبان دیگر یا در قالب دسترس‌پذیر نیاز دارید،
لطفاً با یکی از کارکنان صحبت کنید تا آن را برای شما تهیه کند.

Jeśli niniejsza ulotka ma być dostępna w innym języku lub formacie,
proszę skontaktować się z członkiem personelu, który ją dla Państwa przygotuje.

Dacă aveți nevoie de această broșură într-o altă limbă sau într-un format accesibil,
vă rog să discutați cu un membru al personalului să se ocupe
de acest lucru pentru dumneavoastră

如果您需要本传单的其他语言版本或无障碍格式，请联系工作人员为您安排。

إذا احتجت إلى هذه النشرة بلغة أُخرى، أو بتنسيق
يسهل الوصول إليه، يرجى التحدث إلى أحد الموظفين لترتيب ذلك لك.

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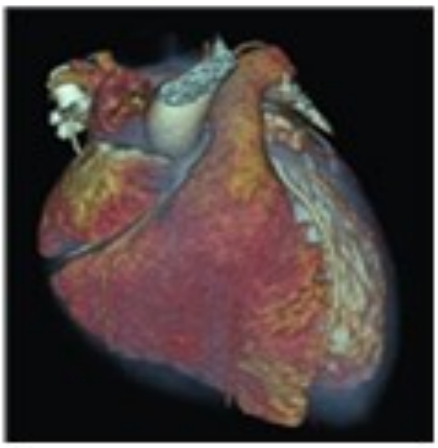
Introduction

This information aims to answer your questions about having a CT scan. It explains the benefits, risks and alternatives, as well as what you can expect when you come to the hospital. If you have any further questions, please speak to your referrer or the Radiographer performing your scan.

What is a CT scan?

CT stands for Computerised Tomography. A CT scan takes a series of pictures of your body using X-rays. CT scans provide a greater detail of your internal organs, bones, blood vessels and soft tissue than ordinary x-rays, and so are often the preferred method of diagnosing a wide range of medical conditions. A Radiographer will perform this scan for you. A Radiologist or Cardiologist will look at these images and make a report which goes to your referrer.

A Cardiac CT scan is a specialised CT scan which provides very detailed images of your heart and the arteries which supply your heart.



3 Dimensional CT Heart



How should I prepare for the scan?

What happens during a CT scan?

- The CT scanning machine looks like a ‘large doughnut’ or a ‘polo mint’. You will be positioned in the middle of the scanner.
- The Radiographers can’t be with you in the room, but will be able to see, hear and speak with you at all times. You will lie on a narrow examination table that slides into and out of this circle. The scanner table can be lowered and patients with mobility problems will be offered assistance.
- X-rays produced by the scanner pass through your body and are detected by electronic sensors on the other side of the ring. This information is sent to a computer that produces a picture of your body. Modern CT scanners are so fast that they can scan through large sections of the body in just a few seconds.
- You will need to lie very still while each picture is taken to avoid blurring the images and you may be asked to hold your breath for a moment. Straps and pillows may be used to help keep you still and help you to maintain the correct position during the examination.

Preparing for the scan

It is important that you follow the preparation instructions as this may affect whether or not your scan will be able to go ahead and the diagnostic quality of the images acquired during your scan.

Medication

Please bring a list of up to date medications you are taking and if you use any sprays or inhalers, please bring them with you to your appointment. You can continue to take any medication prescribed to you by your doctor as you usually would do.

Eating and drinking

In order to produce the best quality images of your heart you must avoid caffeine 6 hours prior to the examination (tea, coffee, chocolate). These products increase your heart rate, which can lead to a poor-quality scan. Otherwise continue to eat and drink normally. In fact, we advise you to be well hydrated (drink lots of water) before your scan.

What do I need to wear?

We encourage you not to bring or wear any valuable items or jewellery. ECG electrodes will be placed on your chest for the scan, so you will be asked to change into a hospital gown.

What to expect

On arrival at the X-Ray Department, you will be directed to the relevant waiting area and will be asked to change into a hospital gown. You will be asked a series of safety questions and a small tube (cannula) will be sited in your arm. Your blood pressure and heart rate will also be recorded.

You will then be taken into the CT scanning room and you will be asked to lie on a bed. ECG leads will be placed on your chest. An injection of a contrast agent (a dye which shows up on the scan) into a vein in your arm is necessary to produce the images of your heart. You will have to hold your breath several times during the examination. If you have difficulties lying flat or holding your breath for short periods (about 20 seconds) please inform the radiographer.

Will I be given any medication during the scan?

Betablockers

The best quality scan is obtained when your heart rate is slow. Some people may have a relatively fast heart rate and may require the doctor to give a small injection of a medication called a beta blocker to slow the heart rate down. This is standard practice and there is nothing to worry about. The beta blocker will slow your heart rate gently, has no major side effects and only acts for a short time (approximately 20 minutes).

