

Dental X-rays

Do I really need x-rays?

X-rays are useful to the patient and dentist for:

- Discovering cavities between teeth and underneath old fillings and crowns.
- Evaluating bone support around teeth and gum disease.
- Discovering abscesses and root infections.
- Discovering cysts and tumors.

This simple and useful diagnostic procedure is commonly misunderstood. Patients are often understandably concerned with radiation exposure. Below is a fact sheet about x-ray radiation you may find interesting. Notice that dental x-rays are at the very bottom of this ranked listing.

The following exposures of bone marrow to radiation during typical x-ray examinations are listed below in millirems, a measurement of radiation.

The maximum on the job yearly exposure for Canadian and U.S. radiation workers has been set at 5,000 millirems. Low doses spread out over a period of time are not as harmful as large doses at once because the body has time to recover.

HIGH DOSE GROUP	millirems
Barium enema: lower GI series	875
Pelvimetry: examination to evaluate the proportions of the birth canal	595
Barium meal: upper GI series	535
Mammography: breast examination	1000
Lumbosacral spine (lower spine)	450
Small bowel series	422
IV pyelogram	420
Lumbar spine	347
Thoracic spine	247

MEDIUM DOSE GROUP	
Gallbladder	168
Abdomen	147
Ribs	143
Pelvis	133
Skull	78
Hip	72
LOW DOSE GROUP	
Cervical spine (neck)	52
Femur (upper leg)	21
Dental (full mouth series)	9
Dental (panorex)	1
Dental (bitewing)	0.5

You would have to take 1750 dental x-rays to equal the radiation in a lower GI series! 1 dental x-ray is 1/10000 of the yearly maximum recommended dose.

To put things in perspective, each time you fly from coast to coast you receive 4 millirems of background radiation, or the equivalent of four panoramic radiographs.

As well, there is background radiation from concrete buildings, roads and even the sun! Just standing around you receive more than 3 bitewing x-rays worth of radiation every day

We would have to take almost 10,000 dental x-rays to reach your maximum safe yearly dose!

When you weigh this against all the serious conditions such as decay, periodontal disease, abscesses and cancer that can go undetected without x-rays, it seems like a pretty fair tradeoff.