

Dental X-Rays

Overview

Dental X-ray examinations provide valuable information that helps your dentist evaluate your oral health. With the help of radiographs (the term for pictures taken with X-rays), your dentist can look at what is happening beneath the surface of your teeth and gums. If you have any questions about your dental X-ray examination, your dentist will be happy to discuss them.

How do dental X-rays work?

As X-rays pass through your mouth, they are mostly absorbed by your teeth and bone. These “hard” tissues, are denser than cheeks and gums, which are called “soft” tissues. When X-rays strike the film or a digital sensor, an image called a radiograph is created. Radiographs allow your dentist to see hidden abnormalities, like tooth decay, infections and signs of gum disease, including changes in the bone and ligaments holding teeth in place.

How often should radiographs be taken?

How often X-rays (radiographs) should be taken depends on your present oral health, your age, your risk for dental diseases, and any signs and symptoms of oral disease you may be experiencing. Your dentist will review your history examine your mouth and then decide whether or not you need radiographs.

If you are a new patient, the dentist may recommend radiographs to determine the present status of your oral health and to help identify changes that may occur later. A new set of X-rays may be needed to help your dentist detect any new cavities, determine the status of your gum health or evaluate the growth and development of your teeth. If a previous dentist has any radiographs of you, your new dentist may ask you for copies of them. Ask both dentists to help you with your X-rays.

What are the benefits of a dental radiograph examination?

Because many diseases of the teeth and surrounding tissues cannot be seen when your dentist examines your mouth, an X-ray examination can help reveal:

- small areas of decay between the teeth or below existing restorations (fillings);
- infections in the bone;
- periodontal (gum) disease;
- abscesses or cysts;
- developmental abnormalities;
- some types of tumours.

Finding and treating dental problems at an early stage can save unnecessary discomfort as well as time and money. Radiographs can help your dentist detect problems in your mouth that otherwise would not be seen.

How do dental X-rays compare to other sources of radiation?

The amount of radiation that we are exposed to from dental X-rays is very small compared to our daily exposure from things like, cosmic radiation and naturally-occurring radioactive elements (for example, those producing radon).

Source of Exposure	Dose
Dental X-ray (small)	0.005 mSv
135g bag of Brazil nuts	0.005 mSv
Chest X-ray	0.02 mSv
Transatlantic flight	0.07 mSv
Nuclear power station worker average annual occupational exposure	0.18 mSv
UK annual average radon dose	1.3 mSv
CT scan of the head	1.4 mSv
UK average annual radiation dose	2.7 mSv
USA average annual radiation dose	6.2 mSv
CT scan of the chest	6.6 mSv
Average annual radon dose to people in Cornwall	7.8 mSv
Whole body CT scan	10 mSv

The table above compares our estimated exposure to radiation from dental X-ray with other various sources.

As indicated below, a millisievert (mSv) is a unit of measure that allows for some comparison between radiation sources that expose the entire body (such as natural background radiation) and those that only expose a portion of the body (such as X-rays).

Source: Adapted from Frederiksen NL. X-Rays: What is the Risk? Texas Dental Journal. 1995;112(2):68-72.

What if I'm pregnant and need a dental radiograph examination?

If you are pregnant or think you may be pregnant be sure to tell your dentist prior to having any x-rays. In most circumstances we will elect to delay radiographic examination until after your baby is born. Occasionally a radiograph may be needed for dental treatment that can't wait until after the baby is born. Radiation exposure resulting from dental X-rays is low. However, every precaution is taken to ensure that radiation exposure is As Low As Reasonable Achievable ([the ALARA principle](#)). Dental X-ray exams do not need to be delayed if you are trying to become pregnant or are breast feeding.

Additional Resources

(Much of the information in this leaflet has been reproduced from the American Dental Association website)

For more scientific information about radiation see:

[Radiation Answers sponsored by the Health Physics Society](#)
[The EPA Ionizing Radiation Fact Book](#)

Addition Information Relevant At Wall Heath Dental Practice

We are committed to minimising exposure to radiation and so have invested in the latest digital technology meaning we can produce clear radiographic images with the smallest dose currently possible.

These x-ray sensors also input directly into our computers so your images can be viewed immediately. Because the computer is able to manipulate the image we are using half the dose normally needed for wet film x-rays.

We have written our own criteria for justifying radiographs so that we feel we are balancing the need for x-rays for aiding diagnosis against the potential risks, we continually review and update these criteria.

All our x-ray equipment is serviced and checked for accuracy every year in line with national guidance.

If you have any questions or concerns please talk to one of our team.

Dental X-rays



01384 292666

Wall Heath Dental Practice
7 High Street
Wall Heath
West Midlands
DY6 0HA

Tel: 01384 292666
email: info@wallheathdental.co.uk
www.wallheathdental.co.uk