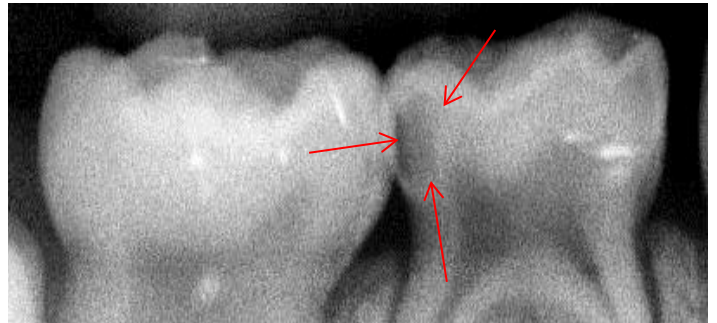


WHAT DO X-RAYS HELP US TO SEE?

One of the most common questions I get as a dentist for kids is, "Are x-rays necessary?" I usually give an answer that explains that it allows us to see if there is a cavity between the teeth and how big the cavity is. This article is meant to clarify that answer with some photos, so you can see what I mean!



This is a close up view of two lower molars in a 5 year old that appear and feel happy. The enamel looks clean and feels smooth. A shadow can be seen under the enamel.



This is the x-ray of those same teeth from that day. It shows decay that is less than 1 mm away from the nerve.



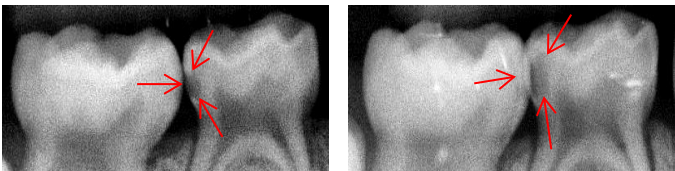
This is what the decay area looks like while I am removing it – it is dark brown and soft.



This is the cleaned out decayed area of the tooth, just about ready to be filled. Note how the position and size correlate to the x-ray.

Now, this is not to say that every good looking tooth is going to have an area of large decay (most don't). But, it helps to show why, even when the teeth appear to be in good health, we will sometimes ask for x-rays.

PS: We usually will take x-rays every 1 year because that is about how long it takes for the average cavity to develop.



This is the amount of growth that happened in 6 months. Note that the decay grew taller and closer to the nerve.



HOW MUCH RADIATION IS THAT, REALLY?

In general, all medical/dental procedures (and really, anything we do) carry both risks and benefits. The internet and media generally focus on the risks of radiation, but the substantial benefits are often ignored. The government considers the risk associated with a yearly radiation dose limit of 50,000 μSv for a radiation worker to be acceptable. That amount of radiation is comparable to 25 head CTs = 2,500 cross country flights = 100 months of background radiation = 250,000 dental x-rays = 500,000 bananas. The following is an infographic that depicts the relative amount of radiation found in common everyday activities. Each icon depicts 0.1 μSv of radiation.

