

# Cardiac CT angiography

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## What is Cardiac CT angiography?

It is a non-invasive method for obtaining high-resolution, three-dimensional pictures of the heart and coronary arteries. CT stands for computerised tomography and angiography means imaging of blood vessels.

## Why is it needed?

It is needed to investigate whether coronary artery disease is present and, if so, to what extent.

The scan aims to provide information about calcium deposits or narrowing (stenosis) in the arteries that supply the heart. If there are stenoses, these may be the cause of chest pain or breathlessness on exertion. This information can be very helpful for the cardiologist in advising and planning the correct treatment for you.

## What does it involve?

You will be greeted by a member of the radiology team and taken into a preparation room. You will be asked to fill in a safety checklist. A cannula (plastic tube) will be inserted into a vein, for administration of the contrast (X-ray dye) used in the cardiac CT exam. You will have the procedure explained to you and be guided through it. You will be asked to put on a gown and remove any jewellery, and you will then be escorted into the CT room.

Once in the CT room you will be asked to lie on your back on the CT scanner table and make yourself comfortable. We will ask you to raise your arms above your head and four ECG electrodes (small sticky discs) will be placed onto your chest, allowing your heart rate to be monitored during the exam. The exam will then begin.

The CT table will move slowly through the scanner to determine the correct starting position for the scans. You may need to be given an injection of a drug (Metoprolol) to slow your heart rate down and enable us to achieve good-quality images.

You will then have two injections of x-ray dye which will make you feel warm. The table will move slowly through the scanner a few times as the actual CT scanning is performed. You will be asked to hold your breath for a period of 10 to 20 seconds while images are recorded.

## How long will it take?

The CT scan is usually completed within 15 minutes, during this time you will need to lie still on the CT scanner.

You will be in the department for approximately one hour in total.

## Where is it done?

CT scan is done in the radiology department. Please report to the CT reception desk in general Outpatients D on arrival.

If you come through the main hospital entrance, take the second corridor on your right (just before the coffee shop). Continue all the way down the corridor and then take a right turn. Take the next left to CT scanner / Outpatient D.

## What preparation is needed?

No special preparation is necessary before a cardiac CT angiogram. You should continue to take your normal medications but avoid caffeine for four hours prior to the exam as this can increase your heart rate.

**If you have diabetes, please telephone the X-ray/Scans Department on 01271 322741 (Monday to Friday, 9am–11am).**

You are advised to wear a loose vest or little top. This is so we can put the ECG electrodes on your chest more easily, without you having to take things off.

## How will I feel during the test?

A cardiac CT scan is painless, fairly fast and easy for you.

The only part of this exam that may be difficult is if you have problems lying still. Please let us know if this is the case prior to starting and we will do everything possible to help. Moving your body during the scan can cause the pictures to blur.

Most people experience a hot flush sensation when the dye is injected. We will talk you through this on the day.

You will be alone in the CT room during the scan. However, the team will be able to see, hear and speak to you at all times if required.

## How will I feel afterwards?

Most patients feel perfectly normal after the exam. However, if we have given you a medicine to slow the heart rate, you may feel light-headed. If this is the case, we will monitor you until you feel well enough to leave.

## What happens after the test?

After the scan we will remove the ECG electrodes and the cannula, and we may carry out some observations, such as your blood pressure and heart rate.

You will be asked to remain in the hospital and not to drive for 1 hour following your scan. We would like you to remain in the CT department for the first 30 minutes but then you may go elsewhere in the hospital until the full hour has passed.

You may eat and drink normally after the exam and resume your usual activities.

It is advisable to bring someone with you for transport home, just in case we give you the medicine to slow your heart rate and you feel light-headed.

## Are there any risks?

As with X-rays, CT scans use radiation. The level of radiation used is relatively small and the benefits of the scan are certainly thought to outweigh the risks. The contrast dye used contains iodine, which some people are allergic to. Please tell us if you have any allergies to any medicines. We will check this with you before you have your scan.

## Follow up

The images obtained will be reviewed by radiologists and cardiologists and discussed at a meeting. Your cardiologist will then advise you of the findings and any recommendations for treatment or further investigation required. This process may take up to two or three weeks, but any urgent findings will be acted on sooner.

## Further information

If you have any questions or concerns about having a CT scan, please contact CT reception at North Devon District Hospital on 01271 322741 or speak to one of the radiology nurses on 01271 311869.

## References

British Heart Foundation ([www.bhf.org.uk](http://www.bhf.org.uk))

Guy's and St Thomas' NHS Foundation Trust, 2011

John Hopkins Bay View Medical Center, 2011

Great Western Hospital NHS Foundation Trust, Swindon, 2011

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## PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email [rduh.pals-northern@nhs.net](mailto:rduh.pals-northern@nhs.net). You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

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Tell us about your experience of our services. Share your feedback on the Care Opinion website [www.careopinion.org.uk](http://www.careopinion.org.uk).

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