

## Computerised Tomography (CT) Scan

**This leaflet 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 for your scan. If you have any further questions, please speak to the Doctor, Nurse or Radiographer caring for you or contact the Radiology department on the appropriate telephone number:**

**Conquest Hospital Appointments:** Tel: 0300 131 5146 or 0300 131 5141

**Eastbourne DGH Appointments:** Tel: 0300 131 4662 or 0300 131 4794 or 0300 131 4374

### What is a CT Scan?

CT stands for Computerised Tomography. A CT scan takes a series of pictures of any part of your body using x-rays to produce images that show cross-sections or slices of your body. A Radiographer (a University-trained health professional who works in Radiology to produce diagnostic images using a variety of different modalities) will perform your scan and may be assisted by an RDA (Radiology Department assistant). The data produced from the scanner is processed by a powerful computer to create the images and can be viewed on a screen to show very detailed images of the inside of your body. These images are interpreted by a Radiologist (a specialist X-Ray Consultant who is trained to interpret diagnostic images) to provide a report for your referring Clinician.

### Why would I need this procedure?

A CT scan can help your doctor to find the cause of your problem and then decide the best treatment options for you.

CT scans can be carried out on all areas of the body, and your Doctor should explain why they have referred you for the scan.

Your Doctor will have decided that a CT scan is the best option for you. Other forms of imaging may not provide the same level of detail or give the information that they need to make an accurate diagnosis.

### What should I do before my scan?

Please follow any instructions received with your scan appointment, as these vary depending on the type of scan you are having. Please continue to take any prescribed medication as usual unless you have been told otherwise by your doctor. Sometimes we will advise you not to eat or drink before your scan. Your appointment letter will Inform you of how long before the scan to stop.

Your appointment letter may ask you to drink a litre of water one hour prior to your scan. You can empty your bladder during this time, as your bladder does not have to be full for this examination. For some scans you may be asked to follow special instructions which will be enclosed with your appointment letter. Please ensure any additional instructions are followed as not carrying out these may cause a delay in your scan being performed.

If you need an injection of contrast, a Radiographer or RDA will insert a cannula (a small plastic tube for giving medication) into a vein in your arm or the back of your hand before your scan. The contrast dye that is used on some scans gives us more information on the images.

We have limited waiting areas within Radiology, so please limit the amount of people you bring with you to one person if possible. It will not be possible for this person to come into the scan room but we will provide any assistance to help you before and during your scan.

Please be advised that we cannot look after children whilst you are in the department, so if you need to bring your children with you, please bring along an adult who can supervise them while your scan is being done. At both Conquest Hospital and Eastbourne DGH please report to the main Radiology Department and book in at Reception.

### **What should I wear?**

Please follow the instructions on your appointment letter as the need to change will vary dependant on your scan. Metal fastenings like zips, poppers and hooks and eyes will show up on the scan, so we may ask you to change into a hospital gown. If you can avoid wearing these clothes then we may not have to ask you to change.

For some more complex scans you may need to change whatever you are wearing. If we are scanning your head, then head coverings, hairbands, grips and earrings will also need to be removed. For certain scans you may need to remove any metallic dentures and hearing aids.

### **What happens during the CT Scan?**

The scanning machine is like a large doughnut. You will need to lie on a motorised bed which moves slowly and slides into the centre of the ring until the part of the body to be scanned is within the ring. The x-ray machine (which is inside the machine so you cannot see it) rotates around your body. As it rotates around, the x-ray machine sends thin beams of x-rays through your body, which are detected by the x-ray detectors. Unlike some other scanning machines, the CT scanner is not enclosed and you will be able to see through the scanner.

### **Canon Aquilion One and 64 sliced installed at Conquest Hospital**



### **GE Revolution and Revolution Evo scanners installed at Eastbourne DGH**



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 short time. Straps and pillows may be used to try to make you as comfortable as possible and support you, so that you will be able to lie still for the scan.

When you are positioned, the Radiographers will leave the room but you will be able to talk to them through an intercom and they will be watching you through the glass window.

If we are scanning certain areas of your body, we may need to give you an injection of contrast dye. If you do receive dye during your scan, it may give you a metallic taste in your mouth and a 'hot flush.' Some people feel as though they want to pass water (wet themselves) - don't worry, you won't, it just gives you that feeling. All of these sensations pass in a couple of minutes.

You should not feel any pain during the scan itself. The most difficult part is keeping still. Try to relax as much as possible but if you find it uncomfortable to lie still then please tell the Radiographer and they will assist you however they can.

The images are recorded and the Radiographer will check them briefly to ensure that they are diagnostic (of good enough quality to be used to make a diagnosis). When this is done you will be allowed to get off the scanner bed and leave the scanning room. Whilst the radiographer can reassure you that the appropriate images have been obtained, they will not be able to give you any idea of the results at that time, but will advise you where to get your results from if you are unsure.