GTN

It may also be necessary to give you a small amount of GTN. This is a small tablet placed under your tongue and helps produce better images of the small arteries around your heart.

If you have any allergies or have taken beta blockers before and have suffered side effects, please inform the CT staff on arrival.

How long will it take?

The actual scan will only take several minutes to perform but the preparation for the scan will take a little longer. We also ask you to wait in the department for up to 30 minutes following the scan so that we can make sure you are feeling alright before you leave. You should estimate that you will spend approximately two hours within the department.

What happens after the Cardiac CT?

You should have no after effects from this examination. You will need to stay in the X-Ray Department for at least 20 minutes after the scan. You can eat and drink normally after the examination and you may drive home and are then free to return to work/normal daily life.

X-ray Contrast (dye)

If we are scanning certain areas of your body, we may need to give you an injection of contrast dye. If you do receive X-ray contrast during your scan, it may give you a metallic taste in your mouth, a ‘hot flush’ and a sensation that you may need the toilet (passing water – don’t worry, you won't, it just gives you that feeling). These effects will pass in a few minutes.

How long will it take?

This depends on which part of your body is being scanned but it typically takes between 10 and 20 minutes. Including the preparation that may be needed, you should plan to be in the CT Department for up to two hours, as we may need to scan emergency patients before you. This means that your appointment could be delayed. We will let you know if this is the case.

Will I feel any pain?

You should not feel any pain during the scan itself. The most difficult part is keeping still. Try to relax as much as possible. If you find it uncomfortable to lie still then please tell the radiographer.

What are the risks?

Radiation

CT scanning involves the use of radiation. Any examination using radiation is only performed when strictly necessary and it is felt the benefits of the examination outweigh any potential risks. All imaging is performed using the minimum amount of radiation necessary, and is individualized for each patient depending on the size of the patient and the condition being investigated.

For more information on radiation please see the link below:
https://www.ukhsa-protectionservices.org.uk/radiationandyou/



Injection of X-ray contrast (dye)

If you have had an allergic reaction to iodine or the X-ray contrast in the past, then you must tell us prior to, or on arrival for, your appointment.

The contrast (dye) that is sometimes used during a CT scan contains iodine.
There are risk factors associated with injections of x-ray contrast, which can be increased by certain conditions. We will complete a safety questionnaire to check your suitability to have the X-ray contrast. The risk of serious allergic reaction to contrast materials that contain iodine is extremely rare, and Radiology Departments are well equipped to deal with them. The injection usually causes nothing more than a warm feeling passing around your body, a metallic taste in your mouth and a sensation of passing water. These effects will pass within a few minutes.

Table 1: Types of allergic reaction to Contrast (X-ray Dye)

Category	Type
Mild	Minor rash, redness, Swelling of the skin, Mild nasal congestion, sneezing, runny nose. Mild high blood pressure, nausea, Mild vomiting.
Moderate	Generalised redness Marked rash, Itching, and swelling of the skin, Hoarseness or throat tightness, Fainting Swelling of face and throat.
Severe	Respiratory arrest Cardiac arrest Fluid on the lung Seizures Cardiogenic shock The risk of death is extremely rare.

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Risks continued...

Extravasation

Occasionally, if you are having a contrast (dye) enhanced CT, there is a small risk that the injection of contrast can leak out of the vein and under the skin. This is called an extravasation. We find this occurs in around 1 out of every 200 injections. If this does happen then further advice will be given to you by the Radiographer and Radiologist at the time of the CT scan.

Pregnancy

If you are, or think you could be pregnant, please contact us prior to your appointment on the phone number in your appointment letter.

GTN

Like all medication GTN can cause side effects, although not everybody gets them.
The common side effects of GTN are:

- Headaches.
- Feeling dizzy.
- Feeling sick.
- Face flushing.

Serious side effects after taking GTN are rare and happen in less than 1 in 1,000 people.

Beta Blockers

Side effects commonly reported by people taking beta blockers include:

- Feeling tired, dizzy or lightheaded (these can be signs of a slow heart rate).
- Cold fingers or toes (beta blockers may affect the blood supply to your hands and feet).
- Feeling sick.

It happens rarely, but some people have serious side effects when taking beta blockers:

- shortness of breath and a cough that gets worse when you exercise (like walking up stairs), swollen ankles or legs, or an irregular heartbeat.
- shortness of breath, wheezing and tightening of your chest.
- yellowish skin or the whites of your eyes turn yellow.

Finally

The pictures taken during the examination are studied carefully and a detailed report is produced. The results will be sent to the person who referred you for the test. They will discuss the results with you and any treatment you may need.

You may already have an appointment with the team who referred you. If not, please contact them to arrange one to discuss the results of this test.

If you have any further questions, please do not hesitate to call the Radiology Department via the number given on your appointment letter.

As this is a teaching hospital there may be students and observers present during your examination as part of their ongoing training. Please let the staff know if you do not wish any students to be present during your attendance.

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