

R59269

Dental X-Rays

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WHAT ARE DENTAL X-RAYS?

Dental X-rays, or radiographs, are used by your dentist to see what's going on inside your mouth in places that otherwise can't be seen. This common tool is used by dentists everyday to monitor the development of healthy teeth, as well as to reveal potential problems, like bone loss, cavities and impacted teeth — even before you notice any discomfort. Your dentist will periodically check your oral health using X-rays because early detection will give you more treatment options. It's just one more way the dentist makes sure your mouth is as healthy as possible!

WHY IS DENTAL HYGIENE SO IMPORTANT?

You've heard it before: brush for 2 minutes twice a day with a fluoride toothpaste, and floss once a day. There are many benefits to this routine. Not only will it help you keep your mouth clean and your breath smelling great, but brushing and flossing can also help to prevent some painful, even dangerous, problems, such as tooth decay, infections and gum disease.

When you consume sugary foods or drinks, you are feeding the bacteria that live in your mouth. In fact, everything you eat and drink mixes together with the saliva in your mouth to form a sticky film called plaque (pronounced "plak"). Plaque can cover your teeth and build up over time if you don't brush and floss everyday.

The bacteria in the plaque eat the sugar and make an acid that breaks down the hard outer surface of your teeth called enamel. The acid can linger in your mouth for as much as 20 minutes. If you're eating and drinking sugary treats all day, such as candy and mints, cookies and cakes, sodas and sports drinks, the acid created by the plaque bacteria is going to stay in your mouth, increasing your chances for tooth decay, also known as cavities.

When you skip brushing and flossing, the plaque begins to harden on your teeth and becomes tartar, which can trap bacteria along the gumline. Tartar can only be removed by a dentist, so it's important to schedule regular check ups.

CAVITIES AND TREATMENT

The ugly truth is that cavities are common. There are a lot of factors that can lead to the conditions that create cavities. Obviously, eating too much sugar and skipping brushing and flossing will cause cavities to form, but some diseases, and even some medications, can determine the likelihood of developing cavities. If a cavity does form, it is important to see a dentist right away, otherwise, the decay will get worse. This could lead to tooth loss, and even dangerous infections.

One treatment for a cavity is a filling. The dentist will clean out the decay and fill it with any variety of substances, such as

porcelain, amalgam (silver), or most commonly, a composite resin. All of which are intended to keep bacteria out, and prevent further decay. As the cavity gets bigger and closer to the nerve, tooth pain and infection are likely, resulting in the need for root canal therapy, crowns or even extractions.

A root canal is needed when the tooth decay is more severe. The dentist must clear out the inflamed or infected pulp inside the tooth, down to the root. Then, the hollowed root canals are filled, and sometimes a post is inserted. This helps to support a replacement tooth, or crown.

ORTHODONTICS

Everyone is different, and so are their teeth. Some teeth are straighter, some more crooked. If a person's teeth are crowded, making them difficult to clean even with regular brushing, it could lead to cavities. Sometimes a person's teeth can be positioned in a way that causes a speech impediment or jaw problems. For these, or for purely cosmetic reasons, braces are applied by an orthodontist to line up the teeth.

TOOTH DEVELOPMENT

Even though babies are born with no teeth in their mouths, both baby (primary) teeth and permanent teeth have already begun to form by the time they are born. Most children have all their primary teeth by the time they are about 3 years old. They begin to shed their primary teeth by about 6 years old, making way for the permanent teeth.

The last teeth to come in (erupt) are the wisdom teeth. These teeth are all the way in the back of the mouth and usually begin to show up around 17–25 years old. Wisdom teeth are frequently blocked, causing them to become impacted. In this case, it is common to have them removed, because they can push all the other teeth out of place, making them more difficult to clean, leading to tooth decay.

Cavity



Filling



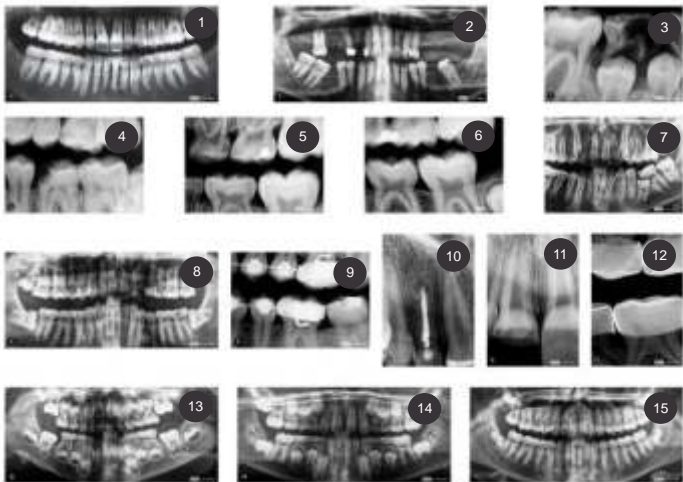
Hold the X-rays up to a light source, such as a window or lamp, to see the inside of the mouth exactly as a dentist would! For even more fun, try placing the X-rays on our Educational Light Cube (R59601). Explore other X-rays from our collection, such as True To Life Human X-Rays® (R5911), Broken Bones X-Rays (R5914), Fixed Bone X-Rays (R59255) and more! Visit our website, www.roylco.com, to see our complete line of X-Rays.

