



Oxford University Hospitals  
NHS Foundation Trust

# Cardiac CT

Information for patients



**The radiology department has received a request for you to have a CT scan of your heart or aorta. This leaflet tells you what to expect.**

## **Before your scan:**

- If you weigh more than 177kg or 28 stone please tell us.
- If you are eligible for hospital transport please tell us as soon as possible.

## **Why am I having this scan?**

Based upon your symptoms, your doctor has referred you for a scan of your heart and associated blood vessels. This involves using X-rays to take detailed pictures of your heart in 'slice sections'.

## **What is a CT scan?**

A CT (computerised tomography) scan is a special X-ray that allows radiographers to take detailed images of the body. The CT scanner is an open, ring like piece of equipment which looks like a polo mint rather than a tunnel.

A cardiac CT scan takes pictures of your heart, coronary arteries (the vessels that supply the heart with blood and oxygen), pulmonary vessels and aorta (the main blood vessel from your heart to the rest of your body). This allows us to get a picture of the structure of your heart and its major blood vessels and valves.

The results of the scan will help your doctor diagnose any health problems you have been experiencing and decide on further treatment for you.

## **Can I bring a relative or friend?**

Yes, but for reasons of safety they will not be able to go with you into the CT scan room, except in very special circumstances. Please be aware that there is limited seating in the waiting area. At busy periods visitors may be asked to return for relatives/friends at a later time.

## **What clothing shall I wear?**

You may wish to wear loose clothing that can be removed easily as you will be asked to change into a hospital gown. This is necessary for us to be able to place electrodes on your chest. These will show us a trace of your heart rate and heart rhythm.

## **Can I eat and drink normally before the scan?**

**Yes you can** – in fact we advise you to drink some water before the scan.

Please avoid coffee, tea and chocolate on the day of the scan as these increase your heart rate which can result in a poorer quality scan.

## **Can I take my prescribed medicines as usual?**

You should continue to take all your routine medicines. If you have diabetes and take metformin you should stop taking this medication on the date of the scan. The doctors in the scanner room will tell you when you can restart your metformin.

## **Do I need to tell the staff what tablets I take?**

**Yes** – when in the scan room it is very important to tell the staff what medication you take, before you have the scan. It is often useful to bring your repeat prescription with you on the day of the scan.

## **What happens at the hospital?**

Upon arrival you will be greeted by the reception staff and radiology assistants. Preparation for the CT scan will take place in the preparation area and you will then be asked to change into a hospital gown. A small tube called a venflon will be placed in one of the veins in your arm. This is used to inject a dye into your arm which will show up on the scan.

In the CT scan room you will meet the doctors and radiographers who will explain the procedure in detail. They will attach the necessary monitoring equipment to your body. They will also explain the breathing instructions you will need to follow during the scan.

## **What happens during the scan?**

You will be asked to lie on your back on the scanning table. An ECG machine will monitor your heart rate. Both this and your blood pressure will be continuously monitored throughout the procedure. The scanning table moves your body through the scanner. You will be asked to hold your breath whilst the scanner takes the pictures. We understand that some people have difficulty holding their breath – please let us know at the time if this is difficult for you.

The scanner sounds like a washing machine and the procedure should not be painful. The staff can see and hear you at all times through a connecting window and an intercom.

## **Will I be given any medications during the scan?**

In order to achieve a good quality scan, your heart rate needs to be slow. Some people have a slightly faster heart rate. If your heart rate is over 60 beats a minute, a doctor will give you a beta-blocker injection into the venflon tube in your arm to slow it down. This is standard practice and there is nothing to worry about. The drug will slow your heart rate gently. It does not have any major side effects. It acts for a short time and its effect will last for about 20 minutes.

If you are asthmatic and have been told that you cannot take beta-blockers, or have become very wheezy with beta-blockers in the past, then you must let us know in advance. We will liaise with your referring doctor and may post a prescription for a medicine called ivabradine to you. This medicine needs to be taken for 3 days before the scan (one tablet in the morning and one in the evening). The tablet is safe for patients with severe asthma.

The majority of patients with COPD/emphysema or mild asthma can take the beta-blockers that we normally use for this scan.

## **Does the doctor need to know any other information about me before giving the drug?**

Normally the doctor will check if you take any medication or have any allergies. It is important to say if you have any allergies or if you have taken beta-blockers before which have given you problems. You should also say if you suffer from asthma.

## **Will I need any other injections?**

You will need an injection of contrast (X-ray dye) into a vein in your arm during the scan. This shows up blood vessels and body organs. The venflon cannula or 'tube' through which the contrast will be injected is put in your arm vein in the preparation area before you go into the CT scan room.

You will also be told about what to expect during the injection of contrast (generally a metallic taste in the mouth and a warm sensation throughout the body which lasts for about 30 seconds). This only lasts for a short time and the symptoms pass quickly. Please tell us if you experience any discomfort in the arm during the scan.

## **How long does the scan take?**

The actual scan only takes a minute or two but the preparation takes longer.

We will also ask you to wait in the department for 20 minutes after the scan to ensure that you are feeling well before you leave. You should allow an hour before you will be ready to go home. You could be in the department longer if there are emergency patients added to the scanning list. We will do our best to keep you informed of any delays that may occur.

## **Are there any risks?**

The examination involves exposure to x-rays but the amount of radiation is kept to a minimum by sophisticated radiation dose controls on the scanner.

We are all exposed to background radiation from the ground, building materials and the air every day of our lives. This is normal and natural.

Medical x-rays give an additional dose and the level of dose varies with each examination. Any small increased risk of cancer occurring many years or decades later is outweighed by the benefit of having the scan performed so a diagnosis can be made and any necessary treatment planned.

The contrast injection contains iodine, which can cause an allergic reaction in a few people. You should inform the staff if you have had an allergic reaction to iodine or contrast dye in the past or if you have any other allergies. Very rarely the dye may cause some kidney damage in people who already have kidney problems.

Very occasionally, the contrast can leak outside the vein to cause temporary swelling and discomfort in the arm. In the unlikely event of this happening we will provide you with further instructions and advice to follow.

## **What happens after the scan**

- You can eat and drink normally.
- You can normally drive home but we advise you to try and arrange for someone to pick you up.
- You may be advised to slightly increase your fluid intake for the rest of the day. If you are a diabetic taking metformin we will speak to you about the possible need to stop taking this medication for 48 hours after the scan.
- You may remove the gauze dressing from your arm after one hour or so.



# **When and how will I know the result of the CT examination?**

You will not receive the results straightaway.

## **As a general guide:**

### **If your GP referred you to us:**

The report will be sent to the GP practice. You can make an appointment with your GP for 10 days after your scan to discuss the results.

### **If a hospital consultant or doctor from the outpatient department referred you:**

The report will be issued ready for your next outpatient appointment. If you do not have another outpatient appointment and do not hear anything about the results within three weeks, we suggest you telephone the referring doctor's secretary for advice.

**If you have any queries we will be happy to answer them on the day of the appointment or you can telephone us on number given on the appointment page.**

## **More patient information is available on the following websites:**

[www.impactscan.org/patientguide.htm](http://www.impactscan.org/patientguide.htm)

[www.nhs.uk/conditions/ct-scan](http://www.nhs.uk/conditions/ct-scan)

[www.ouh.nhs.uk](http://www.ouh.nhs.uk)

[www.ouh.nhs.uk/services/departments/radiology](http://www.ouh.nhs.uk/services/departments/radiology)





## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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