

Patient Information

Radiology

CT with intravenous contrast

Introduction

You have been advised by your doctor to have a computerised tomography investigation usually called a 'CT scan.' This leaflet will explain what the examination involves. It may not answer all your questions, so if you have any questions or concerns, please do not hesitate to call the telephone number on your appointment letter. If you feel unhappy with any part of your care please ask to speak to the most senior person in the department on the day.

Please read this leaflet carefully to ensure you successfully prepare for the examination. You will need to begin your preparation for the examination 4 hours before your appointment.

Please contact the X-ray Department if your weight is equal to or more than 204 Kg (32 stone) as you may require an alternative examination.

What is a CT scan?

A CT scan is an X-ray examination that gives much more information than a normal X-ray. It produces detailed cross-sectional images of your organs and blood vessels.

The examination will be performed by a radiographer who will be assisted by a Radiology Department assistant. The procedure may take up to 30 minutes.



Points to Remember

- **If you are over 70 years of age, please make sure that you have had a blood test within the past 3 months as we need to know your renal function. We request that you ask your referring clinician (Consultant or GP) for a blood test form. Failure to get this blood test will result in the cancellation of your scan and it will be rescheduled. Please note we do not send out the blood test form.**
- Please bring any sprays or inhalers that you are taking with you to your appointment.
- **Please arrive in the department at least 15 minutes before your appointment time** so that we have time to go through your safety questionnaire and get you appropriately changed for your examination.
- If you are on medication from your doctor, except insulin, please continue to take it as normal. In particular please continue to take your heart medication.
- If you are unable to attend, please contact the Department using the number on your appointment letter.
- We also ask you to leave any valuable possessions at home.
- If you are diabetic you should have been given an early morning appointment. If this is not the case please phone the number on your appointment letter and state that you have been advised to rearrange your appointment time. You should not take your morning insulin or tablets before to the examination. Please bring your own insulin, any instructions you have for taking it and a light snack for after the examination with you.

Risks/benefits of Procedure

- X-rays are a type of radiation. We are all exposed to natural background radiation every day of our lives; this comes from the sun, food we eat, and the ground. Exposure to X-rays carries a small risk, but your doctor feels that this risk is outweighed by the benefits of having the test. We will take all safeguards to minimise the amount of X-rays you receive.
- It is possible that you may have an allergic reaction from the injection of contrast agent used during the examination. You will be asked about allergies by the radiologist or radiographer at the time.

Safety

Safety questionnaire: Please complete the enclosed CT safety form and give it to the CT staff when you attend for your examination

Warning: The contrast agent contains iodine and is removed from your body (excreted) by the kidneys in your urine. Please contact the Radiology Department immediately if:

- You are allergic to iodine or have reacted previously to the injection used in x-ray to show your kidneys, blood vessels (angiography) or for CT scanning.
- You have severe renal impairment (GFR below 30ml/min) and are not on dialysis treatment
- If you are taking **Metformin** (also called **Glucophage, Glucovance, Duformin, Orabet** or **Glucamet**) tablets, continue to take these as normal until the time of your examination.
- It will be necessary for you to stop taking these tablets for 48 hours after the radiological test. This is to avoid the build up of acid in the blood following the injection of contrast agent given as part of the CT investigation. Please contact your GP or specialist nurse if you have any concerns or to arrange other medication if required. Stopping the tablets temporarily will not cause any harm to you.

Important information for patients with renal impairment (GFR less than 60ml/min):

- If you are taking non-steroidal anti-inflammatory drugs (NSAIDS) you should discontinue taking them for 24 hours on the day of your examination. You may use Paracetamol as a substitute pain relief medication during this time.

Patients aged 12 - 55 years (For chest, abdomen or pelvis CT scans):

- To make sure there is no possibility you are pregnant your appointment date must be within the first 10 days of the start of your period. Please contact the X-ray Department to rearrange your appointment if this is not the case. When you attend your examination, you will be asked the date you started your last period. If you no longer have periods or there is no chance you may be pregnant (e.g, you have had a hysterectomy) you should keep your original appointment. When you attend your examination, you will be asked to confirm there is no possibility that you are pregnant.

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Preparation

- Please do not eat anything for 4 hours before your appointment. If you are diabetic, please contact your diabetic specialist nurse if you have any concerns how this preparation may affect your medication.
- You should be well hydrated before your examination. Please drink at least 500mls of water or squash during the **2 hours before** your appointment.
- You **may** be asked to drink a further 2 glasses of water immediately before your scan.

Important Information for patients on a fluid restricted allowance:

If you are under the care of a renal specialist and /or have to follow a fluid restricted diet, you should include this preparation as part of your fluid allowance. Please inform the CT radiographer before he/she begins your examination.

What will happen when I arrive?

- On arrival at the Radiology/ X-Ray Department, please report to the reception desk where you will be directed to the **CT/MRI** Department reception and waiting area.
- If necessary, you will be asked to undress and put on a suitable gown. Please feel free to bring your own dressing gown.
- A member of the CT staff will go through your answers to the enclosed safety/consent questionnaire with you.
- For some scans of the oesophagus and stomach, you may be given some more water to drink just before your scan.

