

Paediatric CT Scanning

Information for patients



Radiology Department

The Radiology Department has received a request for your child to have a CT scan. This information leaflet will tell you what to expect.

What is a CT (Computed Tomography) Scan?

A CT scan uses X-rays to take detailed images of the body. The scan is performed by a radiographer and the images are then reviewed by a Paediatric Radiologist.

The CT scanner is a large white ring shape, which looks like a 'polo-mint' rather than a tunnel. It makes noises similar to a washing machine.

Whilst having your CT scan, you may also meet a children's Radiology nurse, a clinical support worker and a receptionist.

Why does my child need a CT scan?

Your child may need this scan to show detailed images of part of their body. The information will then be used to make a diagnosis and to plan treatment.

Can I or a relative or friend accompany my child?

Yes, but for reasons of safety we can only have one person coming into the scan room to give support and encouragement to young children. Pregnant mothers or other children under 16 are not permitted to stay during the scan.

What clothing should my child wear?

Your child may be asked to change into a hospital gown. If they wear loose fitting clothing which does not have metal zips, poppers, buttons or bra clips it may be possible to perform the scan without having to change their clothes.

What happens before the scan?

The majority of children are asked to come to the Children's Day Care Ward (CDCW) on level 1 of the Children's Hospital for preparation for the scan and sedation (if required). He/she will then be taken to the Radiology Department by the CDCW staff. Some older children are asked to come directly to the Radiology Department. Your appointment letter will tell you where you need to go. On arrival in the Radiology department you will be greeted by the CT staff.

Certain scans of the abdomen (tummy area) and pelvis require patients to drink some liquid 30 minutes to 1 hour before the scan. This liquid will be flavoured with some sugar free squash and helps to show up the intestines in the images.

Some children will require oral sedation or swaddling to ensure that they lie still and are calm for the scan. Please check your appointment letter to see if your child requires sedation. If so, please read the section on sedation at the end of this leaflet.

What happens during the scan?

In the scan room the Radiographers will explain the examination and what to expect. You and your child can ask any questions you might have.

Your child will be asked to lie very still on their back, or occasionally on their front, on the scanning table. The table moves your child's body through the scanner, scanning the relevant body parts. Your child may be asked to hold their breath whilst the scanner takes the images. Please let us know if your child might have difficulty holding their breath.

Will my child need an injection?

Some children will need to have an injection of contrast (X-ray dye) when they are in the Radiology Department. This dye is used to show up blood vessels and body organs. The needle and tube through which the contrast will be injected is called a cannula and is put into a vein. This is usually a vein in the arm but can sometimes be in the foot. The cannula will normally be put in on the Children's Day Care Ward before your child comes to the Radiology Department. We can use a skin numbing cream to help with any discomfort when the needle is put in. This is sometimes known as 'magic cream' and works well for most children.

If your child does need an injection of contrast dye we will ask about any medical history of diabetes, asthma or kidney problems.

Your child will be told what to expect during the injection. They will probably have a metallic taste in their mouth and a warm sensation through their body but it shouldn't feel uncomfortable.

How long does the scan take?

The scan usually lasts up to 15 minutes. When the scan is happening, the CT staff can see and hear you and your child at all times via a window and an intercom.

You could be in the department longer if there are emergency patients added to the scanning list. We will let you know if there are any delays.

If you are attending the radiology department directly, allow approximately 30 to 60 minutes for your appointment and arrive 10 to 15 minutes prior to your appointment time.

If your child requires a cannula for injection and/or sedation, the scan will be performed in the afternoon and you should be able to leave the hospital by 5pm at the latest.

Can my child take prescribed medicine as usual?

Yes, he/she can take all their usual medicines.

Are there any risks involved?

A CT scan involves exposure to X-rays; this exposure is kept to a minimum by using radiation dose controls on the scanner. These control how much radiation is used when we do the scan.

We are all exposed to normal and natural background radiation from the environment every day of our lives. Medical radiation gives an additional dose; the level of this dose varies with each examination. Your child's doctor has recommended this examination because he/she feels that the benefits of the procedure outweigh the risks of having the scan.

