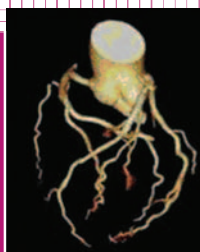


Cardiac CT scans

i Information for patients
Radiology



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What is a cardiac CT scan?

A cardiac CT scan is a specialised test that uses a CT scanner and X-rays to produce detailed images of your heart and surrounding blood vessels. Images are taken in slices through your heart that can be put together to create a 3D picture of your heart and blood vessels.

Why do I need it?

You will have recently seen your consultant who will have discussed with you his/her reason for wanting a cardiac CT scan.

Some reasons include:

- Investigations into chest pain
- Family history of coronary heart disease
- Evaluation of existing heart problems
- You may have had a coronary angiogram which has been inconclusive or more information is required

If you are still unsure as to why the scan is necessary, it is best to talk to your consultant who will have all your details.

Pre-assessment clinic

Before you have your scan you may be given an appointment to attend a pre-assessment clinic where you will be seen by a cardiac nurse. At this clinic your heart rate and blood pressure will be checked and blood samples may be taken if required. You may be given some medication to take before the scan. These are usually beta blockers and help to slow your heart rate to ensure the best scan results can be achieved. If you are asthmatic you may be prescribed an alternative medication such as Ivabradine. At this appointment you will also be informed of how best to prepare for the scan.

It may be unnecessary for you to see the nurse before the scan if you are already taking medication (beta blockers) to slow your heart rate. If you are not asked to attend a pre-assessment clinic please continue your medication as normal unless advised otherwise.

What do I need to do to prepare for the scan?

For the best test results you will need to be relaxed and your heart rate needs to be slow and stable. The following will help to achieve this:

- **Do not** eat sugary foods such as chocolate for 4 hours before the scan
- **Do not** consume sugary or caffeinated drinks (for example tea, coffee, hot chocolate and Cola) for 12 hours before your scan as these will increase your heart rate
- **Do not** undertake cardio-vascular / physical activity that will raise your heart rate on the day of the scan
- **Do not** take Sildenafil (Viagara), Tadalafil (Cialis) or Vardenafil (Levitra) for 24 hours prior to the procedure
- **Do** drink plenty of fluids before your scan

You will receive a short questionnaire along with your appointment letter requesting information regarding allergies and medical conditions. **Please fill this in and bring it with you when you attend for your scan.**

What will happen when I arrive for my scan?

Once you have booked in at the main reception a clinical imaging assistant will collect you to take readings of your heart rate and blood pressure. If your heart rate is still too fast it may be necessary to give you another dose of beta blockers; this will be decided between a consultant radiologist and the consultant who sent you for the scan. A

member of the radiographic team will place a small needle into your arm (known as a cannula) to allow the X-ray dye and any drugs to be administered during the test. You may be given some extra water to drink on arrival to ensure you are well hydrated. Once we are happy with your heart rate you will be taken for your scan.

What happens during the scan?

When you are taken for your scan you may need to change into a hospital gown and then lie flat on the scan table. During the test it is important that you are comfortable to ensure that you remain relaxed and still. The radiographer will connect you to an ECG machine to monitor your heart rate throughout the test.

You may be given a GTN tablet or spray under your tongue before the test begins. If your heart rate is too high to achieve the best quality test you may be given an extra injection of beta blockers by the doctor. GTN and beta blockers help us to ensure that we get the clearest images of your heart and vessels.

You will require an injection of X-ray contrast (dye). This is a liquid that highlights your heart and blood vessels on the scan and helps give more information. The dye is injected towards the end of the scan. Immediately after the injection you may feel warm and have a metallic taste. This is normal and passes off quickly.

You will be scanned several times during which time you will move in and out of the scanner. During each scan you will be asked to hold your breath for up to approximately 20 seconds. It is important that you manage to hold your breath for this length of time as the motion from breathing causes blurring and can ruin the scan pictures.

If you feel you may struggle to hold your breath it may be helpful for you to practice at home to ensure you are prepared.

What happens after the scan?

You will be asked to stay in the department for an extra 15 - 30 minutes, as we need to monitor you and make sure you feel alright before you leave us.

You may notice a headache if you are given GTN as this is a common side effect and does not normally last long. Your usual pain relief medication should help with this.

If you have been given beta blockers and/or GTN to slow your heart rate whilst in the department you will need to be monitored for an extra 30 minutes. Your heart rate and blood pressure will be re-checked to make sure they return to normal before you leave.

We will remove the cannula from your arm.

How long does it take?

The scan itself takes approximately 20 minutes. Please be aware that you will be asked to arrive 30 minutes before your appointment time to allow time for your heart rate and blood pressure to be checked and medication to be given if required. You will also be required to wait 15-30 minutes after the scan during which time your heart rate and blood pressure may be monitored. You should expect to be in the CT department for at least 2 hours.

Are there any risks?

Risk from radiation

CT scans use radiation in the form of X-rays. The amount of radiation is kept to a minimum to prevent harm caused by radiation and CT scans are generally considered very safe. A CT scan of your chest area is considered a low risk examination. The radiation dose you receive will

be equivalent to a few years' worth of the natural background radiation we are all exposed to and this may increase your lifetime risk of cancer by 0.01%.

Your consultant has decided that for your condition the benefit of having a Cardiac CT scan outweighs any risk.

The X-rays can be harmful to your unborn baby. It is important to tell the CT staff if you are, or think you may be, pregnant.

Risk of reaction to the X-ray dye

We take every precaution to ensure that you will have no adverse effect from the injection. However, very occasionally (in less than 0.03% of cases) patients can have an allergic reaction to the dye, known as anaphylactic shock. This can manifest itself as an itchy rash, shortness of breath and, in extremely rare cases, swelling of the throat and other body parts. This is why we take many safety precautions in preparing you for the scan.

