

## What is an X-ray?

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An X-ray is a quick procedure commonly used to produce images of the inside of the body. X-rays are mainly used to look at the bones and joints, although they're sometimes used to detect problems affecting soft tissue, such as internal organs. X-rays can be used to help detect a range of conditions.

### Why do I need this examination?

It has been identified that you have some symptoms that require you to have an X-ray examination, or you may be for a follow-up examination to monitor your medical condition.

### Radiation information

#### How X-rays work

X-rays are a form of radiation that can move through the body without being seen or felt. As X-rays pass through you, they are absorbed at different rates by different parts of the body. A detector located on the opposite side of you captures these X-rays after they have passed through you and transforms them into an image.

In a hospital, there are many types of medical imaging procedures each with different technologies. Radiography, fluoroscopy, and computed tomography (CT) all work on the same principle, using penetrating X-rays to form an image of internal structures in the body.

#### Risks

X-rays offer valuable benefits in healthcare by providing a quick and non-invasive way to see inside the body, however, as with many aspects of medicine, there are risks associated with

their use. X-rays are a form of ionising radiation meaning they have enough energy to potentially cause damage to DNA increasing the risk of cancer later in life. However, these risks are low.

In the UK, on average each of us is exposed to a level of background radiation mainly originating from naturally occurring minerals in the Earth but also other sources like food, and cosmic rays from space. For example, having a typical X-ray of your chest, limbs or teeth is equivalent to the same levels of radiation as you would naturally receive in 3 days of regular life. This would result in less than a 1 in a million chance of additional risk of fatal cancer in your lifetime [1].

Whilst the benefits of clinical diagnosis using X-rays generally far outweigh the risks, efforts should be made to minimise unnecessary exposures. Within the hospital, specialised staff, including Radiographers, Physicists and Engineers monitor the use of X-rays and ensure equipment is safe.

#### Pregnancy

It is also important to understand the effect of radiation on pregnancy. Due to possible effects of radiation exposure on the developing foetus, when having an X-ray, you should inform a member of staff if you think you might be pregnant.

If you have any concerns about undergoing an X-ray, feel free to discuss them with your healthcare provider.

[1] 'Patient dose information: guidance', GOV.UK. <https://www.gov.uk/government/publications/medical-radiation-patient-doses/patient-dose-information-guidance>

**All patients** aged between 12 to 55 years of age (regardless of gender) will be asked to complete a pregnancy status consent form.

If you know you are pregnant when you are due to attend, please contact us on 01392 402336 or email [rduh.radiologyappointments@nhs.net](mailto:rduh.radiologyappointments@nhs.net)

## How long will it take?

The examination usually takes around 5-20 minutes to complete. This depends upon the type and number of X-rays needed.

## During the X-ray

Some clothing, particularly anything containing metal, or with buttons, zips or embroidery, can show up on an X-ray, so you may be asked to change into a gown and/or remove jewellery by a member of staff. Depending upon the area of the body to be examined you may also be asked to remove any dentures, hearing aids, glasses or hair clips.

During the X-ray, the Radiographer, will firstly confirm your identity and the area to be examined. You'll then usually be asked to lie on a table, stand against a flat surface or sit on a chair next to the X-ray table so that the part of your body being examined can be positioned in the right place.

This may occasionally be uncomfortable but should not be painful.

The X-ray machine, will be carefully positioned at the part of the body being examined by the Radiographer. The Radiographer will complete the exposure (X-ray picture) from behind a clear screen.

## Can I still take my regular medication?

You can still take any regular medication

## Children

We ask you not to bring children if at all possible as they will not be permitted into the x-ray room with you whilst you are having your procedure. We appreciate that at times this may be difficult. Therefore, you may wish to bring another adult

with you to supervise them in the waiting area whilst your examination is performed.

## Personal choices

As a teaching hospital, we often have Radiographers and Medical Staff undergoing training. If a student is to be present or perform your examination we will ask your permission. You have the right to refuse. This will not affect your care in any way.

## Cancelling your appointment

If you are unable to attend your appointment, we would be grateful if you could contact us on the telephone number listed on the top of your appointment letter as soon as possible. We can then offer your original appointment to another patient. A further date and time will then be arranged for you. **Please be advised that if you fail to attend your appointment, it may be necessary to remove you from the X-ray waiting list.**

## Finally

If you find reading this leaflet difficult or you do not understand what it means for you, please call the telephone number listed on the top of your appointment letter and we can talk it through or alternatively you can email us **rduh.radiologyappointments@nhs.net**

## How to get to the Royal Devon & Exeter Hospital at Wonford

**Please refer to the enclosed "Welcome to the Medical Imaging Department" leaflet or use the Trusts website for the latest information:**

**[www.royaldevon.nhs.uk/our-sites](http://www.royaldevon.nhs.uk/our-sites)**

For more information on the Medical Imaging Department, please visit our website:

**[www.royaldevon.nhs.uk/services/radiology-x-ray-and-medical-imaging](http://www.royaldevon.nhs.uk/services/radiology-x-ray-and-medical-imaging)**

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