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## Tooth Tips Chew on this. . . or can you? Ideal vs. Non-ideal bites

by [WILLIAM VUILLEMOT, DDS](#) on [AUGUST 15, 2010](#) - [3 COMMENTS](#)

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Have you ever stopped and thought about what it was that makes a person's smile 'light up the room?' Think about your ideal smile. If you are like most, that smile will consist of all the teeth lining up. The teeth will show no signs of wear or grinding, and will be formed in normal shapes, regardless of age. The teeth will provide support for

the cheeks and lips, which enhances facial appearance (esthetics) and speech (phonetics). We find these attributes attractive because they are an indication of health.

A healthy bite functions smoothly: Whether at rest or during hard chewing, the function is an effortless (if not unconscious) process. With the teeth and jaw joints in alignment, the chewing stroke is harmonious, and the teeth, gums, bones, muscles, and ligaments will perform with minimum strain.

Signs of trouble in the bite will appear as changes to form and function and/or pain. Some individuals may have significant breakdown of tooth or other jaw components, and may have no symptoms or complaints of pain. Others may show no external signs of wear or stress, but may have pain or soreness in the jaw joints, muscles, or ligaments of the jaws, neck, or back. Headaches, tinnitus (ringing in the ears), and vertigo have also been associated with bite alignment problems.

Tooth wear is a common indicator of problems with the bite. The front teeth may appear to flatten, or become shorter over time. The chewing motion may shift to a horizontal or side-to-side motion, rather than vertical. As the front teeth become shortened, the face takes on an appearance of increased age. The chin and the nose are able to come closer together as the teeth wear and shorten. This is referred to as Loss of Vertical Dimension.

Bite problems may be caused by misalignment of one or more teeth, and may be accompanied by conscious or unconscious clenching or grinding of the teeth called Bruxism. Any pain or soreness in the head and neck or persistent headache requires attention and careful diagnosis. Often medical evaluation is indicated, with MRI or CAT scans used to rule out tumors, migraines, or infections. If the medical exam is negative, and a bite disorder is suspected, a thorough dental exam should be completed, and any tooth or gum infections treated.

If tooth misalignment is suspected as a cause of bite problems, TMJ, or tooth wear, diagnostic dental records should be obtained. These include impressions and stone casts of the teeth and jaws, and bite records that show the relationship between the teeth of the upper and lower jaws. The bite records may also show the alignment of the teeth with the right and left jaw joints. Models are mounted on jaw simulators, and studied and compared to ideal models to help with diagnosis.

One very useful technique is to provide the patient with a removable plastic bite plane, often referred to as a Bite Splint, to mask the effects of tooth misalignment, and allow time for the joints and muscles to heal. One type of splint is U-shaped, and snaps over the entire upper arch. It can be fashioned to simulate an ideal bite when worn over the teeth, and also can help restore vertical dimension. A properly adjusted splint will cover up (or cancel out) the effects of one or more poorly positioned teeth. This pro-

vides a chance for the muscles and ligaments to rest and heal. At this point, we often see relief of pain symptoms, at least while the device is being worn. As muscle soreness, pain, and swelling subside, we often see improvements in facial esthetics as the muscles of facial expression relax and are free to function normally.

Once maximum healing has occurred and the misaligned teeth have been identified, plans can be made for restoring the misaligned dentition to the ideal. The possible choices for restoration are beyond the scope of this article, but may include bite adjustments, orthodontics, dental bonding, w surgery, or a combination of these. Some clients choose long term, part time use of the bite splint as a palliative device until they are ready and able to proceed with restoration.

Be an informed Patient in Charge by becoming educated about the factors involved with bite disorders. Remember that a study of ideal natural bites is highly suggested, because you must be aware of both form and function of the ideal to be able to diagnose what is wrong. And when suffering from misalignment, the ideal bite can also be a target for dental restoration processes.



*About William Vuillemot, DDS*

*Dr. William Vuillemot is a 1985 graduate of University of Michigan Dental School. He and his wife Barbara, also a dentist and 1985 U of M graduate, have practiced in Lansing since 1985 and co-founded Trillium Dental PC in 1993.*

*Dr. Bill was a clinical instructor at U of M Dental School, and has acquired extensive post-graduate training in cosmetic and functional restorative dentistry, as well as orthodontics. Dr. Bill invented SmileBond Systems, and acquired a patent for his process in 2007. For more information visit [www.smilebond.com](http://www.smilebond.com)*