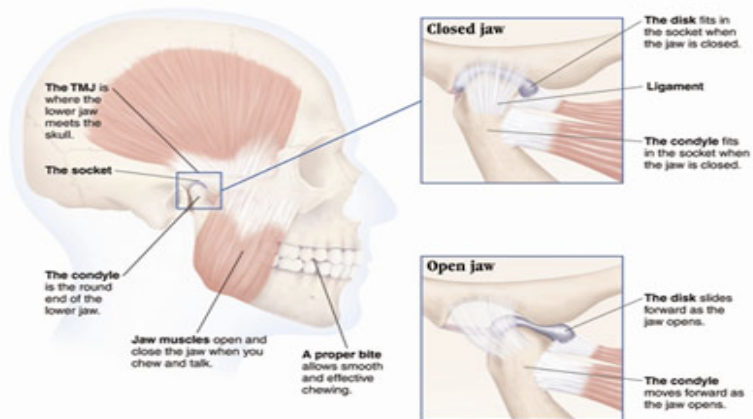


# Temporomandibular Joint Dysfunction (TMJ Dysfunction)

## What is the Temporo-Mandibular Joint?

The Temporomandibular Joint ('TMJ'), is the joint where the lower jaw (the 'mandible') joins the bottom of the skull (at the 'temporal bone'), immediately in front of the ear on each side of the head. It moves every time you chew, talk and swallow. It is one of the most frequently used 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 open and shut. The motion you feel is in the TMJ. You can also feel the joint portion if you put your little finger into your ear canal with the fingernail facing backwards. Then press forward as you open and close your jaw again.



## How does the TMJ Work?

When you bite down, you not only put force on the object between your teeth but also on the joint. To accommodate such forces and prevent too much wear and tear occurring in one spot within the joint space the joint was designed to be a sliding joint, rather than the usual ball and socket joint (such as the hip and shoulder). The forces of chewing are therefore distributed over a wider surface in the joint space, which dissipates the wear and tear and allows healing to rapidly occur in between chewing. Joints are lined with cartilage, which is a rubbery, slippery material that allows for smooth motion.

## Causes of TMJ Dysfunction:

If you habitually grit or grind your teeth, or often chew gum, you increase the wear on the cartilage lining of the joint, and give it little opportunity to recover between meals. Many people are unaware of these habits unless an onlooker tells them.

If you chew habitually on one side of your mouth, you concentrate all the 'wear and tear' on one side rather than equally on both sides. This can occur if you have a tooth problem on one side, or recent dental work that causes you to favour one side. Teeth that do not fit together properly (an 'improper bite') can also be at fault.

In each of the above circumstances, a faulty chewing pattern takes place that creates one focus of wear of the cartilage lining of the joint space. When that spot wears down, pain occurs. A form of arthritis occurs which is called TMJ Dysfunction (dysfunction means faulty or painful function).



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## Symptoms:

Pain may be sharp and searing, occurring each time you swallow, yawn, talk or chew, or it may be dull, constant or boring. The usual focus of pain is over the joint, immediately in front of the ear, but pain can also radiate elsewhere. The pain often causes spasm in the adjacent muscles, which are attached to the bones of the skull, face and jaws. Therefore, the pain can be felt at the side of the head (the temple), the cheek, the lower jaw, and the teeth. They can lock wide open ('dislocate'), or in some severe cases prevent the jaws from fully opening.

A very common focus of pain is in the ear. In some patients the TMJs make popping, clicking or grinding sounds when the jaws are opened widely. Some people get ringing in their ears from TMJ dysfunction, which is an exaggeration of the ringing that most people can normally produce by clenching their teeth together hard.

When an earache is not associated with other ear related symptoms (e.g. hearing loss or discharge) and the eardrum looks normal, the doctor will consider the possibility that the pain comes from TMJ dysfunction.

## Treatment:

If it has been detected fairly early it will probably respond to these remedies.

- Measures to reduce the damage to the joint:
  - Chew evenly, left and right.
  - Stop clenching, gritting or grinding your teeth.
  - Stop chewing gum.
  - Avoid hard, chewy foods.
  
- Measures to encourage the healing process:
  - Apply a heat pad for half an hour at least twice daily, more often if you find this useful.
  - Take paracetamol, aspirin or other anti-inflammatory medicines (e.g. Nurofen, Voltaren) in a dose your doctor recommends. Anti-inflammatories are particularly effective for TMJ dysfunction.

Antibiotics and other treatments for a presumed ear infection are usually ineffective. Checking for dental problems and readjusting your bite can help.

Stubborn cases of TMJ dysfunction may require further consultation with an oral surgeon or dentist. Your dentist can fit you with a splint to open your bite and decrease bruxism (grinding your teeth while sleeping).]

Only a very limited number of cases require surgery for treatment, and this should be done by a surgeon with particular expertise in this area. Your dentist may recommend such a specialist to you.