Young women who have started menstruating, and who require an abdominal or pelvic CT scan, may be asked about the dates of their menstrual cycle.

Everyone is exposed to ionising radiation all the time (for example from gamma rays from space, air travel, natural radiation from the ground). Medical radiation gives an additional dose and this level varies with each examination. Your child's doctors have taken this into account and believe that the benefits of the procedure outweigh the risk of having the scan.

If your child is aged 12 or over and requires an abdominal or pelvic scan, you will be asked to complete a form to establish their gender at birth. If your child was born female you will be asked to record the date of her last period. As the test uses radiation, we have to ensure that there is no chance of pregnancy before we start the examination.

The form must be completed by female patients even if they have not yet started their periods, as we still legally have to confirm that she could not be pregnant.

The contrast injection contains iodine, which can cause an allergic reaction in a few people. Please tell the Radiographers if your child has had an allergic reaction to iodine or contrast dye in the past or if they have any other allergies.

Very occasionally, for those who have an injection, the contrast can leak outside the vein and cause temporary swelling and discomfort. In the unlikely event that this happens, we will provide further instructions and advice on what needs to be done.

What happens after the scan?

If your child has had a cannula put in, this will be removed. A dressing will be put on as there may be a small leak of blood or fluid. You can remove the dressing after an hour or so. Your child will be able to go home as soon as possible and carry on with their normal activities.

If your child has an injection of contrast you may be advised to slightly increase the amount of liquid they drink for the rest of the day. This is to help dilute the effects of contrast dye in the kidneys. A few extra glasses of water over the day should help with this.

If he/she is diabetic and taking metformin we will speak to you about the possible need to stop taking metformin for 48 hours after the scan.

When and how will we know the result of the CT scan?

You will not receive the results straight away.

As a general guide:

- If your GP referred your child to us, the report will be sent to the GP practice and you can make an appointment for 10 days later to get the result.
- If a hospital consultant or doctor from the outpatient department referred your child, the report will be ready for their next appointment.

If you or your child has any questions we will be happy to answer them on the day of the appointment. If you need to speak to us before the appointment you can telephone us on the number given on the appointment letter.

Sedation

Your appointment letter will indicate whether your child will require oral sedation to ensure that they lie still and are calm for the scan. This is usually used for younger children (**between 3 months and 4 years of age**). Babies younger than 3 months old will often be scanned straight after a feed, when they fall asleep, so will not require sedation. Children older than four years generally do not require sedation.

We use the lowest dose of sedation possible to minimise any risks. For the sedation to be most effective it is better if your child is already tired. Try keeping your child up later than usual the night before the scan, waking him or her a little earlier and attempting to keep them awake on the journey to hospital. We appreciate that this can be difficult to do but we find this method helps the sedation to work at its best.

For all babies and children up to four years old, who require sedation, please follow these feeding instructions. This will ensure that any sedation can be given as safely as possible. If these instructions are not followed, it may not be possible to perform the scan.

a) On the **day before** the scan your child can eat and drink as normal.

b) On the **morning of the scan**:

If your child is **under one year** they can:

- Eat breakfast and drink cow's milk until 7:40am
- Drink formula milk until 09:40am
- Be breast fed until 10:40am
- Drink water/clear squash (not fruit juice) until 11:40am
- Please do not give your child chewing gum or boiled sweets.

If your child is **over one year** they can:

- Eat breakfast and drink milk until 7:40am
- Drink water/clear squash (not fruit juice) until 11:40am
- Please do not give your child chewing gum or boiled sweets.

More information is available on the following websites:

NHS Choices

Website: www.nhs.uk/conditions/ct-scan

CBBC – The CT Scan Song

Website: www.bbc.co.uk/cbeebies/watch/get-well-soon-ct-scan-song

The College of Radiographers

There are short videos showing the way in which X-rays and scans are used, including CT scanning.

Website: www.collegeofradiographers.ac.uk/patient-advisory-group/patient-support-and-information-network/patient-information

For further information about the Oxford University Hospitals please visit our website:

www.ouh.nhs.uk

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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