



Dental Radiation and Your Body

11/26/12- RMA

Nervous about the radiation you receive from dental X-rays? **Low doses of radiation, like used in dental offices, are not cumulative per faulty assumptions in the past.** Anxiety about X-rays is understandable and information is the answer. Used correctly, dental radiography is a valuable tool enabling dentists to detect damage and disease not visible during a regular exam, and detect it at its earliest stages. These may include:

- Dental Caries (cavities) between the teeth, gum disease, bone loss
- Cysts, solid growths (tumors) or abscesses
- Position of unerupted or impacted teeth
- Difficult tooth removals, root canals, implants
- Type and degree of orthodontic malocclusion
- Dental injuries such as tooth or jaw fractures



How often X-rays are needed depends on the status of your present oral health, risk for disease, your age, and any signs and symptoms of oral disease. We usually recommend “bitewing” X-rays once per year to best detect interproximal decay and bone loss and full mouth X-rays once per 5 years to view the overall teeth and jaw bones.

The latest in digital X-ray equipment and techniques are used at Jackson Creek Dental Group. They are designed to use the very lowest levels of radiation.

Understanding the level of radiation risk is everything. We are constantly exposed to ionizing radiation (the kind that causes cancer). It is in ultraviolet sunlight, in the air, from the ground, given off by building materials and in cosmic rays from space. **What matters is the dose and interval.** Being alive on earth gives us **8.2uSv per day.** So, this becomes the **benchmark.**

Below is a chart comparing the amount of radiation from dental X-rays to other medical and natural sources.

Dental Radiograph exposure:	(uSV)	Comparable to natural background radiation for:
Natural Exposure from sunlight, air, ground, materials and cosmic rays	8	1 day
Single Intraoral X-Ray	5	<1 day
Panograph X-ray	10	1 day
Cosmic rays during coast to coast flight in commercial aircraft	30	4 days
Cone Beam CT (dental)	50	6 days
Chest X-ray	100	12 days
Occupational Limit	137	17 Days
Mammogram X-ray	400	50 days
CT – Colonography	10000	1250 days
One Time Dose at which 0.1% die	1,000,000	125,000 days or 342 years

Adapted from Safety-X-ray, RadiologyInfo.org - 2012

Let’s look at **relative risk** another way. Statistically speaking:

- We lose approximately 15 days from our life expectancy due to this “natural” radiation dose
- We lose 207 days life expectancy from all accidents
- We lose 1 year from alcohol
- We lose 2 years from being 15% overweight
- We lose 6 years from smoking 1 pack of cigarettes per day
- We **gain** 6 years when we eat a plant-based diet, exercise regularly, drink plenty of water, spend time in sunlight, practice temperance, breathe in pure air, rest well and trust in divine power.

If you are concerned about the amount of radiation you will receive from taking dental X-rays, please have a frank discussion with your dentist or hygienist when you come in for your next visit.