

The Upshot

You Probably Don't Need Dental X-Rays Every Year

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My dental hygienist complimented me on the health of my teeth and gums. Then she said something that you, too, have undoubtedly heard while sitting back in the dentist chair.

“Would you like bitewing X-rays? It’s been a year since your last ones. Your insurance will cover them annually.”

The easy answer was: “Yes. Bring on the bitewings!” They are, after all, painless, don’t take much time, and, as I was reminded, would not cost me a penny because they are covered by my insurance.

But the easy answer isn’t necessarily the right one. Do I need bitewing X-rays every year?

The American Dental Association says I don’t, and you may not either. Adults without apparent dental problems do not need dental X-rays of any kind every year, the A.D.A. says. Adults who properly care for their teeth and have no symptoms of oral disease or cavities can go two to three years between bitewing X-rays, according to the A.D.A.

Adults with a high risk of cavities (like those with a history of them) should receive them at least every 18 months, and possibly more frequently, depending on the condition of teeth and gums.

The interval between X-rays is determined by the rate at which cavities develop. Typically, it takes about two years or more for cavities to penetrate adult teeth enamel. The rate is faster for children, so the recommended bitewing intervals are shorter for them.

However, children with adequately spaced primary (baby) teeth and no cavities do not need any dental X-rays. Older children with a low propensity for cavities can go 18 months to three years between bitewing X-rays. Those at the highest risk may need them more frequently.

Bitewing and other dental X-rays have their place; there is risk in not taking them. Sometimes decay can spread quickly. The X-rays help dentists see cavities, gum disease, the position of teeth still below the gum line and other dental conditions not visible with the naked eye. Other kinds of dental and orthodontic imaging — like full-mouth, full-head, panoramographs or 3-D cone-beam computed tomography — reveal more.

But dentists tend to overuse them. Jay W. Friedman, a dentist who advises Consumer Reports on dental issues, has been warning of overuse of dental imaging since the 1970s. “Many patients of all ages receive bitewing X-rays far more frequently than necessary or recommended,” he said. “And adults in good dental health can go a decade between full-mouth X-rays.”

Other X-rays used for orthodontic treatments, wisdom tooth extraction and implants — like cephalographs (side-view X-ray of the skull and jaws) or 3-D cone-beam computed tomography — are not needed on a routine basis, according to Dr. Friedman. One study found that although X-ray images increase orthodontists’ confidence in their diagnoses and treatment plans, the vast majority of the plans are formed before viewing them.

All X-rays can be harmful, though the radiation dose of bitewings is relatively low. Of all the medical radiation patients receive, dental X-rays account for less than

3 percent. But the harm from radiation is cumulative. Every X-ray adds to the risk of damage that can lead to cancer.

An unnecessary bitewing or other dental X-ray is an unnecessary harm. And a cone-beam C.T. scan confers the same radiation dose as six traditional dental X-rays, with only limited evidence of greater diagnostic or treatment value over imaging with lower radiation.

Though dental X-rays blast a relatively low dose of radiation — as compared with other medical imaging — one study of over 2,700 patients appeared to find a link to an increased risk of intracranial meningioma, the most common form of brain tumor (when radiation exposure from X-rays was greater than in the current era). Patients with a tumor were twice as likely as patients without one to have had a bitewing X-ray.

A limitation of the study is that its findings were based on patient recall of dental X-rays, not more objective medical data, which is not available. However, the study is consistent with earlier and smaller ones that documented increased risk of tumors associated with dental X-rays.

Though your insurance may cover annual bitewings, they're not free. The prices insurers or uninsured patients pay vary, but a full set of bitewings typically runs about \$60. That's as much as the price of a cleaning at many dental offices. So, when dentists take bitewings at routine visits, they may be doubling their revenue. Other types of dental X-rays can cost more. For some people, it's a needless expense that comes with needless risk.

My answer to my hygienist's offer of annual bitewing X-rays: "No thanks. Let's wait a couple of more years."

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