



# Head and Neck Associates of Orange County, Inc.

An Incorporated Medical Group

Head & Neck Surgery

Pediatric & Adult Otolaryngology

Facial Reconstructive Surgery

## TEMPOROMANDIBULAR JOINT DISORDER

### WHAT IS THE TEMPOROMANDIBULAR JOINT (TMJ) AND HOW DOES IT WORK?

Both the right and left Temporomandibular joint (TMJ) are complex joints made of muscles, tendons and bones. Each part plays a role in keeping your TMJ working smoothly. When muscles are relaxed and balanced and both jaw joints open and close comfortably, you're able to talk, chew, or yawn without pain. The joint itself is where the upper jaw (maxilla) and lower jaw (mandible) meet. Within the joint there are moving parts that allow the lower jaw to close on the upper jaw. This joint is a typical sliding "ball and socket" which has a disk sandwiched between it.

The TMJ is located immediately in front of the ear on each side of the head. Each time you move your jaw, you cause motion in the TMJ. It is one of the most frequently used of all the joints in the body. You can locate the TMJ by putting your finger on the triangular structure in front of your ear. Then move your finger just slightly forward and press firmly while you open your jaw. The motion you feel is in the TMJ. You can also feel the joint motion if you put your little finger against the inside front part of your ear canal. These maneuvers can cause considerable discomfort to a patient who is having TMJ trouble, and your doctor may do this to help establish the diagnosis.

### WHAT ARE THE COMMON SYMPTOMS OF TMJ?

Myofascial pain and TMJ usually is the result of unbalanced jaw muscles activity and/or jaw muscle spasm and overuse. Symptoms tend to be chronic, and treatment is aimed at eliminating precipitating factors.

**Headache:** 80% of patients with TMJ will complain of a headache, and 40% will complain of facial pain. Pain is often made worse while opening and closing the jaws. Frequently exposure to cold weather or even air-conditioned cold air on the face increases tightness and facial pain because it causes muscles to contract.

**Ear pain:** 50% of patients with TMJ will report ear pain without any evidence of infection. The ear pain is usually described as being in front of the ear or below the ear. Typically, they will have been treated many times for a presumed ear infection, however each episode of ear pain is not associated with hearing loss or ear drainage (which would be expected if they really had an ear infection). Because ear pain is so common in patients with TMJ, they will frequently be referred to an ear specialist.

**Dizziness:** 40% of patients with TMJ may report a vague dizziness or imbalance (usually not a spinning type vertigo).

**Fullness of the Ear:** A feeling of fullness in the ear is usually caused by Eustachian tube dysfunction, the structure responsible for the regulation of pressure in the middle ear. Patients with TMJ frequently have hyperactive (spasms) of the muscles which help regulate opening of the Eustachian tube. It is for this reason why over one-third of patients with TMJ will report muffled, clogged, or full ears. Twenty percent of patients reported ear fullness and pain during airplane takeoffs and landings.

**Ring of the Ear - Tinnitus:** For unknown reasons, a third of patients with TMJ will also complain of tinnitus. Of those patients, half will have resolution of their tinnitus after successful treatment of their TMJ. The cause of the tinnitus may be related to the common development of the ear structures and the jaw.

## HOW DO TMJ PROBLEMS DEVELOP?

Temporomandibular joint (TMJ) disorders are a group of complex problems related to the jaw joint. Other names include myofascial pain dysfunction and Costen's syndrome. Because your muscles and joints work together, a problem with either one can lead to dysfunction (stiffness, headaches, ear pain, bite problems (malocclusion), clicking sound, or locked jaws). The following are examples of how things can go wrong with the TMJ:

1. Teeth grinding and teeth clenching (bruxism) increases the wear on the cartilage lining of the TMJ. You may be unaware of this behavior unless you are told by your bed mate.
2. Habitual gum chewing or fingernail biting.
3. Dental problems such as malocclusion. Patients may complain that it is difficult to find a comfortable bite, or that the way their teeth fit together has changed. They may only chew on one side of their jaw.
4. Trauma to the jaws
5. Stress frequently leads to unreleased nervous energy. It is very common for people under stress to release this nervous energy by the conscious and or unconscious habit of grinding and clenching their teeth.
6. Occupational tasks such as holding the telephone between the head and shoulder.

## HOW ARE PATIENTS EVALUATED WHEN TMJ PROBLEMS ARE SUSPECTED?

Damaged jaw joints are suspected when there is popping, clicking and grating sounds associated with movement of the jaw. Chewing may become painful, and the jaw may lock. The teeth may be worn smooth, and there will be a loss of the normal bumps and ridges on the tooth surface.

## HOW CAN TMJ BE TREATED?

The mainstay of therapy for acute TMJ pain is heat, soft diet, and anti-inflammatory medications.

**Jaw Rest:** Keeping the teeth apart as much as possible, recognize those times that tooth grinding is occurring, and not chewing gum or eating hard, chewy, or crunchy foods such as raw vegetables, candy, or nuts. Avoid foods that require opening the mouth widely, such as a big hamburger.

**Heat Therapy:** Helps to reduce muscle tension and spasm. Acute injury to the joint is best treated with cold first.

**Medications:** Anti-inflammatory medications such as aspirin, Advil, Aleve, or steroids help control inflammation. Muscle relaxants, such as Valium, help decrease muscle spasms.

**Physical therapy:** Passively opening and closing the jaw, massage, and electrical stimulation help to decrease pain and increase the range of motion and strength of the joint.

**Stress Management:** Stress support groups, psychological counseling and medications help to decrease muscle tension. Biofeedback help patients recognized times of increased muscle activity and spasm.

**Occlusal Therapy:** A custom made acrylic appliance which fits over the teeth is commonly prescribed for night, but maybe required throughout the day. It helps to balance the bite and reduce or eliminate bruxism.

**Correction of Bite Abnormalities:** Corrective dental therapy, such as orthodontics, may be required to correct an abnormal bite. Dental restorations may help to create a more stable bite. Adjustments of bridges or crowns help to insure proper alignment of the teeth.

**Surgery:** Surgery is indicated in those situations where medical therapy has failed. It should be done as a last resort. TMJ arthroscopy, ligament tightening, joint restructuring and replacement are considered in the most severe cases of joint damage or deterioration.