



TAYLOR DENTISTRY

Advances in Dental X-Rays

We are pleased to tell you about our x-ray system at Taylor Dentistry. This system is composed of two new pieces of equipment that yields better image quality while reducing the amount of x-rays that the patient receives.

The first piece of equipment is our digital imaging system. This is a phosphor-plate system that reduces radiation dose to the patient compared to conventional film based x-rays. A small, flat phosphor plate is placed in the patient's mouth next to the teeth. The x-ray is then taken and scanned into the computer.

The second piece of equipment is the NOMAD portable x-ray machine. The NOMAD exhibits better resolution than a conventional x-ray machine due to the differences in focal spot size. This smaller irradiation area also reduces the patient dose by 25% without significantly compromising the beam aiming capability. NOMAD alone has been shown to reduce patient dose by up to 1/3 per image. University studies also show that the NOMAD is also safer for our staff because of superior shielding used in comparison to conventional x-ray machines.



ScanX Digital X-Ray



NOMAD X-RAY

Used together, these advances yield excellent images with less radiation to our patients.

You may be interested to know that radiation is part of our natural environment. We are all exposed to radiation from materials in the earth itself, from naturally occurring radon in the air, from outer space, and from inside our own bodies (as a result of the food and water we consume). The average radiation for a person in the U.S. from natural sources (per year) is over 300 mrem. The amount of radiation for a dental x-ray that a patient receives from a conventional system is about ½ (0.5) mrem; so ours is even less.

The following table lists average yearly radiation exposures.

Cosmic radiation in Omaha (~1000 ft. elevation)	28 mrem
Terrestrial (from the ground)	30 mrem
Living in a stone, concrete, adobe, or brick building	7 mrem
Food and Water (Ca-14, K-40, radon)	40 mrem
Air (naturally occurring radon)	228 mrem
Smoking ½ pack of cigarettes for one year	18 mrem
Xray mammography	40 mrem
Xray barium enema	800 mrem
Cooking with natural gas	10 mrem
Reading a book for 3 hours per day, or watching TV	1 mrem
Flying in an airplane cross country	5 mrem
Sleeping next to someone	2 mrem

