

feeling good

Neuromuscular dentistry = State of the art dentistry

by E. Kyle Dalton, DDS



State-of-the-art diagnostic equipment like the Cone Beam 3-D Imaging System can produce CT scan results in just minutes, allowing a neuromuscular dentist to evaluate a patient's mouth for various issues.

Neuromuscular dentistry is the science that evaluates and treats the complex relationship between the teeth, muscles of the jaws and the jaw joints (temporomandibular joints, also referred to as TMJ). In years past, most people associated dentistry with tooth and gum-related ailments, but proven advances in the area of neuromuscular dentistry have begun to shed light on the fact that the way your upper and lower teeth come together (i.e. your bite or occlusion) is part of a complex system of teeth, muscles and joints that not only affect your dental health, but have a dramatic impact on your overall health.

When our bite, or occlusion, is not properly aligned, which is the case for many people, our jaw muscles and jaw joints work continuously to find the optimal position. The overworking of this muscle group – when it should be relaxed – can lead to various painful conditions including neck and shoulder pain, headaches, grinding of the teeth and TMJ disorders. Obstructive Sleep Apnea can also be the result of an improper jaw alignment that causes the airway to be constricted when lying down.

State-of-the-art diagnostic equipment like the Cone Beam 3-D Imaging system (shown) can render CT scan results in just minutes allowing a neuromuscular dentist to evaluate the patient's bite, TMJ, airway and dozens of other issues that may be going on in this critical region of the body.

An example of this can be seen with this article. In CT scan No. 1, we see a healthy temporomandibular joint as there is a nice space between the condyle and the socket. In CT scan No. 2, there is little or no space between the condyle and the socket. Similar to a “slipped” disc in the back, an

over-compressed TMJ can lead to severe headaches, grinding of the teeth, neck pain and shoulder pain, and can adversely affect strength and balance, as well.

For those suffering from malocclusion (incorrect bite/jaw alignment) issues, a neuromuscular dentist can relax the muscles around the jaw with ultra-low frequency electrical muscle stimulation (or TENS – Transcutaneous Electrical Neural Stimulation) which allows those overworking jaw muscles to relax to their optimal position. Once this

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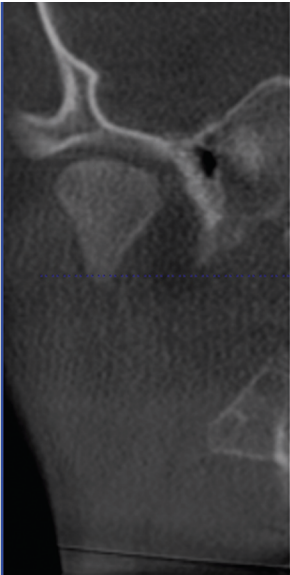
is done, a device that uses computer graphics to track this optimal jaw position, called the K-7 Evaluation Computer, charts the positioning to within 1/10 of a millimeter. This allows the dentist to create a very precise mouthpiece, or appliance, that the patient can wear to “train” their teeth,

jaw muscles and jaw joints to this relaxed position...thus alleviating many of the painful symptoms associated with this condition.

So, how do you know if neuromuscular dentistry is right for you? If you are considering major dental procedures such as reconstruction, cosmetic dentistry, orthodontics or dentures, or if you suffer from neck pain, headaches or other TMJ-like symptoms, establishing a precise occlusion ahead of time is critical and can help ensure that your restoration will last as long as possible. This is where neuromuscular diagnostic techniques can make all the difference in the world; by understanding what's going on behind your smile, a neuromuscular dentist can address issues that affect your overall health and well-being and develop a treatment plan designed especially for you and your individual needs.

Kyle Dalton is a member of the American Dental Association, the American Academy of Cosmetic Dentistry, the International Academy for Comprehensive Aesthetics, the American Academy of Sleep Dentistry, and the Arkansas Dental Association. He is a Fellow of the Las Vegas Institute for Advanced Dental Studies and has completed over 500 hours of continuing education in neuromuscular and cosmetic dentistry.

CT SCAN NO. 1



CT SCAN NO. 2