X-RAYS INCLUDED IN THIS SET:

1. **GOOD ORAL HYGIENE:** This X-ray shows a panoramic view of a healthy, happy mouth.
2. **POOR ORAL HYGIENE:** In this X-ray, we can see several teeth are missing, and many of the remaining teeth have treated and untreated cavities.
3. **CAVITY IN PRIMARY TOOTH:** Here, a cavity is present in a primary (baby) tooth. It appears as a dark patch in the top right, indicating that the tooth has decayed in that area. This cavity is severe and the tooth would be considered non-restorable. The dentist would need to remove the decayed tooth to make room for the permanent tooth underneath to erupt into place.
4. **CAVITY IN PERMANENT TOOTH:** You can see a cavity as a dark patch in the bottom left of this X-ray. Once a cavity in a permanent tooth is filled, it is necessary to schedule regular dental check-ups. This helps ensure the filling remains intact, preventing further decay.
5. **CAVITY FILLING:** In this dental X-ray, a filling appears as a bright white spot in the top middle. There are also dark spots of decay between the teeth.
6. **CAVITY FILLINGS BETWEEN TEETH:** You can see in the top left of this X-ray, the bright white spot where two teeth with cavities have been filled in by the dentist. This is a good example of why flossing is so important to clean between the teeth where plaque is hard to reach.
7. **CROWDING:** In this X-ray, the upper canine teeth are blocked from erupting. You can see them in the top middle, crowded between the incisors and the premolars. In the bottom row on the right side of the image, the second premolar is blocked by the first molar.
8. **IMPACTED TEETH:** As seen in this X-ray, teeth can become impacted when crowding prevents the space required for the tooth to erupt. Usually this is not painful, and may not even need to be treated. When necessary, treatment could include removal of the impacted teeth, or orthodontics.
9. **BRACES:** When crowding has caused a person's teeth to shift in a way that makes them difficult to clean it may be necessary to see an orthodontist. An orthodontist is someone who applies braces with small wires, customized to fit each patient, in order to straighten their teeth.
10. **ROOT CANAL:** Sometimes, mouth injuries can cause enough damage to create tooth decay. In this X-ray, we can see where an abscess has developed from the result of some kind of trauma, such as being hit by the handlebars of a bicycle, or perhaps a sporting related injury. In this instance, the injury caused the tooth's nerve to die, leading to severe pain and tooth decay. We can see where the dentist has applied root canal

therapy to remove the nerve, which will heal the infection and prevent further decay.

11. **BROKEN TOOTH:** Teeth commonly break when a cavity is present because the decay makes the tooth weak. In this case, we can tell by the X-ray that the tooth in the bottom left of the image has broken off, but no cavity is present. The tooth down to the root seems otherwise healthy, indicating that the fracture was most likely a result of trauma. Here, the dentist will suggest repairing the tooth with a crown.
12. **CROWNS:** All 4 of the teeth in this X-ray have crowns. Crowns are used to replace broken or decayed teeth, and are made to look like the original. In this case, stainless steel crowns are used to replace primary teeth. As the permanent teeth erupt, these crowns will exfoliate along with the primary teeth.
13. **6 YEAR-OLD DEVELOPMENT:** Around age 6, primary incisors begin to shed, usually starting with the lower incisors and ending with the upper incisors. At the same time, the permanent first molars erupt (commonly called 6 year molars).
14. **12 YEAR-OLD DEVELOPMENT:** Around age 11, the primary molars are lost, then the primary canines. These are replaced by their permanent counterparts. Around age 12, the permanent second molars erupt behind the first molars (commonly called 12 year molars).
15. **18 YEAR-OLD DEVELOPMENT:** The third molars, or wisdom teeth, usually erupt around age 18. By this time, most people have all their permanent teeth in place, and all the primary teeth have been shed.



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