Risks from contrast (dye) injections:

It is very rare, but some patients may have an allergic reaction to the contrast (dye) injection.

In most cases, a reaction will be mild: itchy feelings or redness. A severe reaction can lead to difficulty in breathing.

To minimise the risk of an allergic reaction, the radiographer will ask you a checklist of questions before the exam.

The radiographer is trained to recognise an allergic reaction and knows what to do if the situation arises.

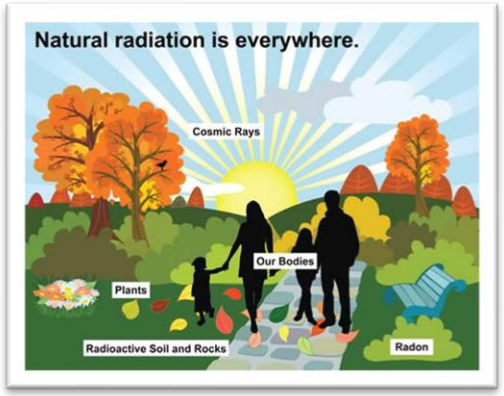
Allergic reactions usually happen during or soon after the examination. The plastic cannula will be left in place as a precaution for 30-60 minutes after the scan in case an allergy develops. It will be removed before your child leaves the hospital.

Rarely, the iodine in the dye injection may interfere with the function of the thyroid gland in very young children. Your child's doctor will advise if a thyroid blood test will be required after the CT exam.

Are there any risks from a CT exam?

The benefits of performing a CT examination are considered to outweigh the risks of *not* doing the scan ('justifying' the examination).

The x-ray radiation dose received during a CT scan is kept as low as possible by using specialist techniques ('optimising' the examination). The radiation dose is monitored by the X-Ray Department staff.



How much is the x-ray dose in CT?

Everybody is exposed to radiation from the world around us: this is known as background radiation.

One way to measure the dose of radiation from a CT exam is to work out how many days of background radiation it is equivalent to. For example, in a 5-year-old child:

A CT head scan is equal to about 10 months of background radiation, a CT chest to about 1.2 years and a CT abdomen to around 1.5 years.

CT scans use low level radiation to generate the pictures needed. Exposure to radiation is associated with a risk of developing cancer. But, almost half of all people will develop cancer at some time during their life, even without a CT scan. Not all cancers are fatal. Using all the research information available, scientists have calculated that a single child's CT abdomen scan confers a 0.03-0.05% increase in cancer risk. The risk to your child is very small.

If you have questions about your child's CT scan examination, please ask the doctor who is looking after your child.

Belfast Health and Social Care Trust
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INFORMATION FOR PARENTS AND CARERS

A guide to your child's CT scan

Royal Belfast Hospital for Sick Children
Imaging services

Date of Issue: 15th January 2026
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Your child's doctor has referred them for a CT scan. This leaflet has been produced to provide you with information about CT examinations. If you have further questions, please ask the doctor looking after your child.

What is a Computed Tomography (CT) scan?

A CT scan is a fast way to get very detailed images showing the inside of the body. A CT scanner uses x-rays to make these pictures, which give the doctors much more information than ordinary x-ray pictures.

Why is a CT scan needed?

CT scans can help doctors to evaluate a wide range of conditions and are useful in many different circumstances.

CT is especially useful to look for injuries after trauma, to diagnose and follow up children with cancer, to evaluate birth malformations and to locate sources of infection.

CT exam findings can help doctors to make a diagnosis and allow appropriate treatment to be started.

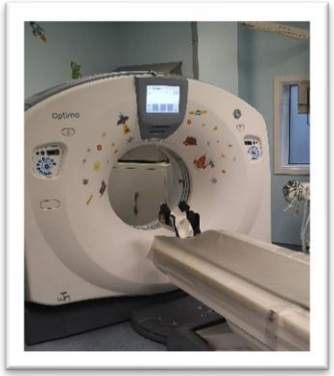
The doctor looking after your child will explain why your child needs this examination.

What does a CT scanner look like?

A CT scanner looks like a 'polo' mint or donut.

The table slides in and out of the hole in the middle, but the sides of the machine do not touch your child.

The x-ray equipment is hidden around the sides of the hole.



Computers control the CT scanner, and they are behind a window next to the scanner: the radiographer controlling the scan will sit at a desk behind this window. He or she can always see your child during the scan.

Exam preparation:

Children need to lie still for a CT study. Younger children cannot always manage this and may need to be given medicine to sedate them or an anaesthetic to put them to sleep.

Depending upon which part of the body is being imaged and why, it might be necessary to inject some contrast ('dye') into a vein during the exam. The contrast helps the radiology doctors see some parts of the body more clearly. If contrast is needed, a small plastic cannula (a short tube) will be put in either by doctors on the ward or by the anaesthetists after your child is asleep. To make insertion of the cannula painless, the skin can be numbed using topical anaesthetic cream first.

If your child's tummy is being imaged, then they may need to drink a special type of juice before the exam too. This 'juice' is really a type of medicine that shows the radiology doctors the lining of the bowel in detail.

During the exam:

Your child will have to lie on the CT table. Unless your child must be put to sleep for the exam, you can stay by your child's side and can hold their hand; parental reassurance is very important. If your child has a favourite toy, they can usually hold this in their hands during the scan too, if you think it will help them to lie still.

If you choose to stand next to your child, you will need to wear a special lead apron to protect you from the scanner's x-rays.

If your child is wearing clothes with sparkly or glittery decorations or metal fasteners, these will usually have to be removed before then exam, as they cause artefact on the pictures. Jewellery may need to be removed too. We will give your child a gown to wear if they need it.

If you are pregnant or there is a possibility that you might be pregnant, please make the radiographer aware and they will advise you of your options.

The radiographer will program the computer to perform the correct type of scan: this will take 5-10 minutes. It then takes only a few seconds for the pictures to be generated. The scanner is very quiet whilst it is working.

If contrast (dye) is being injected, your child may feel a little bit warm and may have a funny 'metal' taste in their mouth. These types of sensation last only a few seconds.

After the scan:

The radiology doctor will need to study the CT pictures and write a report, which is then sent to the ward/clinic doctor who requested the scan. The ward/clinic doctor will discuss the results of the CT scan with you when they are available.