

Further information

NHS website - www.nhs.uk/conditions/x-ray/

References

¹ Ionising Radiation (Medical Exposures) Regulations 2017

² More information on the typical doses, equivalent background radiation and lifetime risk from diagnostic medical exposures can be found on the gov.uk website:

<https://www.gov.uk/government/publications/medical-radiation-patient-doses/patient-dose-information-guidance>

Car parking at the hospital

The Lister, New QEII and Hertford County Hospitals have Pay & Display parking for patients.

Please allow plenty of time to find a parking space. Disabled parking is available.

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www.enherts-tr.nhs.uk

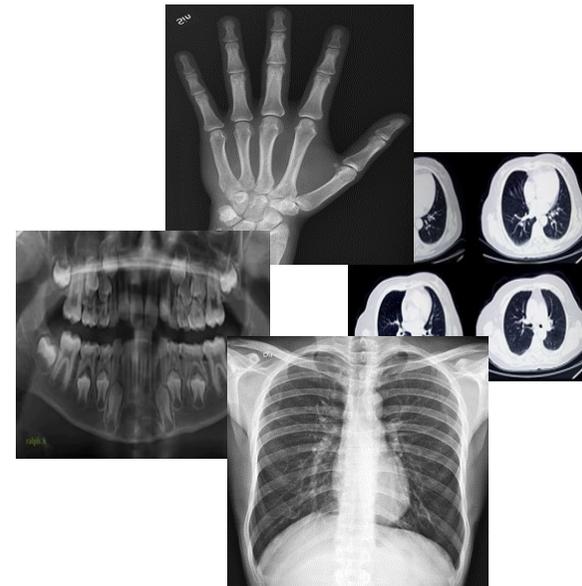
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Patient Information

X-rays and CT Scans

How safe are they?

Department of Radiology



Introduction

Your doctor or healthcare practitioner has referred you for an X-ray or CT scan so they can make a diagnosis or monitor the progress of your treatment.

Whenever radiation is used there is a small risk involved so we have to be sure that this is outweighed by the benefit of being able to use the information gained to make the correct diagnosis.

Justification

There are strict regulations and legal requirements that govern all medical X-ray exposures.¹ These say that the radiographer must be able to justify the exposure to radiation for the examination that has been requested before you can have it.

They usually do this by looking at the information that your doctor or healthcare practitioner has provided on the request. Sometimes it is not justified from the information given. In this case, we are legally not able to perform the examination at this time. The radiographer will discuss this with you and contact your doctor or healthcare practitioner.

X-rays and CT scans

X-rays are a type of radiation that passes through the body which we use to provide images for your diagnosis or to monitor your condition. You cannot see X-rays or feel them and as the exposure takes just a fraction of a second; only a small dose of radiation is required. More than one X-ray is often taken to provide as much information as possible.

CT scans are a more sophisticated way of using X-rays where a fan-shaped beam of X-rays passes through a small section of your body at a time.

About radiation

We are all exposed to “background radiation” every day from natural causes. This comes from the air we breathe, rocks in the ground, building materials, the food we eat and even from outer space as

cosmic rays. So our exposure in any one year will depend on where we have lived, what we have eaten and even where we have flown to on holiday.

Every X-ray or CT scan gives us a small additional dose of radiation equivalent to between a few days (chest, teeth or limb X-ray) and a few years (some CT scans) of natural background radiation.

Radiation and risk

The radiation doses from X-rays and CT scans are far too low to cause immediate harm, but it is possible that they very slightly increase the chance of getting cancer many years or even decades after the exposure. However, the risk from having an X-ray and CT scan is very small. For example, an X-ray of your chest, teeth or a limb has a less than 1 in a million chance of causing cancer (gov.uk).²

In radiology, we do everything we can to make sure we keep doses, and therefore risk, as low as possible while still getting good quality diagnostic images.

Age factors

Extra care is taken when deciding whether or not to X-ray children as the risk to them is a little higher because they are still growing and developing, and have a longer life ahead of them. The risks are much lower for older people.

A baby in the womb can be extra sensitive to radiation. **If you are, or think you might be pregnant, please tell the radiographer before your X-ray or CT scan.**

“I’m not sure...”

If you are still concerned about the possible risks from having your X-ray or CT scan, your doctor can give you more information about their reasons for requesting it. Please bear in mind that if treatment decisions depend on the results, the risks to your health from not having the examination are probably greater than those from having it.