

### Further sources of information

NHS Choices: [www.nhs.uk/conditions](http://www.nhs.uk/conditions)

Our website: [www.sfh-tr.nhs.uk](http://www.sfh-tr.nhs.uk)

### Patient Experience Team (PET)

PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

**King's Mill Hospital:** 01623 672222

**Newark Hospital:** 01636 685692

**Email:** [sfh-tr.PET@nhs.net](mailto:sfh-tr.PET@nhs.net)

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team on 01623 672222 or email [sfh-tr.PET@nhs.net](mailto:sfh-tr.PET@nhs.net).

This document is intended for information purposes only and should not replace advice that your relevant health professional would give you. External websites may be referred to in specific cases. Any external websites are provided for your information and convenience. We cannot accept responsibility for the information found on them.

If you require a full list of references (if relevant) for this leaflet, please email [sfh-tr.patientinformation@nhs.net](mailto:sfh-tr.patientinformation@nhs.net) or telephone 01623 622515, extension 6927.

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## INFORMATION FOR PATIENTS

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# Your



# and you

## Your x-ray and you

Your doctor or healthcare practitioner has referred you for an x-ray so that they are able to make a diagnosis or monitor the progress of your treatment.

You should discuss with them how the information on the x-ray will help with your diagnosis or treatment.

**We make sure that the benefits from having the x-ray, making the right diagnosis and providing the correct treatment outweigh the very low risk involved with the x-ray itself.**

There are strict regulations and legal requirements that govern all x-ray exposures (Ionising Radiation (Medical Exposures) Regulations (IR(ME)R) 2017) .

Prior to the examination, the radiographer must be able to authorise the exposure to radiation that you will receive during your x-ray examination; this is usually done from the information that your doctor or healthcare practitioner has provided on the x-ray form.

Sometimes, from the information given, it is not appropriate for you to have an x-ray. In this case a different test or one that does not involve exposure to radiation may be more appropriate. In this case the radiographer will discuss this with you and speak to your doctor or healthcare practitioner.

## Consent

Please feel free to ask your doctor or the radiographer if you have any further questions.

If you do not feel you have been given sufficient information then you may refuse to have your x-ray and go back to discuss this with your doctor or the healthcare professional who referred you.

## References

### **NHS Choices (2015)**

NHS Choices information on typical effective doses, equivalent periods of natural background radiation and lifetime fatal cancer risks from diagnostic medical exposures.

<https://www.nhs.uk/conditions/x-ray/>

### **Public Health England (2008)**

Patient dose information guidance.

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

Ionising Radiation (Medical Exposures) Regulations 2017. Statutory Instruments 2017 No 1322.

[http://www.legislation.gov.uk/ukxi/2017/1322/pdfs/ukxi\\_20171322\\_en.pdf](http://www.legislation.gov.uk/ukxi/2017/1322/pdfs/ukxi_20171322_en.pdf)

## In perspective

Every exposure to x-rays carries a risk of causing cancer many years or decades later. However, this risk is thought to be very small. An x-ray of your chest, limbs or teeth has less than 1 chance in 1000 000 of causing cancer (NHS Choices, 2015).

More information on the typical doses received, equivalent periods of natural background radiation and lifetime fatal cancer risks from diagnostic medical exposures can be found on the NHS Choices website – the link is at the end of this booklet.

## Age

The risks from x-rays are a little higher for children than they are for adults; this is because children are still developing and growing and have a long life ahead of them. Extra care is taken with young patients to keep their x-ray exposure to a minimum.

The risks from x-rays are much lower for older people.

## Pregnancy

A baby in the womb can be particularly sensitive to the radiation of an x-ray or CT scan.

**If you are, or think you may be pregnant, please tell the radiographer before you have an x-ray.**

## About x-rays and radiation

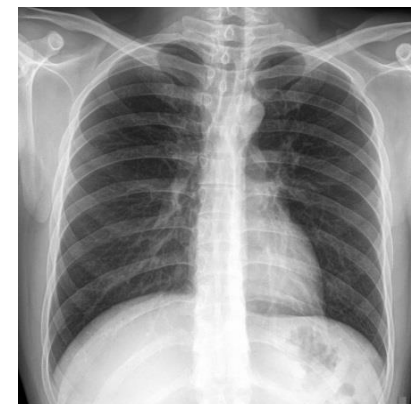
### X-rays

X-rays are a type of radiation that can pass through the body.

In healthcare, this type of radiation is used to provide images which help to diagnose illness or monitor medical conditions. You cannot see x-rays and you will not feel them during an x-ray examination.

The x-ray exposure itself takes a fraction of a second and a very small amount of radiation is needed. As the x-rays pass through the body, the energy from x-rays is absorbed at different rates by different parts of the body. A detector or plate on the other side of the body picks up the x-rays after they've passed through and turns them into an image.

More than one x-ray from different angles may be necessary to provide as much information as possible, particularly when looking for broken bones.



## Radiation

We all receive radiation, known as 'background radiation' every day. This background radiation is due to natural causes from:

- Cosmic rays reaching the earth from space.
- From certain rocks (which may be contained in building materials).
- From travel (particularly air flight).
- From naturally occurring radon gas (particularly widespread in granite areas of the country such as Devon, Cornwall and Dartmoor).

In any one year our exposure will vary according to where we've lived, where we may have flown to and what we may have eaten.

## In perspective

Every x-ray we have gives us a small additional dose of radiation; the level of the dose varies with different types of x-ray examinations. Generally the amount of radiation you will receive during your x-ray examination is the equivalent of between a few days and a few years of exposure to natural 'background radiation' that you would receive from the environment.



Examinations such as chest x-rays, x-rays of limbs and dental x-rays have doses that are relatively low and equivalent to a few days of background radiation, so carry a very low risk to you.



CT scans have doses that are a slightly higher and can be equivalent to a few years of background radiation, depending on what area of the body is being scanned. It should be remembered that the higher dose examinations are normally used to diagnose more serious conditions when a greater benefit to the patient is to be expected.

All x-ray doses are kept as low as reasonably practicable to ensure that images of a high diagnostic quality are obtained without exceeding accepted dose levels.

