

TMD

(Temporomandibular Dysfunction)



SW Virginia TMJ Clinic

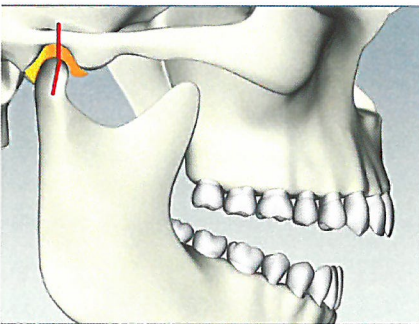
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TMD (Temporomandibular Dysfunction)

Pain in your Jaw Joints? Frequent Headaches?
Clicking, Popping, or Locking of your Jaw Joints?
Limited Opening?

These are classic symptoms of TMD or Temporomandibular Dysfunction

The TMJs are the jaw joints located just in front of the ears. The design of these joints is unique as they have the capacity to allow the jaw to rotate open as well as slide and rotate at the same time. Hence they are sometimes called “sliding hinge joints”. Another unique feature of the TMJ is that one joint can be simply rotating while the other is sliding and rotating. All of this is made possible through the complex interplay of muscles, ligaments, bones, blood supply, and disc structures. Simply put, this is a very complex joint system commonly taken for granted until it causes problems. And because of the complexity of the design of the TM Joint system, the problems related to them can be complex as well. For instance, it is common to have muscle, nerve, bone, ligament,



and disc problems occurring all at the same time in one or both jaw joints. This can lead to various levels of pain and disability.

It is also a common misconception that the TMJs represent a “rigid system”, where the joints hinge much like that of a cabinet door. This level of thinking is grossly inaccurate and unhelpful when problem-solving.

The TMJ joint system is in actuality a very flexible system with bones bending, muscles moving, and ligaments stretching. Additionally, the TM

joints are influenced by what happens with the mouth. More specifically, the jaw joints are influenced by the teeth and bite of the individual as well as by habits like teeth clenching or teeth grinding.

Temporomandibular Joint Disorder (TMD) is a collective term referring to a number of clinical problems involving the Temporomandibular Joints (TMJs) and associated muscles and structures of the area.

TMD is thought to be fairly common as several researchers have found clicking and popping noises in the jaw joints to be present in 40-60% of the general population. Considering that normal healthy TMJs are completely silent at all times, the 40-60% figure is a rather staggering one to consider. The good news is that TMD symptoms are quite variable in nature, with most being a mild annoyance. However, a small percentage of patients with TMD have symptoms which degenerate into crippling chronic pain and limited jaw mobility. A recent National Institute of Health study indicates that over nine million Americans suffer from TMJ pain on a regular basis.

Symptoms

Common symptoms of TMD are:

- Pain about the face, head and neck regions
- Clicking, popping, and or grating noises in the jaw joints
- A limited ability to open the mouth wide or move it side-to-side
- Frequent headaches, often around the temple area
- Earaches, buzzing, or ringing noises in the ears
- Deep pain the jaw joint itself
- Soreness or pain in the cheek area
- “Sticking”, “catching” or “locking up” of the jaw
- A sudden inability to find a comfortable bite position

Headaches

Headaches are one of the most common symptoms of TMJ disorders. 40 million Americans who suffer from headaches may have been improperly diagnosed. “Migraines”, tension headaches, and sometimes even “sinus” headaches are diagnosed based on subjective symptoms reported by the patient, sometimes leading to incorrect diagnosis and treatment. Medical specialists may not be aware of the link between the bite and headaches. Most people with this condition were not aware of what a correct bite felt like because they always had a conflict between

their teeth and jaw. We are trained to determine whether there is a link between headaches and the bite for individuals we see with headaches. We can treat these problems without medicine with appliances and by helping the bite fit better with various treatment modalities.

It is our goal to achieve maximum improvement with comfort and normal function, while using the least invasive and conservative treatment possible. For most patients, the ideal result can be achieved, while for others, depending on the nature and stage of the illness, effective management is the maximum goal. Depending on the nature and severity of an individual's condition, the appropriate therapy is determined. For some, simple treatment designed to relax the muscles and reduce inflammation such as splint therapy is used. For others, more comprehensive diagnostics and dental restorations are needed.

Causes

Common causes of TMD symptoms are one or more of the following:

- Long-term strain on the TMJs caused by a sleep pattern of chronic grinding and/or clenching of the teeth (bruxism). This may lead to permanent damage to the teeth and TMJs themselves.
- Certain types of malocclusion (bad bites) can chronically overstress the TMJs and related structures every time the individual chews. This in turn can lead to TM joint damage.
- Accidents involving direct or indirect trauma to the head, face, and / or neck may lead to partial or total TMJ disc dislocation, stretched or torn TMJ ligaments, and impaired joint function.
- Extensive dental procedures which have overstressed the muscles, joints, ligaments, nerves, may also lead to TMJ ligament inflammation or damage. This in turn could lead to muscle spasms and / or TMJ disc dislocation.
- General anesthesia intubations which strain weak TM joints or damage healthy TM joints by overextending the joint while the patient is asleep.
- Arthritis of the TMJs particularly in patients with TM disc dislocations
- Systemic diseases such as gout, lupus, scleroderma, and fibromyalgia may also contribute to TMJ - like symptoms or problems.

