

Management of Temporomandibular Dysfunction "TMD" - Number # 3 in Series

Summer 2014

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Issue Number #1 and #2: If you missed these issues and would like to receive them and/or you are not on our email list to receive this newsletter and would like to be, contact Dan Brasch DPT at Jackson County Physical Therapy 541 - 776 - 2333.

TMD - A Short Recap of issues #1 and #2

Patients having pain in the facial area, especially if there is a problem with the temporomandibular joints, have been traditionally classified as having "TMJ". Practitioners and researchers working with this patient population now recognize that the neck and head posturing are intricately related to the mandible and occlusion. Dysfunction in the cervical spine, posture of the head and neck, and occlusion need to be addressed in a team approach by dentist and physical therapist working together for optimal patient outcomes. Issue #2 addresses the first stage of management "Addressing Parafunction". From a physical therapy approach establishing an unclenched position of the mandible at rest done through proprioceptive exercises is imperative. The emphasis in physical therapy is to protect the patient from their parafunctional behavior during the day. Many of these patient exhibit what has been classically defined as **Bruxomania!** The term Bruxomania is a good description of the static holding/clenching activity happening for these patients on a 24/7 basis.



Let's Remove the "Smash" to the TMJ. Dentists, through application of an appropriate appliances can have a significant effect upon the TMJ. A recent published study measured articular pressures in the anterior/superior joint space by placement of transducers within the joint ⁽¹⁾. A stabilization/flat plane/Michigan appliance 3 mm thick was shown to reduce joint pressure on articular cartilage by 30%. Real joint protection at night and provision of time for healing of articular surfaces of both the condyle and eminence.

Physical therapists through joint mobilization techniques also decompress the TMJ. Parafunction, malocclusion, trauma, and disc displacement can all result in Inflammation of the TMJ. Inflammation of the TMJ results in same physiological effect seen in other inflamed joints - tightening and constriction of the capsule which surrounds the joint. A tight capsule literally "shrink wraps" the joint drawing the joint surfaces of the condyle and eminence toward each other placing the joint surfaces of the condyle and eminence with their cartilage linings under constant compression. It's a quick way to wear out any joint and the TMJ! A tight capsule is a common finding in both acute and chronic disc displacements.



Bill unlocking a locked TMJ.

JCPT Happenings

Bill completed CRAFTA's 8 day course on TMD and craniofacial pain in Bethesda Maryland this fall. CRAFTA series presented evaluation and management approaches for:

- Patients with TMD secondary to acute and chronic joint problems
- Patients with cranial nerve involvement with both sensory and motor disturbances
- Current concepts on the relationship of upper cervical spine and occlusion

Bill will be teaching Pacific University's physical therapy doctorate students on TMD in November 2014

The News regarding Bill's retirement has been greatly exaggerated.

Though Bill has retired from the JCPT partnership he continues to work 30 - 35 hours/week treating patients with oral facial pain in the Medford Office. Patients with TMD issues are also seen by Justin Carson DPT, Dan Brasch DPT, and Dan Loch DPT all trained in the care of patients with TMD





Care for TMJ patients is offered at two of Jackson County Physical Therapy's four locations.

In **Medford**, by Bill Esser, PT, MS, CCTT, Justin Carson, DPT, CSCS, OCS Dan Brasch DPT

In **Ashland**, by Dan Loch, DPT

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Late Summer Joke - It's in the news!

Q: What did the pig say at the beach?

A: I'm bacon!

Removing the Smash Continued From Page 1:

Mobilizing the capsule for disc displacement assist the patient in decreasing morning locking, clicking, and catching and improves overall function. Mobilizing the capsule for patients with chronic disc displacement (usually found in patient over 50, a history of clicking joint problems, and recent onset of a painful joint) can significantly decrease joint pain and speeding recovery.

Ultrasound and Other Modalities? Physical Agents be they heat, cold, or electrical all can play a part in treatment of the patient with TMD.

Ultrasound, a common modality used by physical therapist, has unique properties which can be of great benefit in treatment. Ultrasound, used prior to joint mobilization techniques, increases the elasticity of the capsule and surrounding tissue maximizing the effect of subsequent joint mobilization. Ultrasound also has an effect on collagen deposition and repair speeding soft tissue healing.

Neuroprobe uses high intensity localized current applied to acupuncture points to provide pain relief for both muscle and joint pain. In a study done by Bill Esser, MS,PT,CCTT measuring EMG values of the masseter and temporalis musculature before and after Neuroprobe, marked decreases in EMG activity were measured after Neuroprobe application for TMD patients. Patient routinely report marked to amazing decreases in facial pain and tightness at JCPT following use of the use of Neuroprobe. Patients who respond well to Neuroprobe can also be instructed in Transcutaneous Electrical Stimulation (TENS) for use at home. TENS is another tool patients can use at home to help manage muscle and joint pain and dysfunction.

Iontophoresis can be of significant benefit for patients with pain and inflammation of the TMJ. Iontophoresis uses electrical current to drive medication into joints eliminating the need for injection by needle. Since the lateral compartment of the TMJ does not have a bony component the TMJ is particularly suited for treatment by Iontophoresis and at JCPT we have found this to be an excellent approach for the patient with joint inflammation.



Figure 1. Common scar on the chin after a fall onto the chin.

Summer Time Blues? During the summer months JCPT TMD therapist have continued working with local dentist and emergency rooms in the care of young patients experiencing injury to their temporomandibular joints by bike and skateboard injuries. Mariano Rocabado DPT, CCTT acknowledged as a world expert on TMD, has stated that over 90% of children who have a scar on his/her chin have displaced the disc off the condylar head at the time of impact (figure 1). Current research also supports early intervention for these patients as "closed lock" conditions left untreated longer than 1 month usually results in life-long disruption of the TMJ and loss of appropriate disc position⁽²⁾. At JCPT we have continued to unlock these patients, stabilize the condition with a temporary splint, and refer the patient to their dentist for permanent splint and dental care. So for both acute and chronic patients with TMD a quick look at the chin is an important first step in figuring out the puzzling history often present for these patients.

1. Casares, Guillermo et al. Influence of oral stabilization appliances in intra-articular pressure of the TMJ. *Cranio*.214, V32, No3, 2014.
2. Sembronia et al. Is there a role for Arthrocentesis in recapturing the displaced disc in patients with closed lock of the TMJ. *Oral Surgery, Oral Medicine, OralPathology, and Endodontology*, Vol. 105, No. 3, March 2008

Need a past issue? Contact us at (541) 776-2333 or by email at danb@jc-pt.com.