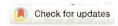
## **Dental x-rays**



-rays can detect problems that would be missed by just looking in your mouth, such as

- an infection in your tooth or tooth root;
- cavities between teeth or under fillings;
- trouble with teeth and jaw development in children and teens who are getting their permanent teeth;
- bone loss from severe gum disease.

Sometimes x-rays are needed as part of your dental treatment. When deciding whether to recommend x-rays, your dentist will consider factors such as

- your current oral health, including any oral health problems you are having;
- your age;
- your risk for tooth decay or gum disease.

Your dentist might recommend x-rays if you are a new patient. X-rays help your dentist evaluate your oral health and give him or her something to compare against when looking at changes that may occur later.

## COMMON TYPES OF DENTAL X-RAYS

There are several types of dental x-rays. Each one helps the dentist see different areas of your mouth.

Common x-rays used in the dental office include bite-wing, periapical, and panoramic x-rays. Bite-wing x-rays help the dentist check for tooth decay between the back teeth or under dental fillings. These are taken with a small film or digital sensor that you bite with your back teeth. Periapical x-rays help the dentist observe conditions below the gumline, showing the roots of the teeth. They can be taken of front or back teeth. Panoramic x-rays use a machine that rotates around the head. It produces a long film that shows the entire jaw and all of the teeth in 1 image.

Cone-beam computed technology is used to make a special type of x-ray that is used less often. This technology takes a series of images to create a 3-dimensional image. Because it relies on multiple images, the radiation exposure is higher than that of commonly used x-rays. It is used when more detailed information is needed.

## ARE DENTAL X-RAYS SAFE?

Because dental x-rays expose us to radiation, patients sometimes wonder if they are safe. We are exposed to radiation from a number of sources, even the sunshine, air, and soil around us.<sup>1</sup>

To help limit the amount of radiation exposure to your thyroid gland when taking x-rays, your dentist may cover your throat with a special collar.<sup>2</sup>

Pregnant women may wonder if dental x-rays can affect their unborn children. Dental x-rays are considered safe at any stage during the pregnancy.<sup>3</sup> In fact, The American Congress of Obstetricians and Gynecologists notes that delaying dental treatment, including x-rays, could lead to more serious problems like an infection.<sup>3</sup> Tell your dentist if you are or might be pregnant. A protective blanket may be used to cover your abdomen when x-rays are taken.<sup>3</sup>

## CONCLUSION

Dental x-rays are a safe way to let your dentist observe conditions beyond the surfaces of your gums, teeth, cheeks, or tongue. They can help him or her spot tooth decay, keep an eye on advanced gum disease, watch how a child's teeth are developing, and more.

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"For the Patient" provides general information on dental treatments. It is designed to prompt discussion between dentist and patient about treatment options and does not substitute for the dentist's professional assessment based on the individual patient's needs and desires.

You can find more information for patients at ADAcatalog.org or at MouthHealthy.org.

- United States Nuclear Regulatory Commission. Background radiation. Available at: https://www.nrc.gov/reading-mr/basic-ref/glossary/background-radiation.html. Accessed April 12, 2019.
- 2. American Dental Association Council on Scientific Affairs, U.S. Department of Health and Human Services, Public Health Service, Food And Drug Administration. Dental radiographic examinations: recommendations for patient selection and limiting radiation exposure. 2012. Available at: http://www.ada.org/en/~/media/ADA/Publications/ADA%20News/Files/Dental\_Radiographic\_Examinations\_2012. Accessed February 18, 2019.
- 3. American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women. Committee opinion: oral health care during pregnancy and through the lifespan. American College of Obstetricians and Gynecologists, 569, August 2013 (Reaffirmed 2017). Available at: https://www.acog.org/-/media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/co569.pdf. Accessed April 10, 2019.