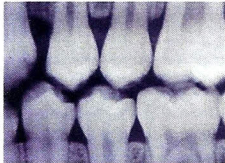


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Summer Newsletter

June/July 2010

Dental X-Ray Safety



Bite-Wing X-Ray

History: X-rays were discovered over 100 years ago. Their exposure time back then was 25 minutes and the quality of the picture was poor. Today, one picture takes only fractions of a second to produce a high quality diagnostic picture.

The exposure from dental radiographs is extremely small, especially with new developments in film and equipment. FDA commissioner states that dental X-rays are considered safe and contain relatively low radiation.

Examples: To help you understand the risk of exposure, a comparison of radiation doses from radiography and background radiation (atmospheric, cosmic radiation, etc.) can be made with the mean active bone marrow dose.

Researchers compared whole-body bone marrow dose from background radiation to the data from radiographic examinations. They concluded that 'if a person in an average location in the U.S. were to receive a full-mouth periapical and panoramic examination every 4 months for the rest of their life he would incur only the same risk as a person living in Denver who was not exposed to dental radiography'. "Denver is exposed to more atmospheric radiation due to the high elevation of this city". So remember you are exposed to radiation naturally, including cosmic radiation from space; terrestrial radiation from stone and other building materials; and radiation from manmade objects such as color televisions.

To carry this comparison further. If a person in the average location in the US were to receive the same dental radiography treatment mentioned above every day for a lifetime, this individual would have the same risk as someone living in certain high elevation areas of Brazil or India (Source: Kim Loss, DDS and "Oral Radiology Principles and Interpretation, 2n Edition Mosby 1987)

Digital X-Rays-the safer way to receive a dental x-ray

Digital X-rays...benefits to you:

- ⌚ Reduced exposure to radiation
- ⌚ Less waiting time
- ⌚ Shorter appointments
- ⌚ Involved in co-diagnosis

- ⌚ Better understanding of treatment
- ⌚ Environmentally friendly

Digital radiography, or computerized X-rays, is part of the high-tech services that we provide to our patients by utilizing the Schick Digital X-ray system. Digital X-rays use less radiation than traditional film. Instead of a piece of film, the system's sensor is placed in the mouth to capture an X-ray. The Schick system uses a sensor with rounded corners and a smooth casing that makes the process of taking X-rays more comfortable for patients and more efficient for our staff. Another benefit is time savings. There's no waiting—as soon as the X-ray is taken, it appears immediately on the computer monitor. And because of the enhancements in the digital X-ray software program, we are better able to diagnose and treat conditions. Since the images can be enlarged, patients are able to clearly visualize and understand the diagnosis and proposed treatment plan. We are pleased to offer digital X-rays and other technologies so that our patients gain a positive dental experience.

Overall a single dental X-ray such as an occlusal or periapical is equal to the exposure of just one chest X-ray. An important aspect to consider here is the differences in the area exposed. A single X-ray of the chest actually results in almost three times more exposure than that of a dental X-ray. This is due to the larger field size of the chest.

The exposure rate for a full mouth series is equal to the sum of all the individual exposures or only three millirems. Three millirems are equivalent to about four days of exposure to radiation received naturally from the sun. The overall exposure is actually much less than the sum of the individual X-rays due to the movement of the radiographic tube between exposures.

A full mouth series of X-rays uses approximately the same amount of radiation you would get on a one way plane ride to Denver. Remember you may receive more radiation using your microwave than you receive from one of our X-rays.

Remember that the risks of poor dental health must also be considered, and may include consequences such as heart disease as well as abscesses and other oral pathology.

How we protect you: In this office we only take X-rays



(Dental X-Ray Safety continued)

when necessary and do all the following to minimize your exposure to the very low dose radiation:

- ⑦ We use current advancements of new and faster X-ray sensors and X-ray machines. With this modern equipment the exposure time is fractions of a second. Thus we use technology that is designed to reduce radiation exposure levels to the lowest possible through use of an X-ray sensor .
- ⑦ All our patients are required to wear a lead shield apron when we take X-rays to minimize the amount of radiation exposure to you. Here, we drape you with a protective lead apron to cover the most sensitive parts of your body (reproductive cells and bone marrow) so they are NOT exposed to radiation. The lead apron will also reduce up to 94% of the scatter radiation.
- ⑦ We also use positioners to help make more accurate radiograph images.
- ⑦ If you are receiving medical radiology, dental radiographs only involve a very small part of the body that does not usually overlap with the areas exposed in medical radiology.
- ⑦ We always ask if you are pregnant. If there is any chance you may be, we will NOT take X-rays even though the exposure levels to the uterus is literally zero. To help us eliminate any unnecessary radiation

“Radiography is an indispensable tool for us to use to detect disease and are cautiously used by us to provide the greatest benefits to you.”

exposure, we ask that you forward any previous dental records taken at another office.

- ⑦ It is important to keep this issue of the safety of radiation in PERSPECTIVE.

Remember there are serious health risks every time you drive a car or walk across the street. Patients who do not consent to a reasonable amount of dental radiography run a greater risk of dental disease which when left undiagnosed, may cause an even greater health hazard and additional medical expenses than the radiograph itself!

Because of low exposure, the benefit of using X-rays outweighs the fear.

If you have any concerns about X-rays and their safety, please discuss them with us!

Radiography is an indispensable tool for us to use to detect disease and are cautiously used by us to provide the greatest benefits to you.

We require that updated dental radiographs be taken to help us provide you with the most accurate diagnosis. We will be unable to perform treatment if you refuse necessary X-ray diagnostic procedures.

Staff News

Shannon: Shannon is trying on a green thumb. She is getting ready to do some front yard landscaping and plant a new backyard garden at her house. Your advice and ideas are welcome!

Linda: Linda lived through her kitchen remodel and has a greater appreciation for her appliances and kitchen sink. She wants everyone to know that washing dishes in the bathroom sink is not fun at all. Her new kitchen is beautiful and she agrees that it was indeed worth the wait.

Marci: Marci is currently out of the office on a Dr. prescribed bed rest. She is following the baby trend in the office and is expecting her second child (it's a girl!) in August. We all miss Marci and wish her well.

Brittany: Brittany is excited for summer and all the fun trips she has planned. There are always some fun stories to hear following her adventures. She is still hoping to get a puppy this year.

DaiLene: DaiLene's little man, Jake just turned 1(Max is now 2 1/2, if you can believe that.)! She is here on Mondays and Tuesdays and loves spending the rest of her time with her boys. DaiLene recently saw the Lion King play and highly recommends it to everyone.

Juliana: Juliana just celebrated her one year anniversary with us, so by now many of you know and love her. She is here on Wednesdays and Thursdays and hopefully a little more in the near future with the completion of our new hygiene room.

Dr. Marty: Congratulations to Dr. Marty! He will be recognized in the Portland Monthly Magazine as one of Portland's top dentists in their July 2010 issue. This is Dr. Marty's fifth consecutive year of receiving this honor. He adores his girls (Madison 2 years and Brielle 6 months).



Miss Madison asleep with her toothbrush in hand. Good girl!

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