

Radiology

CT: Small bowel (Mannitol)

Your doctor has advised that you have a CT scan of your small bowel. A CT scan is an X-ray procedure that gives more information than a normal X-ray. It provides detailed images of your organs and blood vessels. A CT scan is performed by a radiographer.

This leaflet will explain what to expect in your CT scan appointment and how you should prepare.

Please call the phone number on your appointment letter if you have any questions or concerns. If you feel unhappy with your care, please ask to speak to the CT lead or superintendent radiographer.

Please read this leaflet carefully. It will help you prepare correctly for your CT appointment. You will need to begin your preparation for 4 hours before your appointment.

- Please contact the X-ray Department if your weight is 157kg (24.5 stone) or more. You may need a different type of procedure.
- You will need to have had a blood test within 3 months before your appointment if you are having a contrast scan and are above the age of 70 years. This is important as we need to check your kidney function before you are given the contrast agent (dye).



Kidney function blood test

If you need a kidney function blood test, please request an e-GFR blood request form from who referred you.

- If you have been referred by your GP, please ask your GP for an e-GFR blood request form.
- If you have been referred by a hospital doctor, nurse, or other healthcare professional, then please contact the department you were referred from for an e-GFR blood request form.
- You need to bring your blood test result to your appointment if you had your test within the last 3 months at a GP practice outside of the Coventry area.

If your blood test results are not available when you arrive for your appointment, it is unlikely that you will have your CT scan. Your appointment will need to be rearranged for after you have your blood test results.

Having a blood test

There are more than 30 blood test clinic locations in and around Coventry. You can book in advance at most clinics.

Visit www.uhcw.nhs.uk/bloodtests to find the clinic most convenient for you and book an appointment.

Our main blood test clinics are at:

- **City of Coventry Health Centre**, Stoney Stanton Road, Coventry CV1 4FS
- **University Hospitals Coventry and Warwickshire**, Clifford Bridge Road, Coventry CV2 2DX
- **Hospital of St Cross**, Barby, Rd Rugby, CV22 5PX
- **George Eliot Hospital**, College Street, Nuneaton, CV10 7DJ
- **Warwick Hospital**, Lakin Rd, CV34 5BW
- **Stratford Hospital**, Arden Street, Stratford Upon Avon, CV37 6NX

Arriving for your appointment

- Please bring with you any sprays or inhalers that you are taking.
- Please leave any valuable possessions at home. You can bring your mobile phone with you and this will be kept safe during the scan.
- **Please arrive in the department at least 60 minutes before your appointment time.** This is important. We need this time to check your safety questionnaire and prepare you for your CT scan.
- Please continue to take medicines prescribed by your doctor as normal. This includes medicines for heart conditions
- If you cannot attend your appointment, please contact the X-ray department on the phone number in your appointment letter.
- You should have received an early morning appointment if you are someone living with diabetes. If this has not happened, please phone the number on your appointment letter, and bring your own insulin and any instructions you have for taking it with you. You should also bring a light snack for after your CT scan.

CT scan risks

X-rays are a type of radiation. We are all exposed to natural background radiation every day. 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 a scan. We will take all precautions to minimise the number of X-rays you receive.

It is possible that you may have an allergic reaction from the injection of contrast agent used during your scan. You will be asked about allergies by the radiologist or radiographer.

Safety

Safety questionnaire

Please complete the safety questionnaire that has been sent to you. Bring it with you to your appointment.

Kidney impairment

Warning: The contrast dye used in your scan contains iodine and is filtered by your kidneys in your urine. Please contact the Radiology Department immediately if:

Patient Information

- you are allergic to iodine or have reacted previously to the injection used in X-ray or CT scanning to show your kidneys or blood vessels (angiography).
- You have severe renal impairment (GFR below 30ml/min) and are not on dialysis treatment.

Important information for patients with renal impairment

(GFR less than 60ml/min)

- If you are taking **Metformin** (also called **Glucophage, Glucovance, Duformin, Orabet** or **Glucamet**) tablets, please continue to take these as normal until the time of your appointment.
- You will need to stop taking these tablets for 48 hours after the CT scan. This is to avoid the build-up of acid in the blood following the injection of contrast agent. Please contact your GP or specialist nurse if you have any concerns or if you need to arrange alternative medicines. Stopping your tablets temporarily will not cause any harm.
- If you are taking non-steroidal anti-inflammatory drugs (NSAIDs) you should stop taking them for 24 hours on the day of your CT scan. You may use paracetamol as an alternative pain relief medicine during this time.

Patients aged 12 to 55 years for all CT scans between the lower chest and knees

The risks of radiation are higher for babies in pregnancy. You will be asked to confirm that you are not pregnant before you have a CT scan.

To make sure there is no possibility that you are pregnant, you should have your CT scan within the first 10 days of the start of your menstrual cycle.

If you are outside of 10 days of your cycle, we ask that you read and complete the confirmation **I am not pregnant form** which is attached before attending your appointment.

We advise you to take a pregnancy test to confirm if you have any doubt.

If you have any questions or concerns, please contact the CT department on 02476 966952 (Monday to Friday 9am – 5pm) and ask to speak to the bookings clerk in advance of your appointment date.

Preparing for your CT scan

Please do not eat anything for 6 hours before your appointment. Clear fluids may be drunk up to 2 hours before your appointment. This includes black tea or coffee, squash, clear soups, and plain water.

If you have with diabetes, please contact your diabetes specialist nurse if you have any concerns how this preparation may affect your medicines.

Important Information for patients on a fluid restricted allowance

If you are under the care of a kidney specialist and/or must follow a fluid restricted diet, you should include the bowel preparation as part of your fluid allowance. This can be altered if required. Please tell the radiographer at the beginning of your CT scan appointment.

What will happen when you arrive?

