



FACT SHEET

Niagara Health is pleased to provide you with general information about your upcoming exam.

X-RAY SAFETY

As with other medical procedures, x-rays are safe when used with care. **Radiologists** and **Medical Radiation Technologists** have been trained to use the minimum amount of radiation necessary to obtain a diagnosis. The amount of radiation used in most examinations is very small and the benefits greatly outweigh the risk of harm. X-rays are produced only when the exposure switch is momentarily turned on. As with visible light, no radiation remains after the switch is turned off.

WHO IS THE RADIOLOGIST?

The **Radiologist** is a specialized physician who performs x-ray procedures and interprets x-ray images.

WHO IS THE MEDICAL RADIATION TECHNOLOGIST?

The **Medical Radiation Technologist** is a licensed medical professional that produces diagnostic images using various forms of radiation.

WHAT ARE X-RAYS AND WHAT DO THEY DO?

X-rays are a form of radiant energy, like light or radio waves. Unlike light, x-rays can penetrate the body, which allows a radiologist or technologist to produce images of internal structures. The radiologist or technologist can view these images on film or on a computer monitor.

MEASURING RADIATION DOSE

The scientific unit of measurement for radiation dose, commonly referred to as “effective dose”, is the millisievert (mSv).

Because different tissues and organs have varying sensitivity to radiation exposure, the actual dose to different parts of the body from an x-ray procedure varies. The term *effective dose* is used when referring to the dose averaged over the entire body the proper position.

NATURALLY-OCCURRING ‘BACKGROUND’ RADIATION EXPOSURE

We are exposed to radiation from natural sources all the time. The average person receives an effective dose of about 3mSv per year from naturally occurring radioactive materials and cosmic radiation from outer space.

MINIMIZING YOUR RISK

- If you have concerns about the amount of radiation you will receive from diagnostic x-rays, discuss your concerns with your doctor prior to your scheduled examination.
- If you are pregnant, or think you may be, tell your doctor or the technologist before having an x-ray.
- If you must have an x-ray, tell your doctor or the technologist about any similar x-rays you have had recently. You may not need to repeat them.

HOW MUCH RADIATION DO WE RECEIVE FROM COMMON X-RAY PROCEDURES?

To explain it in simple terms we can compare the radiation exposure from one chest x-ray as equivalent to the amount of radiation exposure one experiences from our natural surroundings in 10 days.