

Patient Information leaflet CT Coronary Angiography

Radiology department

Introduction

We hope this guide will answer your questions about your CT Coronary Angiography scan. Please contact the team if you require further information via the details at the end of this leaflet.

What is a CT Coronary Angiography Scan?

A Computerised Tomography (CT) scanner is a specialised piece of equipment, shaped like a very large doughnut. It uses X-rays and a computer to produce a series of cross-sectional images of your body, which gives the clinician more information than standard X-rays.

During a CT coronary angiography scan, we scan and take pictures of your heart and your coronary arteries using a special dye (contrast). This allows us to see any narrowing or blockage of the arteries and vessels around your heart.

CT coronary angiography is a non-invasive procedure. This reduces the risk of complications.

Prior to the introduction of CT coronary angiography, your heart and arteries would probably have been investigated with “traditional” coronary angiography. This is an “invasive” procedure that involves inserting a catheter into the heart through an artery in the leg, then injecting dye, and then taking a series of X-rays.

These tests can provide information on how well your heart is functioning, but cannot provide information on the anatomy of your heart.

A CT coronary angiography scan will provide a detailed image of your heart's anatomy.

Why do I need a CT Scan?

You are having this examination as it will help your doctor to decide on the cause of your symptoms. This procedure will give clearer information to the clinicians treating you.

Will I need an injection?

CT scans sometimes require an injection of a special dye (contrast media) into a vein in the arm or hand via a cannula. The dye is eliminated from the body through the kidneys. This is administered to patients at the request of a radiologist (a specialist radiology doctor) to help enhance certain areas of the body.

Your scan has been requested with contrast medium.

What are the associated risks?

X-ray radiation: All x-ray procedures involve exposure to radiation in varying amounts. The amount of radiation dose associated with a CT is greater than a plain X-ray because CT scans provide a more detailed 3D picture of what is going on inside the body.

This detailed imaging can significantly aid your diagnosis or treatment. The dose you get from a medical x-ray is very low and your doctor along with the radiologists (x-ray specialists) have determined that the benefits of having the examination outweigh potential risks.

The radiographer is present throughout your test making sure that the radiation dose is kept as low as reasonably possible and the duration and level of x-rays are kept to a minimum.

Due to ionising radiation regulations, only patients are allowed in the X-ray room.

Procedure: A CT scan is considered a very safe procedure.

Contrast injection: During your injection you may feel a slight warm to hot sensation, and may have a sensation of urinating, this does not happen but can feel quite strange. Occasionally some patients may feel nauseous during the injection, this feeling should pass very quickly.

Extravasation: Extravasation is where during the injection of contrast, some of the contrast leaks into the soft tissue instead of going into the vein. This can cause a painful swelling in your arm or hand. If this happens we will apply an ice pack to aid with swelling and bruising and give you aftercare information.

We may need to insert another cannula to continue your scan if this happens. Although rare, extravasations can happen. Our staff are fully trained to deal with these complications if they arise.

Allergic reaction: A very small number of patients have an allergic reaction to the x-ray dye. This can be minor, severe, or even life threatening but the chances of this occurring are very rare. Before your examination begins the radiographer will ask you a series of questions about your medical history, including any allergies you may have. This will help us assess if you are at risk of an allergic reaction to the x-ray dye.

Patients aged 12 to 55, could you be pregnant? X-rays can be harmful to an unborn baby and should be avoided by patients who are or may be pregnant.

It is recommended that the examination is performed within 10 days of the first day of your menstrual period.

If your appointment is not within this time or if you think you may be pregnant, please contact the X-ray department before your appointment.

When you arrive for your CT scan, you will be asked when your last period started. If it is more than 10 days earlier, your appointment may be postponed.

Breastfeeding: On the day of your CT examination, you will be given an injection of iodine contrast medium (Visipaque or Omnipaque). These agents are low risk contrast agents. A very small percentage of the injected contrast enters the breast milk but virtually none is absorbed across the gut of the infant.

No special precautions are required and you can carry on breastfeeding as normal. However, if you have any concerns you may want to express some breast milk prior to your appointment.

This information is from guidance provided by The Royal College of Radiologists.

Preparing for your procedure

Please contact the booking team before your appointment if:

- -you are or think you may be pregnant
- If you have had a previous allergic reaction to x-ray dye (contrast agent) or are allergic to iodine.
- If you are a diabetic taking Metformin.
- If you have been advised or told to restrict your fluid intake.
- If you weigh over 30 stone/190 kilograms
- If you have problems standing or need a hoist to transfer
- If you require an interpreter – please inform us as soon as you receive your appointment letter, and we will arrange an interpreter for you.

If you are taking Metformin tablets, it is important you let us know in advance. You will be required to have a blood test within 7 days of the date of your scan. This will be to check that your kidneys are functioning at a level good enough to eliminate the contrast from your body.

