

Children's (Paediatric) X-ray examination

Consumer Information

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What is an X-ray examination?

Radiography is the imaging of body structures using X-rays. X-rays are a form of radiation similar to visible light, radiowaves, and microwaves. X-radiation is special because it has a very high energy level that allows the X-ray beam to penetrate through the body and create an image or picture.

The image is created due to the X-ray beam being absorbed differently by different structures or parts in the body. A dense structure like bone absorbs a high percentage of the X-ray beam (which appears light grey on the image), whilst low density structures like soft tissues absorb a small percentage (which appears dark grey on the image). The body has many different structures of varying densities and this difference creates a picture or image.

The X-ray beam is focused to a particular part of the body (e.g. wrist, chest, or pelvis) and the image is formed as a *shadow* representing the different tissues in your body, such as bone, muscle, and fat (see [Plain Radiography/X-rays](#)). An X-ray examination is particularly useful for looking at bones and the lungs but there are other indications or symptoms for which X-ray imaging is used.

How do I prepare my child for a Paediatric X-ray examination?

There are usually no special instructions for an X-ray examination but if your child is wearing any metallic objects, such as rings or jewellery, these may need to be removed to improve the quality of the image. Clothing may also need to be removed from the area being X-rayed or the child may need to change into a hospital gown. This should be kept in mind when dressing your child for the appointment to save time and lessen any embarrassment.

What happens during a Paediatric X-ray examination?

X-ray examinations are usually quick and simple.

Once the [radiographer](#) (a person specially trained in taking X-ray images) has positioned the part of your child's body to be examined and *lined up* the X-ray machine, the X-ray examination takes less than a second to perform. Your child may be required to

hold his or her breath or remain still for a very short time (seconds) for the image to be obtained. This is so that the images are not blurred.

The radiographer will check that the image contains all the required information before your child leaves the X-ray department. This may take up to 5-10 minutes, depending on the number of images to be checked, who has to check the images, and how the images are saved or sent to your referring doctor. The length of time taken will be greater if more than one part of the body needs to be imaged.

Are there any after effects of a Paediatric X-ray examination?

Your child will not have any unusual feelings or sensations during or after having an X-ray examination. There are no immediate side effects and no special instructions to be followed after having an X-ray examination. Your child can return to school, kindergarten, or child care after the study if there is no medical reason for them not to do so.

How long does a Paediatric X-ray examination take?

The length of time will vary depending on the age of your child, how they cooperate with the radiographer and how many areas are to be imaged. Each image itself takes less than a second to obtain. Preparation for the X-ray and positioning your child may take some minutes but in most circumstances, the entire examination will take less than 5-15 minutes.

What are the risks of a Paediatric X-ray examination?

The X-ray examination may not show an abnormality that is present and further investigations to make a diagnosis may be required. Your referring doctor (or health care provider) will discuss the test results with you.

X-rays are invisible and pass through the body without any sensation. X-rays like many other medical investigations and treatments are not considered harmful if used appropriately.

X-rays should only be used when there is a potential benefit to the child that may assist in the diagnosis of a condition or to monitor any treatment. X-rays are a type of ionising radiation which we know causes cancer in high doses (see [Radiation Risk of Medical Imaging in Adults and Children](#)).

What are the benefits of a Paediatric X-ray examination?

An X-ray examination is usually a quick and simple test that helps your doctor "see inside" your child's body to help identify if anything is abnormal. Plain X-ray examinations (often called "radiographs") provide very good information about bones and

lungs particularly and some kinds of abdominal problems. They are often used to check the position of catheters (thin plastic tubes) that may need to be inserted into a vein or artery to give fluids or drugs into the bloodstream.

X-rays are also often helpful to locate objects that your child may have swallowed or inhaled, such as a coin, beads or other small items. X-rays may also show objects that have penetrated your child's skin, such as glass or sharp metal, that cuts the skin and breaks off in a wound.

Who does a Paediatric X-ray examination?

The images are usually taken by a [radiographer](#) (also known as a medical imaging technologist, MIT) under the supervision of a [radiologist](#).

In some circumstances, other health professionals are allowed to take some types of X-rays. However, they must receive specific training and remain licensed to perform these X-ray examinations safely.

Where is a Paediatric X-ray examination done?

X-ray examinations are usually performed in a special X-ray room in a private radiology practice or in a public or private hospital. Some X-ray examinations are undertaken in a hospital ward, operating theatre or theatre recovery ward using special mobile X-ray equipment.

When can I expect the results of my child's Paediatric X-ray examination?

The time that it takes your doctor to receive a written report on the test or procedure your child has had will vary, depending on:

- the urgency with which the result is needed
- the complexity of the examination

- whether more information is needed from your child's doctor before the examination can be interpreted by the radiologist
- whether your child has had previous X-rays or other medical imaging that needs to be compared with this new test or procedure (this is commonly the case if you have a disease or condition that is being followed to assess your progress)
- how the report is conveyed from the practice or hospital to your child's doctor (in other words, email, fax or mail)

Please feel free to ask the private practice, clinic, or hospital where your child is having their test or procedure, when your child's doctor is likely to have the written report.

It is important that you discuss the results with the doctor who referred your child, either in person or on the telephone, so that they can explain what the results mean for your child.

Please note:

This information is of a general nature only and is not intended as a substitute for medical advice. It is designed to support, not replace, the relationship that exists between a patient and his/her doctor. It is recommended that any specific questions regarding your procedure be discussed with your family doctor or medical specialist

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