



Dental

XRAYS

TYPES OF INTRA-ORAL RADIOGRAPHS

Bitewing X-Ray

Bitewing X-rays are incredibly common and often taken for preventative purposes because they are a great way to see any decay between teeth or below the gum-line. The term bitewing comes from how patients must bite down on the X-ray film. These types of X-rays can be taken in the dental chair. Each bitewing captures the exposed (visible) part of your upper and lower teeth as well as half of their roots and supporting bone. Bitewing x-rays help dentists detect decay on the teeth and changes to your jawbone caused by gum disease. There are different types of dental x-ray machine, some are digital while others are non-digital. The digital ones are efficient and they make the consultation process faster as they don't require developing of films.

Dental imaging system (Digital x-ray sensor)



Non-digital wall mounted x-ray machine



x-ray film holder



dental x-ray films

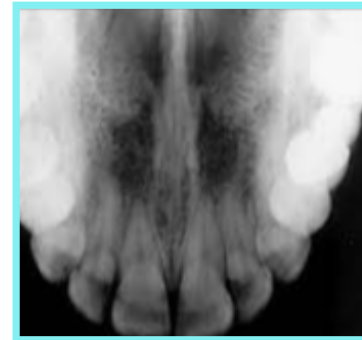


Periapical X-Ray

Bitewings show most of the tooth, but for a comprehensive view of both the tooth or the jawbone, a periapical X-Ray is a better choice. This type of X-ray captures an image of the entire tooth, including a little past the tooth root. It shows everything from the crown (chewing surface) to the root (below the gum line). The X-ray typically captures the entire upper or lower row of teeth in one image. These types of X-rays may be used when there is a suspicion of damage to the tip of the tooth root or issues with the jawbone. Film will be placed near your mouth using a metal rod with a ring attached to it. You will need to bite firmly onto the device to keep it in place and provide a clear x-ray image.

Occlusal X-Ray

Occlusal X-rays are designed to capture what goes on inside the roof or floor of the mouth, which helps the dentist see full tooth development and placement. This may be used to find out why teeth haven't erupted yet or to spot supernumerary (extra) teeth, which can damage healthy permanent teeth. This type of X-ray may also be used to diagnose a cleft palate or fracture. Hard-to-find cysts, abscesses or growths can also be spotted with an occlusal X-ray. (see picture A)



(Picture A)

Panoramic X-Ray

A panoramic X-ray uses a special machine that takes one image of your entire upper and lower teeth. The result is a 2-D image of your 3-D mouth. If you suffer from frequent complications or have had major dental work in the past, your dentist may recommend a panoramic X-ray every now and then to make sure nothing is brewing. A panoramic X-ray may be used as a common X-ray method and is often used in preparation for major dental procedures such as getting braces. Dentists also commonly use it to diagnose major complications such as jaw tumours, cysts, and sinusitis. You will be asked to bite down on a "bite blocker" to keep teeth aligned and obtain a clear image. Then, a rotating arm on the machine makes a semi-circle around your head to record your mouth.

Cephalometric X-Ray

A cephalometric projection is an X-ray of one side of the entire head. This is commonly used by orthodontists, so they can see how the teeth and jawbones fit to better create a treatment plan that involves the entire mouth. this type of X-ray may also be used to diagnose any throat complications such as lumps or cancer It can also be used to determine causes of sleep apnoea

Cone Beam X-Ray

CBCT, "cat-scan" or "cone beam" x-rays are an imaging method that uses computer technology to convert 2 dimensional images into a 3 dimensional (3D) picture. Compared to a traditional 2-dimensional x-ray that shows a flat image, the 3-D picture shows every dimension and aspect of the teeth and surrounding bone.

What this means to a patient is an accurate diagnosis of an area of concern that would not have been possible without this technology. It is used for dental implant treatment planning. This advanced, more exact approach using dental cone beam imaging means fewer complications, less invasive therapy, quicker healing times, and ultimately better results for the patient.

References

- Cleveland Clinic. 2022. Dental X-rays. [online] Available at: <<https://my.clevelandclinic.org/health/articles/11199-dental-x-rays>> [Accessed 4 January 2022].
- Dr. Jerry Maymi & Associates. 2022. 6 Types of Dental X-Rays - Dr. Jerry Maymi & Associates. [online] Available at: <<https://drmymmi.com/6-types-of-dental-x-rays/>> [Accessed 4 January 2022].