During the examination

- You will be taken into the X-ray room where the examination will be explained to you and you may ask any questions that you have.
- An injection of a contrast agent (a colourless liquid that shows up on X-ray images and CT scans) into a vein in your arm, may be necessary, to show your blood vessels. The supervising radiologist will have decided this before your scan; however, this will be confirmed by the CT

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radiographer once he/she has checked the answers on your questionnaire. You will be fully informed by the CT staff.

What is iodinated contrast media?

- It is a clear liquid that is injected via a thin plastic tube (cannula) inserted into a vein (usually in the arm but occasionally in the leg). The contrast media acts like a 'dye' which helps to show up any problems in the organs of the body.

Why do I need to have the iodinated contrast media?

- The dye allows the radiology doctors to distinguish between normal and abnormal structures. It improves the visibility of specific organs, blood vessels and tissues, allowing doctors to form their diagnosis easier.

Will I feel anything when I have the contrast media injected?

- The contrast media can make you feel as if you are experiencing a warm flush sensation. It can also leave a metallic taste in your mouth which can last up to a few minutes once the contrast has been injected.

Pregnancy and contrast media

- If there is any chance of pregnancy, let the radiographer performing the scan know. It could result in the scan being cancelled, re arranged or an alternative examination being untaken.

What side effects can be experienced following the administration of iodinated contrast media?

- After the administration of contrast media, you may experience a variety of side effects, which can vary from patient to patient. The radiographer performing the scan will go through a CT questionnaire form to find any risks before the examination is undertaken.
- Examples of side effects include feeling sick (vomiting), but the vast majority of patients do not suffer from any side effects following the administration of the iodinated contrast media.
- Severe adverse reactions to iodinated contrast media are very uncommon and Radiology Departments are equipped to deal with them.

If I have a reaction to the iodinated contrast media injection what might occur?

- Most often side-effects/reactions would occur shortly after the contrast had been administered. However, there is small percentage of patients that may receive a delayed reaction. This is most commonly a rash which may occur hours to days after the examination. Most reactions are mild, however it is advised you seek medical attention if it progresses.

Contrast-induced nephropathy

- Patients who have impaired kidney function are theoretically at risk of further deterioration in kidney function following iodinated contrast administration.
- All patients over the age of 70 years will need to have a blood test to check their kidney function before they have a CT scan. The CT scan must be performed within 3 months of the blood test being done.
- If you only have mildly impaired kidney function, it may still be possible to have the contrast media but you may need to have some extra fluids before and after the scan. The hospital will advise you if this is necessary.

CT scan:

- You will be asked to lie still on your back on the X-ray table and, if you require an injection of contrast agent, a small cannula (tube) will be inserted by the radiographer into a vein in your arm ready for the injection.
- You may then be asked to raise your arms above your head, depending on what part of your body is to be scanned, and the table will be moved into the scanner. The scanner is open at both ends (it is not a long tunnel).
- You will be asked to hold your breath whilst a short 'scout' scan is taken; this takes a couple of seconds.
- There will be a few minutes delay whilst the radiographer programmes the full scan. You will then be given the injection of contrast agent which may make you feel quite warm or flushed.
- After a short delay you will be asked to hold your breath again for one or more longer scans. If you have any difficulties holding your breath for about 15 seconds, please inform the CT staff before you have the injection

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- Once the scan is complete, you will be helped back to the changing rooms or waiting area – see below 'After the examination'
- Do not leave the department with a tube (cannula) still in place. This will normally be removed 10 minutes after the scan has taken place.

After the examination

- You will be given an aftercare information sheet by the CT staff; please ask for one if it is not offered to you.

If you have had an injection of contrast medium:

- You will be asked to remain in the CT department for 15 – 30 minutes before the tube (cannula) is removed from your arm and you can go home. You may get dressed whilst you wait.
- **You can eat and drink normally after the examination.** We recommend that you drink at least one pint of liquid within 2 hours after your examination
- **If you have severe renal impairment (a GFR below 30ml/min) and are not on dialysis:** It will be necessary for you to attend renal day case unit (UHCW ward 50) the day after your examination to monitor your renal function if you have had an intravenous injection of contrast. Please contact the radiology department immediately.

If you have not had an injection of contrast agent:

- You may get dressed and go home immediately after the scan.
- You should feel no aftereffects from the procedure.
- You can eat and drink normally after the examination.

How do I get the results?

The results will not be given to you immediately. They will be sent to the doctor who referred you for this examination.

Other sources of information:

For information about the effects of X-rays read the NRPB publication: “X-rays how safe are they?” on the Health Protection Agency website:

www.hpa.org.uk

Please note that the views expressed in these websites do not necessarily reflect the views of UHCW NHS Trust or the NHS.

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact the telephone number on your appointment letter and we will do our best to meet your needs.

The Trust operates a smoke free policy.

University hospital of Coventry and Warwickshire website:

www.uhcw.nhs.uk

Did we get it right?

We would like you to tell us what you think about our services. This helps us make further improvements and recognise members of staff who provide a good service.

Have your say. Scan the QR code or visit:

www.uhcw.nhs.uk/feedback



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