



CHILDREN'S IMAGING

RADIATION SOURCE

- X-ray (i.e. chest, spine, arm)
- Head CT
- Abdominal CT

ADULTS' IMAGING

RADIATION SOURCE

- Bone Densitometry (DEXA)
- CT (Abdomen/ Body)
- X-ray (i.e. chest, spine, arm)
- Mammography



IT'S WHAT'S ON THE
INSIDE THAT COUNTS



X-Ray IMAGING

What you should know



X-RAY IMAGING

Benefits And Risks

TRG IMAGING would like to help you understand more about the risks of imaging with x-rays and the effects on the body.

x-ray imaging is extremely beneficial for clinicians in the diagnosis and treatment of their patients, for your optimal healthcare.

Diagnostic imaging techniques using radiation include x-rays, computed tomography (CT) scans, mammography and bone densitometry.



WHAT IS An x-ray?

x-ray (radiography) is the most frequently performed radiology procedure. TRG Imaging performs many thousands of these examinations each year. x-rays are essential for the assessment of many body areas—for example arms and legs following trauma (injury), chest x-rays for asthmatics.

x-rays are part of the electromagnetic spectrum, which includes radio waves, microwaves and visible light. They have an extremely short wavelength, or high frequency, making them high energy.

This means they can penetrate most materials.

x-rays are used in medicine to examine the body 'structure'. They are most useful for bony structures in the body but do show some soft tissue (non bony areas) detail as well.

HOW MUCH RADIATION IS USED IN THESE EXAMS?

Every day we are exposed to radiation from soil, rocks, building materials, air, water and cosmic radiation. This is commonly referred to as 'background radiation'. People living at higher altitudes will be exposed to more cosmic radiation than people living at sea level.

We can compare the amount of radiation we receive through x-ray examinations by measuring the radiation dose to the body or specific organs. Radiation exposure is measured in millisievert units (mSv). By comparing this amount with the background radiation dose we are daily exposed to, we hope to help you make informed decisions on your x-ray study.

Different parts of the body have varying sensitivity to radiation dose so the term 'effective dose' looks at the dose averaged over the whole body.

There is no conclusive evidence that radiation from diagnostic x-rays causes cancer. To be safe we act as if low doses of radiation may cause harm. Our Radiologists and MRTs have been trained to use the smallest radiation exposure necessary to obtain the required information for your diagnosis. The benefits of accurate diagnosis far out weigh the risk of harm when this approach is adopted.

WAYS TO LIMIT RADIATION RISK

- Image when there is clear medical benefit.
- Ensure that the Radiologist/ MRT uses the smallest dose possible—you have the right to ask the technician how we minimise radiation dose.
- Image only the indicated area and avoid multiple scans
- Keep track of your x-ray history and inform your doctor to help them provide informed advice on your treatment. This record keeping is especially important if you change your healthcare providers.