There is a slight risk of reaction to the dye within a few hours after having the injection. If you experience any of the above symptoms once you have left the department, do not hesitate to contact either your GP or your local Accident and Emergency Department. Please inform staff of any allergies you may have.

Asthma: On rare occasions the X-ray dye can bring on an asthma attack, if you are asthmatic please remember to bring your inhalers with you.

Risk to kidney function

The X-ray dye injection can cause your kidneys to work more slowly; this is only a problem if you already suffer with kidney problems. If you have not had a recent blood test you will need to have one before the scan

to check your kidneys are working properly. Your doctor / cardiac nurse will organise this for you. Depending on these blood results you may need to be hydrated before and after the scan, this can involve drinking 1 litre of water before and after the scan or you may need to come into hospital and be put on a drip for a few hours before and after the scan. Once we receive your blood test results you will be informed if this is necessary for you.

The short questionnaire you have been asked to complete provides information to help reduce the risk of an allergic reaction and medical problems. **Please remember to complete this and hand it in when you attend for your scan.**

Shall I continue taking my medication?

Yes, continue taking any medication unless your cardiac doctor / nurse advises you otherwise. If you are diabetic and are taking Metformin you may need to stop taking this.

If you are diabetic and taking Metformin please contact the CT scanning department as soon as possible. Our telephone number is provided on your appointment letter.

When will I get my results?

We cannot give you your results straight away. The radiologist will need time to look at your scan pictures in detail, your results will then be sent to the consultant that sent you for the scan. You should have an outpatient appointment booked with your consultant at which you can discuss the results. If you do not have an appointment booked your consultant's secretary will send one out to you once they have received the results.

What should I look out for when I get home?

Normally any symptoms occur during your time in the department. If you do become unwell when you get home please contact your GP, phone 111 or, in an emergency situation, your Accident and Emergency Department and tell them what procedure you have had.

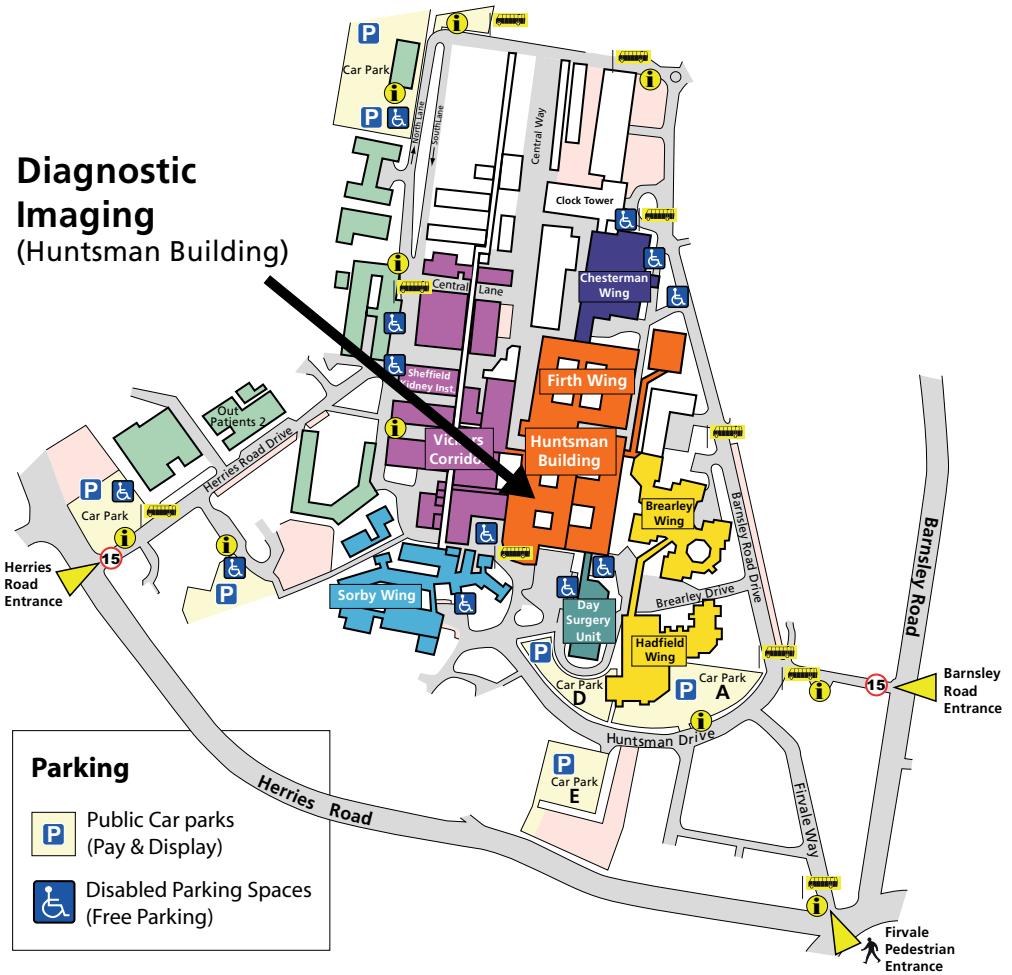
What if I still have some questions?

After reading this leaflet, if you want to know more or have any concerns, you can contact your cardiac doctor / nurse, the CT scanning department or you can ask the radiographer when you arrive.

What should I do if I cannot keep the appointment?

If you cannot make your appointment, or if you have any queries, please contact the CT scanning department. Our telephone number is provided on your appointment letter.

Diagnostic Imaging (Huntsman Building)



Parking



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(Pay & Display)



Disabled Parking Spaces
(Free Parking)



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