### **Are there any risks?**

All CT scanning involves the use of X-rays. There are strict guidelines in place for the use of x-rays in diagnosing medical conditions so CT scans can only be performed at the request of a Doctor (or other suitably Registered health Professional). The amount of radiation used is more than an ordinary X-ray of the same area of the body and is equal to the natural radiation that we receive from the atmosphere over a period of approximately three years. Women who are or might be pregnant must inform a member of staff in advance. Because children are more sensitive to radiation, they should have a CT study only if it is essential for making a diagnosis and should not have repeated CT studies unless absolutely necessary.

We will keep the radiation dose as low as we possibly can.

Many CT examinations involve you having a contrast medium (dye) injected into a vein to increase the quality of information obtained from the scan.

- The injection usually causes nothing more than a warm feeling passing around your body, a metallic taste in your mouth and occasionally a sensation of needing to urinate. These effects subside within a few minutes.
- 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.
- Very rarely, the dye may cause some kidney damage, most commonly in people who already have kidney problems. For this reason we may ask you to have a blood test before your scan to ensure your kidney function is good enough to be given the contrast.
- If you are having a contrast enhanced CT, there is a small risk that the injection of contrast can leak out under the skin instead of in the vein. If this happens then further advice will be given to by the staff at the time of the CT. There should not be any lasting damage but you may experience bruising as a result of this.

Despite these slight risks, your Doctor believes it is advisable that you should have this examination, and do bear in mind there are greater risks from missing a serious disorder by *not* having your scan.

**You must inform your Doctor and contact the Radiology department (on the numbers provided at the top of this information) for specific advice before you come to your appointment, if any of the following apply to you:**

- **If there is any possibility that you might be pregnant**
- **If you are breastfeeding as you may need to express and discard your milk for 24 hours after the scan.**
- **If you have ever had any allergic reactions to x-ray contrast or any bowel preparations in the past.**
- **If you are taking medicines for diabetes, such as metformin, then these may need to be stopped following the scan (you will be given instructions regarding this at the time of your scan).**

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

This depends on which part of your body is being scanned but each scan typically takes between 10 and 20 minutes. Including the preparation that may be needed, you should plan to be in the CT department between 30 minutes to an hour. Your appointment letter will give you more details, as some scans will take longer than others.

We will try to keep to your appointment time but occasionally we have to scan emergency patients at short notice which can cause delays for our booked patients. If this situation arises when you come for your scan we will let you know and keep you informed of any delays.

### **What happens after the scan?**

In most cases, as soon as the scan is finished you can go home, or back to your ward if you are staying in hospital. If you have had a contrast dye injection, we may ask you to wait for up to 30 minutes before you leave the department. This is to ensure that you feel well and there is no sign of any allergic reaction to the contrast dye you had been given.

### **How soon will I be able to resume normal activities?**

You can eat and drink as normal and resume your usual activities straight after the scan. For more specialist scans you will be advised of any further instructions following your scan.

### **How do I get the results of my scan?**

Due to the complex nature of the scan images which need evaluation by the Radiologist, you will not receive any scan results on the day of your scan. Your results will be given to you by the Doctor that referred you for the scan when you see them. They will discuss the results with you and any treatment you may need. Please allow two weeks for the results to be sent to your referring doctor if you are an out-patient. As per your appointment letter, if your condition changes or deteriorates in this time, contact your referring Doctor.

Patients who have scans performed whilst they are on the ward, will receive the results usually the same day from the ward Doctors.

## Consent

We will ask you to fill out a questionnaire on your arrival in the department, which helps us assess your suitability for the contrast dye if needed. On this we will ask for your consent for us to carry out the scan. Consent will verbally be taken before any injections take place.

## Sources of information

For further information regarding your condition please refer back to the Doctor who has sent you for your scan.

Further information regarding CT Scanning can be gained from The Royal College of Radiologists - [www.rcr.ac.uk/](http://www.rcr.ac.uk/)

Patient information - <https://patient.info/treatment-medication/ct-scan>

## Important information

The information in this leaflet is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

## Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team - Tel: 3033 131 4731 or by email: [esh-tr.patientexperience@nhs.net](mailto:esh-tr.patientexperience@nhs.net)

## Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

## Other formats

**If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.**

**Tel: 0300 131 4434 - Email: [esh-tr.AccessibleInformation@nhs.net](mailto:esh-tr.AccessibleInformation@nhs.net)**

## Reference

The following clinicians have been consulted and agreed this patient information:

Rebecca Ayling, Clinical Manager, CT Scanning, Dr Justin Harris, Clinical Lead Radiologist, Dr Gillian Watson, Consultant Radiologist, Dr Neil Barlow, Consultant Radiologist

The Diagnostics, Anaesthetics and Surgery Division have agreed this patient information leaflet:

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