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Radiation Comparison Chart



New York City
College of Technology

To Radiate Or Not To Radiate?

That is the Question!



See the *difference*?



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2016

What is Radiation?

- Radiation is a form of energy that travels through space and is able to penetrate various materials.
- Just the mention of the word “radiation” conjures up an unpleasant image for most people. We associate it with bombs, cancer, and all manner of bad things. But do you know that there are many beneficial uses of radiation.

Why are dental X-rays recommended?

Early detection of hidden problems allow for dental professionals to intervene and correct problems before they become more serious.

Routine dental X-rays should be taken based on age, risk of disease, and presence or symptoms of disease.

Radiographs are used to:

- Diagnose and monitor oral diseases that are not visible to the naked eye.
- Monitor dentofacial development.
- Evaluate the progress of dental treatment.
- Most importantly, for **early detection of infections or tumors.**



How is the patient protected during dental radiation?

The amount of radiation used to obtain dental radiographs is very small. Dentists follow the **ALARA** principle, which stands for “**As Low As Reasonably Achievable,**” when *exposing* radiographs. This radiation safety principle limits your exposure by incorporating the following techniques:

- ❖ Lead apron and thyroid collar to protect vital organs.
- ❖ *Using F speed film* versus D speed film which *requires 60% less radiation during exposure.*
- ❖ *Digital exposure using 70% less radiation exposure as compared to traditional film.*



Who benefits from dental X-rays?

- Adults with extensive restorative work, such as fillings, *to examine for decay beneath existing fillings, or development of new decay*
- Individuals with Periodontal (gum) disease to monitor bone loss.
- Individuals who have dry mouth, which is called Xerostomia, *side effect of many medications or disease. Dry mouth can lead to root surface decay*
- Smokers, to monitor bone loss resulting from periodontal disease.
- Children with mixed dentition; to make sure the jaw is developing properly and there aren't any missing permanent teeth.

Would you believe. . .

You are exposed to **more radiation** from an **airplane flight from New York to California** than having a dental X-ray.

If you like **canned foods**, think twice! In order to keep those foods preserved, they must be **irradiated** to have a **long shelf life**.

What about all you couch potatoes? **Watching hours of television means constant exposure to ionizing radiation.** Maybe those dental x-rays are not that bad after all!

Role of Dental Hygienist



EDUCATION PREVENTION AWARENESS

It is the **role of the dental professional** to *educate* the patient and *help* prevent disease with early detection. The dental X-ray is a *useful diagnostic* tool and key for awareness and prevention.

Dental radiographs provide *the clinician the ability to examine the areas of the mouth that cannot be seen visually.* In order to *have a thorough dental examination, radiographs should be included as part of the treatment plan.*

