

## **TMJ (Temporo-Mandibular Joint) Syndrome**

### **What is the TMJ?**

You may not have heard of it, but you use it hundreds of times every day. It is the Temporo-Mandibular Joint (TMJ), the joint where the mandible (the lower jaw) joins the temporal bone of the skull, immediately in front of the ear on each side of the head. Each time you chew you move it. But you also move it every time you talk and every time you swallow (every 3 minutes or so). It is, therefore, one of the most frequently used of all the joints of the body.

You can locate that joint 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 all the way and shut it. The motion you feel is the TMJ. You can also feel the joint motion in your ear canal. These maneuvers can cause considerable discomfort to a patient who is having TMJ trouble, and doctors use these maneuvers with patients for diagnosis.

### **How does the TMJ work?**

When you bite down hard, you put force on the object between your teeth and on the joint. In terms of physics, the jaw is the lever and the TMJ is the fulcrum. Actually, more force is applied (per square inch) to the joint surface than to whatever is between your teeth. To accommodate such forces and to prevent too much wear and tear, the joint was designed to be a sliding joint, rather than the usual ball-and-socket type joint (such as the hip and shoulder, for example).

Therefore, the forces of chewing can be distributed over a wider surface in the joint space, which allows healing to occur rapidly in between chewing times.

### **TMJ Syndrome Symptoms**

The jaw joint (TMJ) is located in front of, and is attached to the ear canal. When the joint becomes inflamed, injured, or stressed it can cause pain in the ear or face. The discomfort is often an ache mixed with sudden sharp pains.

- Ear pain and fullness
- Sore jaw muscles
- Temple/cheek pain
- Jaw popping/clicking
- Locking of the jaw
- Difficulty in opening the mouth fully
- Frequent head/neck aches

The pain may be sharp and searing, occurring each time you swallow, yawn, talk, or chew, or it may be dull and constant. It hurts over the joint immediately in front of the ear but pain can also radiate elsewhere. It often causes spasm in the adjacent muscles that are attached to the bones of the skull face and jaws. Then pain can be felt at the side of the head (the temple), the cheek, the lower jaw, and the teeth.

A very common focus of pain is in the ear. Many patients go to an ENT doctor convinced their pain is from an ear infection. When an earache is not associated with a hearing loss and the ear

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drum looks normal, the doctor will consider the possibility that the pain comes from TMJ dysfunction.

There are a few other symptoms besides pain that TMJ dysfunction can cause. It can make popping, clicking, or grinding sounds when the jaws are opened widely. Or the jaws lock wide open (dislocated). At the other extreme, TMJ dysfunction can prevent the jaws from fully opening. Some people get ringing in their ears from TMJ trouble.

### **How can things go wrong with the TMJ?**

If you habitually clench, grit, or grind your teeth, you increase the wear on the cartilage lining of the joint. Many persons are unaware that they grind their teeth, unless someone tells them.

If you chew gum much of the day, you increase the wear and tear on the joint, and you don't give it the chance to recover. If you chew habitually on one side of your mouth (often due to dental work), you concentrate all the pressure on one side rather than equally.

Teeth that do not fit together properly (improper bite) can be at fault. Imagine how much extra pressure the TMJ must handle if your teeth close first on one side before the other.

When the focus of wear in the cartilage lining of the joint space wears down to the nerve endings, pain occurs. A form of arthritis (traumatic type) occurs that is called TMJ dysfunction (Dysfunction means faulty or painful function).

### **What can be done?**

If the doctor diagnoses your case early, it will probably respond to these simple self-help remedies:

- Chew evenly.
- Stop clenching, gritting, or grinding teeth.
- Stop chewing gum.
- Avoid hard chewy foods.
- Apply a hot water bottle or heating pad set on low for a half hour at least 2x daily on the affected side. **Caution:** Take care not to fall asleep on the heating pad.
- Use an over the counter anti-inflammatory medicine such as Naproxen (Alleve®) twice daily, or Ibuprofen (Advil®, Motrin®) every 6 hours. Please check the package information on the medication before taking it to make sure you have no other medical conditions that prevent you from safely using these medications.
- If the pain persists despite these measures see your dentist or consult an oral surgeon. Checking for dental problems and readjusting your bite can help. Your dentist can fit you with a splint to open your bite and decrease bruxism (grinding your teeth while sleeping).