

Bruxism and cold sensitivity

Why does my tooth hurt when I drink cold water?

I think it is because I grind my teeth.

Pertinent dental history: The maxillary left second molar had amalgam restoration done in the 1950s; the amalgam was replaced in the 1970s; a partial-coverage fixed restoration was placed in 1999; and subsequently the crown broke and was replaced with a cast gold full-coverage restoration in 2001. I discovered I bruxed in 1968 and have worn a hard acrylic maxillary bite splint (night guard) intermittently since 1973. I have an orthodontic Class I occlusion, and this tooth has what are apparently appropriate tooth-to-tooth contacts in centric occlusion and no apparent tooth-to-tooth contact in eccentric movements. Periodic exacerbations of thermal (cold) sensitivity have been noted. Radiographic examination is within normal limits.

Clinical examination: Probing depths are 2 to 3mm with no bleeding upon probing; the free gingival margin is located slightly above the cementoenamel junction (no recession); no bidigital mobility or fremitus is seen.

I experience increased sensitivity during times of emotional stress when I do not wear my bite splint. Potassium nitrate-containing dentifrice does not affect the sensitivity, nor does topical application of sodium fluoride. The sensitivity decreased for a short period after the full-coverage restorations were placed but quickly returned.

So why is my tooth sensitive? I think it is related to bruxing. When I do not wear my night guard, my tooth hurts more than usual when I drink cold liquids, and the gingiva is exquisitely sensitive when I floss.

Over the years I have found that much of the cold (not hot) sensitivity seen in my practice can be

related to bruxing—not to recession, not to abfraction, not to improper oral hygiene techniques or other habits or stimuli.

My patients who brux have more daily thermal sensitivity, more and longer-lasting postoperative cold sensitivity, more pain during and following other dental procedures (like closed subgingival scaling and root planing during maintenance visits), and a greater likelihood of experiencing limited jaw opening following dental procedures.

So how has this changed my therapy? First, I want to find out before therapy if the patient bruxes. So I have questions on my health history about pain or problems in the mouth, jaw soreness, and headaches, and I ask them if they clench or grind their teeth. Many patients readily admit to all the symptoms but deny clenching or grinding. In fact, I have found that the more patients brux, the less likely they are to be aware that they do so, and some patients become very defensive when I suggest that they grind. A number of times they have had their habit graphically demonstrated when they wake up in pain 2 to 3 nights following their surgery. Usually the pain, a dull ache, lasts for 7 to 10 days. The pain usually disappears within 24 hours if a bite splint is made.

So why do I, and many of my patients, have sensitivity to cold?

Because we brux.



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