



TMD: The Grand Imposter

The Tempromandibular Joint, or TMJ, is located just in front of the ear openings on both sides of the head. This joint is the connection point of the lower jaw to the skull, and with contraction and relaxation of the muscles, the lower jaw can move in many different dimensions. The TMJ joint is very unique in that it is the **ONLY** joint that can rotate and slide. This is very important for the movements necessary for talking, swallowing, chewing and supporting the head on the spine.

Tempromandibular Dysfunction, or TMD, and Craniomandibular Dysfunction are terms used to describe the effects that occur when the lower jaw opens or closes abnormally in the body's attempt to bring the teeth together to function properly. The bite is also influenced by abnormal postural influences from below the neck. As a result, the muscles attached to the jaw and the TMJ are forced to accommodate that position, regardless of whether that position is good or bad for your overall health and well-being. The fact of the matter is, a great variety of local and systemic symptoms caused by an improper bite can mimic other unrelated conditions, which is why I call TMD *The Grand Imposter*.

All the muscles throughout the body have a resting level of activity known as muscle tone. Tone holds the body or a body part in a particular position so it is "at the ready" to perform a particular movement or function. The awareness of the body and its movement in space is relayed to the brain through nerves and special sensors located within muscles, joints, and tendons. This awareness is also known as proprioception, and it is constantly being signaled to the brain so that human beings always have a "feel" of how their body (or body part) is positioned in space. When body parts that aren't aligned correctly signal the brain, some of the information is garbled, so the brain doesn't get proper feedback.

For example, in the case where a person has incorrect posture, the upper and lower teeth may not close together correctly, causing sliding or grinding. The associated pain and irritation sends useless sensory and motor information through a tiny network of nerves located in the brain stem,

called the Reticular Activation System (RAS). The RAS has profound influences on our awareness and how we think, learn, and act. Symptoms of improper proprioception can include anxiety, depression, inability to concentrate, and insomnia.

What science has shown us in recent years is that people who had upper airway problems as young children often have upper and lower jaws that developed too far back in the face, which led to an unbalanced bite. In later life, this unbalanced bite causes the head, neck, and jaw muscles to work too hard and spasm, resulting in many of the symptoms that have been lumped together as TMD.

TMD, *The Grand Imposter*, is very influential on the body. In fact, modern medicine is only now beginning to understand the far-reaching effects of an unbalanced bite. Here are some examples.

High Blood Pressure - Because of the instability created in the cervical spine with an unbalanced bite, as well as the unique vulnerability of the Atlas (c1), the likelihood of c1/c2 being out of proper alignment is very high when the bite is off. These anatomical abnormalities are associated with relative ischemia of the brainstem circulation and increased blood pressure.

Headaches – Headaches and Migraines are very common with unbalanced bites, because the muscles of the head and neck have to work extra hard to swallow, chew, talk, and support the head on the spine.

Ear symptoms – An unbalanced bite is also implicated in tinnitus, hearing impairment, ear pain, plugged or pressure-filled ears, popping/grating/crunching, and roaring/rushing sounds.

Menier's Disease – Patients who come to the doctor with symptoms of vertigo, tinnitus, ear pressure/pain, fluctuating hearing impairment, and/or hearing loss can reasonably expect partial or complete recovery with proper treatment that takes into consideration the possibility of an unbalanced bite.

The systemic and biochemical changes brought about by an unbalanced bite can be global, causing Anxiety, depression, erratic moods, and sleep disorders. For patients with a history of these and other symptoms that haven't been relieved by traditional therapies, ask your neuromuscular dentist about a simple manual and/or sensor-based exam to see if you can rule out

TMD, *The Great Imposter*, and get relief for many commonly misdiagnosed symptoms affecting your health and well-being.

1. Cooper, B Establishment of a Tempromandibular physiological state with Neuromuscular orthosis treatment affects reduction of TMD symptoms in 313 patients.
2. Bergamini M, Dental Occlusion and body posture, ICCMO, Cranio 2008 Jan; 26(1)25-32
3. G Bakris, Atlas vertebra realignment and achievement of arterial pressure goal in hypertensive patients, Journal of Human Hypertension (2007), 1-6
4. Ramirez,A.L Theories on Otic Symptoms in Tempromandibular Disorders: Past and Present, Int. J.Morphol.,23(2):141-156. 2005.

