

Do I need to worry about radiation in my scans?

- The younger you are the more important it is to be protected from radiation.
- Just by being alive you receive 4mSv* of radiation every year - this is the same as 40 chest x-rays
- If you take a long haul flight you will get the same amount of radiation as 1 chest x-ray**
- Radiation can cause cancer. Radiation doses used for medical examinations are strictly supervised at all times.

Occurrence	Dose
Natural Background	4.2 mSv per Annum
CXR	0.015 mSv per exam
CT TAP	10 mSv per exam

- We record the radiation dose we give for every exam. We will only take x-rays when they are necessary. It's our job to keep you safe. We will choose an exam with no radiation where possible.

*The scientific unit of measurement for whole body radiation dose, called "effective dose," is the millisievert (mSv).

**Flight time: 15 hours return

Reference: www.epa.ie/publications/compliance--enforcement/radiation/ionising-radiation-national-dose-report.php

Special Needs

If you have any special needs that we need to be aware of during your visit please let us know as early as possible.

Lead Protection

Due to improvements in technology, modern machines can now achieve good images with low levels of radiation. Staff will always make sure the benefits from having imaging is much greater than the risk.

It has been shown that the use of lead protection in imaging examinations does not significantly reduce the potential risks to any patient from radiation exposure and may have the unintended consequences of the loss of valuable information in the images being taken.

Radiographers are trained to:

- Ensure you have the right examination
- Position you to minimise the radiation used
- Make best use of technology to keep your dose as low as possible

Questions

If you have any questions regarding x-rays or our safety measures, please call us and ask to speak to one of our Radiographers.

We will be happy to answer your questions to put you at ease before your appointment.

Contact details:

Midland Regional Hospital Tullamore
Radiology Department
Phone: 057 935 9045

Your consent is very important

Please be sure you understand everything before we proceed with the exam.



X-Ray Information for Patients



What are X-rays?

X-rays are a form of radiation that can pass through the human body to produce shadow-like images of bones and organs. For health purposes, radiographers take images, so doctors can use them to diagnose your illness or injury



Can medical diagnostic x-rays cause harm?

The amount of radiation used in most x-ray examinations is quite small. Procedures such as CT scans need more radiation and so have a higher possibility of increasing the risk for radiation related cancer.

The risk associated with radiation used in identifying a health condition is so small that it is considered to be acceptable in order to get you the treatment you need.

The doctor that referred you and the radiologist are responsible for making sure that the health benefit to you is greater than the radiation risks at all times.

The increased risk of getting cancer from your x-ray is very small when you compare it to naturally occurring cancers which range between 14% and 40%.

Children and x-rays

Some organs in children have higher sensitivity to radiation than in adults. Therefore, scans that do not use radiation, such as MRI and Ultrasound should be considered where possible. We have a separate leaflet to explain x-rays to children.

Pregnancy and x-rays

If you are pregnant or may be pregnant you should inform your doctor and the radiographer taking your scan.

If you are pregnant and accompanying a small child to have an x-ray please bring another adult with you to hold the child during the test. A pregnant family member will be asked to leave the x-ray room.

X-ray at Midland Regional Hospital Tullamore

We use x-rays in four different tests:

- Plain film Radiography (routine x-rays)



- CT or CAT Scans



- Fluoroscopy (x-ray video)



- Nuclear Medicine – This test uses a different type of radiation, gamma rays. You will receive the radiation in an injection



High Radiation	CT Fluoroscopy Nuclear Medicine
Low radiation	X-ray
No radiation	Ultrasound MRI