

# Plain Radiography (X-rays)

## Patient Information

### What is plain radiography?

Radiography is the imaging of body structures using X-rays, which are a form of radiation like radio waves or 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 parts in the body. A dense structure like bone absorbs a high proportion of the X-ray beam (which appears light grey on the image), while 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.



### How do I prepare for plain radiography?

For a plain X-ray there are no specific preparation. You must however bring the X-ray request form or referral letter from your doctor, as no X-ray examination can be performed without it.

- Please inform the radiographer who is performing the X-ray if there is any chance you may be pregnant. Safety of the patient and unborn child is the number one priority so a different approach or test may be needed. As some clothing can make it difficult to see the images clearly, you may be asked to wear a gown.
- Be prepared to remove certain items like watches, necklaces and certain types of clothing that contain metal objects such as zips, as these items may interfere with the quality of the image.

### What happens during plain radiography?

The radiographer will call your name and escort you through to an examination room. They will explain the procedure and prepare you accordingly.

Depending on the part of your body being examined you may be asked to stand, sit or lie down while the X-ray is taken. The number of X-rays taken, and the speed of the test will also depend on this. It is important that you stay completely still when the radiographer instructs you to, as any movement may create a blurred image.

After the X-rays have been completed, the radiographer will process each X-ray and check the results for quality. This can sometimes take several minutes. Sometimes there will be a need for additional images to obtain more information to help the radiologist (a specialist doctor) make a diagnosis. There is no need for concern if this happens as it is quite common.

The radiographer will instruct you when the procedure is finished.

The radiologist then carefully assesses the images, makes a diagnosis and a written report on the findings sent to your referring doctor.

The entire process is straight forward and you will not feel anything strange or feel any different during the examination. You are welcome to ask questions at any stage.

### How long does the X-ray examination take?

It usually takes less than 15 minutes for an entire X-ray procedure. This obviously depends on the number of parts of your body being examined and your mobility and your general health. In most cases, the area being examined needs to be viewed from different directions to obtain enough information to make the diagnosis and this may require you to move into different positions.

For example, a simple chest X-ray on an able patient could take less than one minute. However, a patient needing a full spine, pelvis, both shoulders and both legs X-rayed could take 45 minutes.

People with disabilities and children will also take longer, particularly if they find it difficult to keep still or to cooperate with or understand instructions given by the radiographer.

### What are the risks of plain radiography?

Generally, the benefit of the X-ray procedure is far more important than the small estimated risk. At the radiation dose levels that are used in diagnostic radiography there is little or no evidence of health effects.

The two major risks to health that occur as a result of exposure to medical ionizing radiation (which is the kind of radiation in X-rays) are:

- Cancer occurring many years after the radiation exposure
- Health problems in the children born to people exposed to radiation because of damage to the reproductive cells in the body.

To put this into perspective, a patient would need to have approximately 38 chest X-rays to receive an amount of radiation similar to that of normal background radiation that everyone receives in one year from the environment.

### Who does the plain radiography / X-ray?

A radiographer or medical imaging technologist is a health professional who performs diagnostic radiography.

A radiologist is a specialist medical doctor who reviews and interprets the images and provides a written report of the test to your referring doctor.

### How do I get my results?

Your doctor will receive a written report on your test as soon as is practicable, usually the same day or 1 to 2 days following the procedure

**It is very important that you discuss the results with the doctor who referred you so that they can explain what the results mean for you.**

This information is credited to Inside Radiology, Royal Australian and New Zealand College of Radiologists (RANZCR).  
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December 2018