- Please go to the reception desk in the Radiology (X-ray) department. We will then direct you to the CT/MRI department.
- You will be asked to undress and put on a suitable gown if needed. You can bring your own dressing gown.
- We will check your safety questionnaire with you. You will be given a sugar-based drink called Mannitol to help improve the CT scan pictures.

What is contrast agent?

Contrast agent is an iodinated, clear liquid that is injected through a thin plastic tube (cannula) inserted into a vein. This is usually in the arm but occasionally it can be in the leg. The contrast agent acts like a dye as it helps to show up any problems in the organs of the body.

Why do you need to have contrast agent?

The contrast agent helps the radiology doctors to assess your CT scan pictures. It improves the detail of specific organs, blood vessels and tissues.

What will you feel when it is injected?

The contrast agent can make you feel a warm flush sensation. It can also cause a metallic taste in your mouth which can last a few minutes.

What side effects can be caused by contrast agent?

- You may experience side effects. These can vary from patient to patient. The radiographer will check your CT safety questionnaire to identify any risks before your CT scan.
- Examples of side effects include nausea and vomiting. Most 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. The Radiology Department is prepared to provide care if this happens.

What happens if you have a reaction?

Side-effects or reactions often occur shortly after the contrast agent is given. However, there is a 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. If mild, contact your GP. If severe, go to A&E.

Kidney function: contrast-induced nephropathy

Patients who have impaired kidney function are at risk of further deterioration following contrast agent injection.

All patients over the age of 70 years will need to have a blood test to check their kidney function before a CT scan. Your CT scan must be performed within 3 months of the blood test being done.

If you have mildly impaired kidney function, it may be possible to have the contrast agent, but you may need extra fluids before and after the scan. The hospital will advise you if this is needed.

What is Buscopan (hyoscine butylbromide)?

We will give you a small dose of Buscopan (hyoscine butylbromide). This is to stop muscle movement in your digestive system (peristalsis) whilst you have your scan.

Buscopan is a muscle relaxant that relaxes your bowel muscles. It helps achieve clearer pictures using CT and will help with diagnosis.

Patient Information

Buscopan can affect the muscles of your eyes as well and can cause blurred vision. This usually gets better within 30 minutes.

If you experience any redness or pain in the eyes over the next 24 hours after taking Buscopan, contact your GP urgently and show them this leaflet. This is a very rare occurrence.

What is Mannitol?

Mannitol is a sugar-based drink. We will give you a Mannitol solution to fill your small bowel. The amount of Mannitol solution that we ask you to drink can vary from 800ml to 1500ml. This is to help us to get good pictures of your bowel. This then helps us when reporting any findings to your doctor.

Mannitol has mild side effects which include:

- diarrhoea for a few hours after the scan
- bloating (abdominal spasm)
- flatulence
- vomiting

You will need easy access to a toilet once you have taken the Mannitol solution. Please remember this when planning your activities after the scan.

Please also remember to drink plenty of fluid to avoid dehydration, particularly after your scan.

If you are under the care of a kidney specialist, you should continue to drink from your normal fluid allowance. If you pass a lot of fluid when you poo after taking Mannitol, you can relax your fluid restriction to prevent dehydration. Please contact your home care nurse, dialysis nurse or kidney specialist if you are unsure about your fluid allowance in relation to the laxative effect.

If you wear a stoma bag, we recommend that you bring a spare bag and change of clothes to your appointment. There will be time and facilities to empty your stoma bag before you drink Mannitol solution and have your CT scan.

Patient Information

It is possible to drink water as bowel preparation in rare instances where you are not able to tolerate Mannitol.

- Mannitol has been authorised for off label use (as an oral contrast medium) by the UHCW drug and therapeutics committee.
- Off label means that the medicines are being used in a way that is different to that described in the license. In the case of mannitol, it is being used orally rather than intravenously.
- some examples of “off label” use:
 - Using a medicine for an illness to that stated in the license
 - using a medicine at a higher dose than stated in the license
 - using a medicine in an age group outside the licensed range e.g. in children

Diabetes: does Mannitol affect blood sugar?

Mannitol has a minor effect on blood sugar levels as only a small part of the ingested mannitol is absorbed and broken down.

Most of the ingested Mannitol is not absorbed and goes through to the colon where it is used up by the healthy bacteria in your gut.

It is important that you continue your normal insulin or medicines for your diabetes so that your blood sugar levels do not vary from your normal. It is useful to keep some diabetic substitute drinks or snacks on hand and check your blood sugar regularly.

During your CT Scan

- You will be taken into the X-ray room. The CT scan will be explained, and you can ask questions.
- During the CT scan we will give you a small dose of Buscopan.
- An injection of a contrast agent may be necessary to show your blood vessels. The supervising radiologist will have decided this before your scan. This will be confirmed by the CT radiographer using your safety questionnaire. You will be fully informed by the CT staff.
- You will then be asked to lie still on your back on the X-ray table. 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.

Patient Information

- You may then be asked to raise your arms above your head. This depends on what part of your body is to be scanned. 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.
- Once the scan is complete, you will be assisted back to the changing rooms or waiting area.

After your CT scan

You will be given an aftercare information sheet by the CT staff. Please ask for one if you are not offered one.

If you have had a contrast agent injection

We will ask you to remain in the CT department for 15 to 30 minutes before the cannula is removed. You may get dressed whilst you wait. You can then go home.

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

You will need to attend renal day-case unit (UHCW ward 50) the day after your CT scan. This is to check your kidney function if you have had an contrast agent injection. Please contact the Radiology department immediately.

Patient Information

Your results

Your results will not be given to you immediately. They will be sent to the doctor who referred you to us once we have assessed the pictures.

More information

For information about the effects of X-rays, you can read “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 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.

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



Document History

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