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.

For this procedure:	Your effective radiation dose is:	Comparable to natural background radiation for:
Chest:		
Routine Chest X-ray	0.1 mSv	10 days
CT Scan Chest	8 mSv	3 years
Abdominal Region		
Intraveous Pyelogram (IVP)	1.6 mSv	6 months
Upper G.I.	2 mSv	8 months
Barium Enema	4 mSv	16 months
CT Scan Abdomen	10 mSv	3 years
Central Nervous System		
CT Scan Head	2 mSv	8 months
Woman's Imaging		
Mammography	0.7 mSv	3 months

LINKS TO MORE X-RAY RELATED INFORMATION

X-rays and Pregnancy:

http://www.hc-sc.gc.ca/iyh-vsv/med/xray-radiographie_e.html

The College of Medical Radiation Technologists of Ontario:

http://www.cmrto.org/home/default.asp

Ministry of Health-Healthcare Providers:

http://www.health.gov.on.ca/english/providers/providers_mn.html

Patient Information Page – Radiological Society of North America:

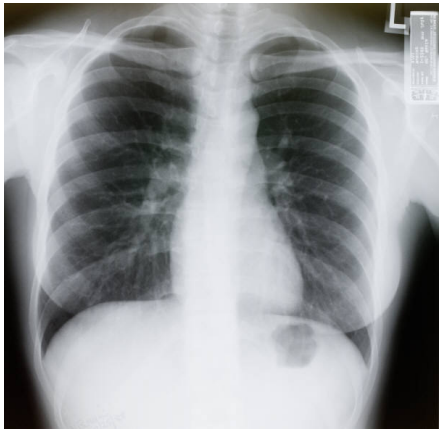
http://www.radiologyinfo.org/en/safety/index.cfm?pg=sfty_xray&bhcp=1

NIAGARA HEALTH SYSTEM | SYSTÈME DE SANTÉ DE NIAGARA

Departments of Diagnostic Imaging

Niagara Health System

RADIATION SAFETY



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.

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.