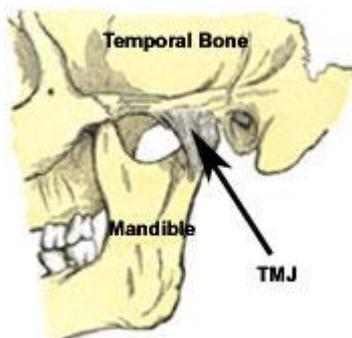


### OMPTG Leaflet

#### Temporomandibular disorders – Patients info sheet (compiled by Hanna Steenkamp – APDL level 2 member of the OMPTG)

The temporomandibular joint (TMJ) is often overlooked, under evaluated or merely ignored. However, it is one of the most active joints in the human body – constantly used for conversing and eating. Imagine the world without being able to talk or eat, kiss or even whistle...



The TMJ is a synovial joint formed by the condyle of the mandible, the articular eminence of the temporal bone, and the articular disc that is interposed between the two and divides each joint into two cavities. As we all know, when treating the TMJ, the plan of care should address what is causing the problem to become manifest and the prevention of further degeneration of the joint.

Numerous physical therapy interventions are potentially effective in managing temporomandibular disorders (TMD), including electrotherapeutic modalities, manual therapy techniques and rehabilitation of the joint. Treatment of other regions of the body such as the cervical spine/related musculature, shoulder girdles, thoracic spine/related musculature, lumbar spine and pelvis are also important as these areas may play a postural component to the problem associated at the TMJ. Not to forget that we always treat both the Left and Right side of the TMJ, and never only the affected side. When treating patients with TMD, patients with an acute onset or post traumatic injury are more likely to respond better to physical therapy intervention while patients with a chronic TMD tend to not respond as quickly.

This article will review some of the treatment considerations (A Rocabado 6 x 6; B) Joint mobilisation; C) Stretching/Mobility; D) Strengthening/Stabilisation) TMDs once a thorough physical therapy evaluation has been completed and a plan of care has been developed.

#### **A) Rocabado 6 x 6 Exercise Program**

This exercise program by Dr Mariano Rocabado addresses postural relationships with the head to neck, neck to shoulders and lower jaw to upper jaw. The objective of this home exercise program is for patients to: learn a new postural position, fight the soft tissue memory of the old position, restore the original muscle length-tension relationships, restore normal joint mobility and restore normal body balance. Rocabado advocates the instruction of six fundamental components of activity for treatment of TMD. He recommends that patients complete each activity 6 times per session and 6 times per day.

The activities are as follows:

- 1) **Rest position of the tongue**
  - Make a clucking sound with the tongue x 6
  - Find normal resting position = holding one third of tongue gently against the roof of the mouth just behind the front teeth
  - Diaphragmatically breathe through nose while tongue is in resting position x 6 breaths
- 2) **Control TMJ Rotation on Opening**
  - Tongue on roof of mouth and open x 6 reps
- 3) **Mandibular Rhythmic Stabilization**
  - Apply light resistance to opening, closing, and lateral deviation with the jaw in a resting position holding for 6 seconds (this is key when a patient has instability as this assists with visualization/neuromuscular re-education)
- 4) **Stabilized Head Flexion** = upper cervical flexion (nodding)
  - Facilitate upper cervical flexion as most of these patients have forward head posture resulting in upper cervical extension deviation. Nod head x 15 degrees back and forth 6 x reps.
- 5) **Lower Cervical Retraction**
  - Chin tuck x 6 second hold
- 6) **Shoulder Girdle Retraction**
  - Pull shoulders back and down - hold x 6 seconds

#### **B) Joint Mobilization**

When the TMJ is restricted joint mobilization can be performed in various directions to improve joint play at the TMJ.

- 1) Distraction
- 2) Distraction with anterior glide
- 3) Distractions with anterior glide and lateral glide right/left
- 4) Lateral glide without distraction

**C) Stretching/Mobility** (Instructions from Health South Outpatient Division Clinical Education Department)



1) **Functional Jaw Opening** – In front of a mirror open and close your mouth to a comfortable distance while attempting to prevent your jaw from deviating out of a neutral position. In order to help with feedback, you can also palpate the condylar head of your TMJ joint and tongue with your index fingers. "Controlled opening facilitates joint mobility, good circulation to the condylar head, cartilage conditioning, relaxation of the pterygoid muscles, and neuromuscular control of a hypermobile joint".

your jaw in a resting position, matches the canine tooth of the condylar head with one to cue movement limitations. capsule, which can help attain spasm".



2) **Controlled-ROM Lateral Deviation** – In front of a mirror, with laterally deviate your jaw until the canine tooth on the lower jaw the upper jaw. In order to help with feedback you can also palpate index finger and the upper canine tooth with another index finger "Controlled lateral deviation causes distraction of the joint ROM, improve joint mobility and circulation, and control muscular

with jaw in a resting position; laterally deviate your jaw followed by opening of your mouth. This movement causes distraction of the joint capsule.

3) **Lateral Deviation + Functional Opening** – In front of a mirror,

4) **Protrusion ROM** – In front of a mirror, with jaw in a resting position, perform protrusion of your mandible by bringing it forward followed by retrusion back to a resting position.



5) **Self-stretch into Opening** – Open your mouth in midline and provide a mild overpressure to the top and bottom teeth at end-range. "Prolonged stretching may also be recommended to increase opening ROM".

involved joint. Palpate the fingers from the uninvolved Distraction is provided by side



6) **Self-distraction Mobilizations** – From a sitting and resting position, rotate your head slightly to the opposite side of the mandibular condyle with 1 finger while the other thumb and side are placed on the mandible towards the involved side. bending your wrist inwards (ulnar deviation).

**D) Strengthening/Stabilization**



1) **Isometric Contraction with Jaw in Neutral** – Open your jaw to neutral. Place your two thumbs under your mandible (chin) and both your index fingers so that they are touching your bottom teeth. You will then gradually apply resistance to your lower teeth in the directions of lateral deviation, protrusion / retrusion or opening / closing while maintaining the position of your mandible.

fingers against your head, resist upper cervical flexion.



2) **Isometric Contraction of Supra/Infra-hyoid Muscles** – Bring your head forward slightly forward about 15 degrees. With two bring your head forward into your fingers so that your fingers Don't allow your head to move past 15 degrees.



3) **Isometric Cervical Flexion in Forward Trunk Flexion** – Sit forward in a chair with your forehead supported by your forearm which is on a table. In this position, bring your head forward about 15 degrees by flexing into your forearm while maintaining your jaw in the resting position.



4) **Resisted Lateral Deviation out of Neutral** – From a neutral



posture, laterally deviate your jaw away from the involved side until your top and bottom canine teeth match. In this position, use 1-2 fingers to provide resistance for bringing your jaw back to a neutral position. "This helps to stabilize the articular disc on the condylar head by strengthening its lateral ligament attachments".

All the above mentioned treatment options form part of TMJ scientific research which is still in its infancy. There is no coherent body of knowledge on the aetiology and pathogenesis of TMD, and hence not nearly enough evidence-based treatment guidelines. TMD should not be considered the sole province of dentists, maxilla-facial surgeons, physiotherapists, but require the attention of experts in chronic pain, neuromuscular disease, chronic immune and inflammatory diseases, endocrinology, genetics, bioengineering and biomaterials.

Hopefully the TMJ in its simplicity, complexity and multi-factorial nature will be an area of dysfunction that continues to stimulate and challenge you.

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