- Growth and / or developmental disturbances of the structures of the face and TM joints may cause malformation of the TM joint structures and thus dysfunction.
- Some other reasons for TMD are less identifiable and may result from a combination of small events such as lying against a partially strained or damaged (but previously asymptomatic) TMJ while sleeping.
- Facial muscle irritability due to an inadequate diet. Research shows that substances such as caffeine, nicotine, and sugar can significantly increase muscle tension and impair their performance.
- Emotional stress. Studies have also shown a link between stress and the frequency of teeth grinding at night. This chronic and prolonged nightly activity ultimately damages the TM joints or impairs the body's ability to heal a damaged joint.

Diagnosis/Technology

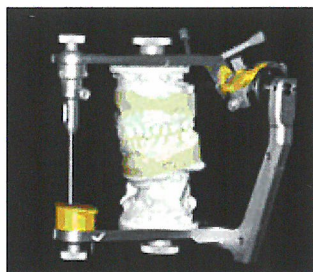
Exam - Dr. Henny will thoroughly examine the TMJs, associated muscles and dental occlusion (bite) to determine correlations between findings and symptoms.

Doppler auscultation - Dr. Henny uses the same technology used to listen to an unborn child's heartbeat. Doppler auscultation is used to listen to the TMJs while in motion. The noises are compared to that of normal joints aiding correct diagnosis.



Joint Vibration Analysis - Dr. Henny is one of few doctors in the state of Virginia who utilizes joint vibration analysis (JVA) to measure and record abnormal vibrations in the TMJs that aids in formation of a correct diagnosis of the state of the jaw joints.

Mounted Study Casts - Dr. Henny may choose to evaluate a patient's bite mounting study casts of the teeth on a bite machine (articulator). This enables him to study the relationship between the jaw joints and bite in fine detail. Often, fine detail changes to this relationship can create life changing relief of common "TMJ" symptoms.



Treatment

How are TMJ Disorders Treated?

Initial treatment for TMJ disorder can range from resting the joints, switching to a soft diet and prescribed medication to stabilization of the joints through the use of a specially designed and custom adjusted hard acrylic orthotic appliance that fits on the top of the teeth. This appliance, when properly designed, redistributes the stresses on the TMJs, and muscle system while specifically guarding and guiding certain joint movements. Injections into the joints are also used on occasion to diminish inflammation and encourage ligament repair.



FAQ

Does it work?

The vast majority of cases we treat are successfully managed through the use of orthotic appliances and / or a combination of orthotic appliance and physical therapy to reduce symptoms and accelerate healing.

Are all dentists similar in training and experience with treating TMJ?

No. It is advisable to research the training level and experience of your treating dentist to determine their success rate and skill level in the area of TMJ treatment. Dr. Henny has advanced training in the area of TMJ treatment through The Piper Education and Research Center (Pipererc.com), The Pankey Institute for Advanced Dental Study (Pankey.org), and Spear Education (SpearEducation.com) where he serves as visiting faculty in addition to over 12 years of successfully treating TMJ disorders.

Can I just buy a mouth guard at the store and treat this problem myself?

This is generally not advisable. Self-care with these non-adjustable devices can put additional strain on already damaged jaw joints. They

may also cause an individual to grind their teeth even more at night and thus worsen the symptoms.

What happens to the 5% of patients who are not successfully treated via professionally designed and managed orthotic appliances?

The vast majority of TMJ patients – perhaps in the 95% range – respond positively to non-surgical, “conservative” therapies. In a small number of cases, conservative therapies render no significant level of improvement. In this group of patients, the amount of breakdown of the internal joint structures is so severe that they cannot achieve comfort or normal functioning without some level of surgical intervention. It is important to understand that TMJ surgery has a long history of mixed outcomes and many failures. This fact alone creates a bias in the minds of many people today toward selecting surgery as a definitive option. You may therefore hear from one or more people something like “TMJ surgery never works”. It is also important to understand that the reason why so many TMJ surgeries have been unsuccessful is that the techniques and approaches used were underdeveloped, mis-applied, or to some degree experimental. TMJ surgery moved past the point of experimentation when Mark Piper, MD, DDS started to study the problems and create real solutions over 25 years ago. Mark has been successfully providing TMJ surgery solutions for over 25 years now and has over 20,000 documented cases to support his surgical approaches as well as how they work out over long periods of time.

www.piperclinic.com



Paul A. Henny DDS

Dr. Paul Henny completed his undergraduate studies at the University of Kentucky in 1980 and received his training and doctorate in dentistry from the University of Michigan in 1984.

Dr. Henny received advanced training in the area of Temporomandibular Disorders at the Bethesda Naval Hospital, The Pankey Institute, The Dawson Academy, and with Mark Piper, MD, DMD at the Piper Clinic.

Dr. Henny has served on the teaching faculties of the University of Kentucky and The University of Washington dental schools as well as for The Pankey Institute post-graduate program.

Dr. Henny has evaluated and treated patients with TMJ issues for over 30 years and currently is the clinic director of the SW Virginia TMJ Clinic located in Roanoke, Virginia.