You will need to take beta blockers for three days prior to your scan. These can be prescribed by your GP or your referring consultant.

Please **do not have anything to eat for three hours** before your appointment time. It is important that you are well hydrated both before and after your scan; you can drink water.

Please avoid tea, coffee and smoking on the day of your scan. They contain caffeine, which can speed up your heart rate. Some soft, fizzy drinks such as cola also contain caffeine, so you should avoid these also.

Please leave any jewellery or valuables at home.

Medication

Please continue taking your usual medication prior to your CT scan. Please bring any inhalers you take with you.

Getting to us

Once you have arrived at The Princess Alexandra Hospital (Hamstel Road, Harlow, Essex, CM20 1QX), follow the signage to the radiology reception, which is located on the ground floor, green zone. Please let the radiology receptionist know that you have arrived for your appointment.

When should I arrive?

Please arrive in the radiology department at your given appointment time. A notification through text or letter should have been sent to you to confirm this appointment.

Can someone stay with me in hospital?

You may have a friend or relative attend with you, but they will be asked to stay in the waiting area while you have your procedure.

Children are not allowed in the waiting area unattended. Our staff are not permitted to supervise children, so please ensure child care arrangements are in place to avoid your tests being rescheduled.

The day of the procedure

On the day of the procedure, you will be cared for by a member of the nursing team who will check your observations first. If your heart rate is high even after taking the beta blockers prescribed by the GP/ referring consultant, the radiologist will prescribe an

additional dose of beta blockers to bring the heart rate down. You will be monitored in the nurse recovery area up until you have your scan.

After these observations have been done you will be taken to the CT department where you will then meet the radiographer (the person who operates the CT scanner) who will explain the procedure to you and answer any questions you may have.

You will be asked to put on a hospital gown to avoid causing any interference whilst taking the scan images.

A cannula will be placed in your arm or hand in preparation for your injection during your scan.

You will then be asked to wait until the scanner is free.

Occasionally there may be a slight delay in your scan due to the scanner being used for an emergency patient. Please be patient with the team.

The procedure

Our radiographer will ask you to lie on a special scanning table. ECG leads will be placed on your chest so that we can synchronise the scanner with your heartbeat. We can then trigger the scanner to take a picture at a certain point of your heartbeat. This allows us to obtain high quality images of your heart.

You may be given a tablet of Glycerol trinitrate to place under your tongue. This medication helps to dilate your vessels making them easier to see. It is a small tablet that will dissolve. This medication can cause a headache. You may take your normal pain relief if required after the scan.

The table moves through the scanner and pictures of your heart and arteries are taken. So that we can see your heart and arteries more clearly we will give you an injection of X-ray contrast (dye) into a vein in your arm. The dye travels through your veins to your heart and “highlights” your hearts anatomy when we take the scan. It is harmless and will pass out of your system in due course. The procedure usually takes about 60 minutes but can take longer in some cases.

If your heart is beating quickly, it can be difficult for us to get a clear picture. We will therefore check your heart rate when you first arrive in the department and, if it is faster than the ideal rate, may give you some medication to slow it down.

After the procedure

Once the radiologist is happy with the procedure you will be asked to sit in the CT waiting area after your scan for around 15 minutes. This is to ensure there are no reactions to the injection and you feel ok.

The cannula will then be removed and a plaster applied to the injection site. If you usually take blood thinning medication, you may need to press on the injection site for a few minutes to ensure any bleeding has stopped.

If you have been given medication to lower your heart rate during your scan, we will take you to be observed by our nurses for 30 minutes after your scan.

The cannula will then be removed and you are discharged from the department. You are then able to continue with your normal activities.

Can I drive after my procedure?

You are able to drive as soon as you are discharged from the department.

How soon can I return to work?

You are able to return to work as soon as discharged from the department.

When will I get my results?

You will not know the results of your examination immediately. The radiologist will report their findings to the clinician who arranged your procedure, who will discuss the results with you. It usually takes a couple of weeks for the results to become available.

What is a recall and why may I need one?

A recall is when the radiologist has looked at your previous images from your scan and would like further images to aid your diagnosis. We may therefore need to ask you to attend a further appointment in the CT department.

Please do not be concerned, as radiologists cannot always be present to view and check the images at the time of your scan.

Contacting the team

If you have any further questions about your CT scan or an existing appointment, please contact the radiology department (**Monday to Friday, 9am to 4pm**) at **01279 827179** and press option 1 for radiology appointments and then option 2 for CT.

If you have any queries **outside of working hours (after 4pm and on weekends)**, you will be redirected to the main radiology reception.

Please note appointment bookings cannot be made during this time.

Your feedback matters

If you would like to give feedback on your care, please contact our patient experience team at paht.pals@nhs.net or **01279 827211**.

Please contact the communications team at paht.communications@nhs.net if you would like this leaflet in another language or format.