

Temporomandibular Joint Disorder

Signs and Symptoms:

- Tenderness of your jaw muscles
- Dull aching pain in front of your ears
- A clicking or grating sensation on opening your mouth or chewing
- Locking of the joint, making it difficult to open or close your mouth

Your temporomandibular joints (TMJ) are the hinged joints that connect both sides of your lower jaw (mandible) to your skull. As with other joints, the bony surfaces are covered and separated by a small disc that prevents the bones from rubbing against one another. Muscles that enable you to open and close your mouth, as well as the bite relationship with your teeth, serve to stabilize these joints, which are located approximately one-half inch in front of each ear.

Like other joints, the TMJ is susceptible to various disorders such as osteoarthritis, rheumatoid arthritis, and other forms of inflammation. Rarely, tumors may arise in this area.

When you open your mouth, the mandible moves downward and forward. For normal jaw function, the right and left TMJs must work in synchrony. If the movement of both joints is not coordinated, the disc that separates the lower jaw from the skull can slip out of position, resulting in malfunction of the jaw and joint noise. This is called internal derangement with reduction. Should your mouth be forced open too rapidly or too far, dislocation can result, also called internal derangement without reduction.

Overuse of the joint by grinding your teeth (bruxism) or trauma to the side of your face can also lead to pain in the TMJ as well as over the temples. This occurs because the muscles that control jaw movement are attached to a nearby bone of your skull.

In some patients, morning headaches or pain in the side of the face or jaw is related to abnormalities of the temporomandibular joint. This is called myofascial pain.

Diagnosis

Tenderness over the joint (with or without movement), a clicking or grating sensation when you open or close your mouth, limited range of motion, and locking of the joints (making it difficult to open or close your mouth) when accompanied by pain may suggest a TMJ problem.

Your dentist may order a panoramic X-ray or refer you to a physician for an MRI scan. However, in many cases they will be normal. Your dentist will also examine your bite to see if there are any abnormalities in the alignment of your teeth and in the movement of your jaw. Conditions such as a high filling, a tipped or displaced tooth due to earlier loss of other teeth, and certain inherited characteristics can produce such misalignments.

Bruxism can exist without you being aware of it. Often, grinding occurs during your sleep. Your dentist can determine the presence of a tooth-grinding habit by noting excessive wear on the biting surfaces of your teeth.

Another result of excessive grinding and jaw clenching is a dull discomfort in your jaw and head areas on awakening in the morning. This is called a musculoskeletal (or tension) headache.

Treatment

For most people, pain or joint noise in the area of the TMJ are not serious. Discomfort may be temporary or chronic in nature. It often goes away with little or no treatment.

Most cases of TMJ disorder are the result of inflammation in the joint. In these instances, jaw exercise, chiropractic treatment, moist heat and medications (such as aspirin or other non-steroidal anti-inflammatory drugs) used for treating similar symptoms in other joints work effectively. Occasionally, a corticosteroid drug can be injected into the joint to reduce severe pain and inflammation.

If abnormalities in the alignment of your teeth are present, your dentist may correct this by balancing your biting surfaces, or by replacing missing teeth, defective fillings or crowns.

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If your TMJ is misaligned, your dentist may recommend a flat plane occlusal guard (splint) to promote better alignment of the jaw bones. This protective device is worn over your teeth, and helps to reestablish proper alignment. The device may need to be periodically adjusted by your dentist.

Splints typically provide relief from jaw locking, pain and joint noise. In addition, your dentist may recommend modifications to your chewing habits. For example, he or she may discourage the use of chewing gum or other firm foods such as caramels, non-tender meats, raw carrots and celery, as well as excessive opening during yawning.

If symptoms continue and the use of a splint is unsuccessful, your dentist may refer you to an orthodontist for an appliance which physically repositions the jaw to retrain the muscles which have accommodated to the TMJ. A specialist in oral and maxillofacial surgery may also be needed to repair or remove the disc that separates the adjacent bony surfaces of the TMJ, portions of the bones themselves, or both.

Bruxism can be a difficult habit to break, especially if it occurs while you sleep. However, your dentist may provide a splint that you can insert over your teeth at bedtime to offset the effects of the clenching or grinding, to protect your teeth from excessive wear, and to remove the stress from your jaw. In addition to these "night guard appliances," biofeedback/relaxation therapy, physical therapy and other behavior modification efforts can be of great help.

When the symptoms of TMJ disorder occur without evidence of a physical abnormality, psychological factors could be responsible for the pain. For example, chronic tension and anxiety might cause you to maintain a clenched jaw, leading to a TMJ disorder. In these situations, biofeedback/relaxation therapy usually provides relief.

The information contained in this handout provided courtesy of the Mayo Clinic.