

## **X-Rays**

X-rays are high-energy photons that have more energy and a shorter wavelength than ordinary visible light. They are called x-rays because Röntgen, the man who discovered them, didn't know what was going on or why.

Ordinary light cannot pass through people because ordinary light does not have enough energy. Photons pass through substantial thickness of matter only if they have high enough energy. Some of the rays stay in the body. Some x-rays have to remain in the body because if no x-rays were absorbed, the image would come out white without any detail.

The light and dark spots come from when you expose a photographic plate to x-rays. The plate starts off whitish, and when x-rays strike the plate, that section of the plate gets darker. In dental x-rays, metal fillings appear white, because the metal is very dense. Bones appear lighter on the image because bone is denser than the rest of the body.

Having x-rays taken a couple times a year is not harmful. However, your dentist will cover your body with a lead-lined apron to protect your body from unnecessary x-rays. Low doses of x-rays cause a negligible increase in the risk of cancer. However, dentists and their staff are exposed to x-rays several times each day, which is why they leave the room when they take a x-ray. You may also notice that the dental team wears a radiation badge, which measures the level of radiation to which they have been exposed. This is all part of your dental office's standard safety program. Finally, the doses of x-rays used in the dental office are very low. You are given just enough so that your dentist can see what is going on inside of you without jeopardizing your health.

Remember, if you have any questions about x-rays, talk to your dentist. He or she will be happy to address your concerns.