



National Dental
Centre Singapore

SingHealth

Understanding Temporomandibular Joint Disorders



Temporomandibular Joint Disorder (TMD) is a group of conditions that cause pain and loss of normal function to the jaw joint, also known as temporomandibular joint (TMJ).

The TMJ is located in front of the ear, on both sides of the head. The joint is made up of the lower jawbone and the skull. A cartilage disk, which functions as a shock absorber and joint lubricant, separates these two bones.

The TMJ and the muscles of chewing enable you to open your mouth, talk and chew.

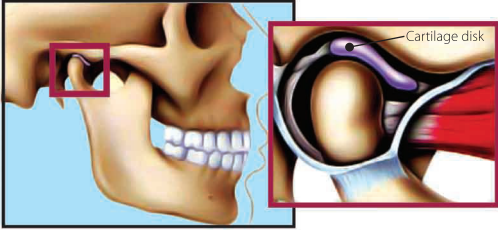
TMD can originate from the chewing muscles, cartilage disk or the joint bone.

Patients with TMD may complain of earaches, headaches and limited mouth opening.

Temporomandibular Joint Positions

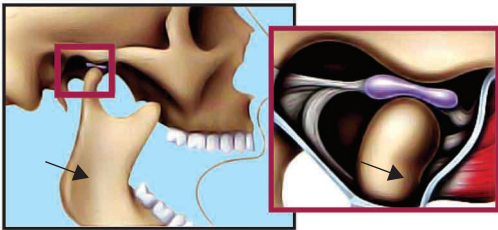
Normal Closed Position

The lower jawbone is separated from the skull by a cartilage disk that acts as a cushion when the joint is in function i.e. chewing, speaking, and yawning.



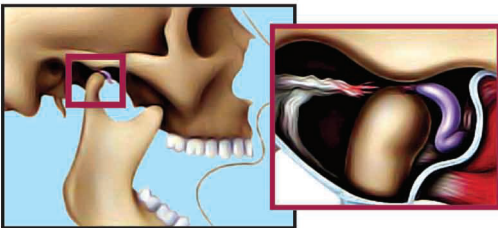
Normal Open Position

On opening of the mouth, the disk will follow the lower jaw bone and together move forward and downward.



Abnormal

In an abnormal joint the disk can be displaced or torn. This displaced or torn disk can cause obstruction to joint movement. A torn disk can result in excessive wear of the bone of the joint causing inflammation and pain.



Common Signs And Symptoms

Noises

It is not uncommon for you to hear noises in your jaw joint when you open or close your mouth. These could be clicking or grating noises. Generally if the noises are not accompanied by pain or limitation of mouth opening, no treatment is required.

Pain

Pain can be experienced over the jaw joint area, just in front of the ear, or over the chewing muscles at the cheek or at the temple region. The pain is dull in nature and felt during mouth opening and closing. Sometimes clicking or grating noises may accompany the pain. The pain is usually due to inflammation of the joint and/or the muscles and may cause difficulty in chewing and biting food.

Restriction in mouth opening and closing

Displacement of the cartilage disk in the joint will occur if there is trauma, excessive pressure or degenerative changes to the joint. This displacement will cause obstruction to the normal movement of the joint and may present as difficulty in opening and closing your mouth.

Because of that, you may experience difficulty when eating food that you used to be able to eat e.g. apple, hamburger and conversely, you may also experience sudden inability to close your mouth, which may or may not resolve on its own.

Causes of TMD

Prolonged stress to the Jaw Joint

The jaw joint and its related muscles can be over stressed if you habitually clench or grind your teeth. Such habits may happen while you are sleeping and you may not be aware of it. Overloading of the joint will cause pain to the joint and muscles.

Trauma

A blow to the lower jaw or face, e.g. sports injury and road traffic accident can directly or indirectly, injure the TMJ. The structures of the joint may be disrupted and damaged. Such incidents may be recent or a past injury.

Arthritis

The jaw joint may be damaged by arthritis (inflammation of the joint). Arthritis may be a degenerative process due to aging or it may be associated with medical conditions such as Rheumatoid Arthritis, Psoriatic Arthritis.

In many cases, the cause of TMD may not be clear.

Treating TMD

Medications

Some anti-inflammation drugs can be helpful in reducing the pain associated with TMD.

Therapies

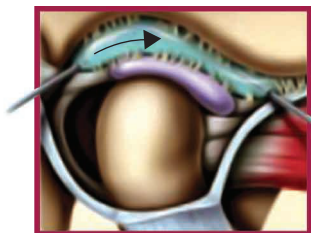
Some TMD symptoms can be relieved with the use of a bite guard. A bite guard is especially useful for patients who grind their teeth during sleep.

Surgery

Surgery may be the best option for patients who do not respond well to non-surgical treatment. Surgery may range from simple washing of the joint with fluids, (arthrocentesis) to inserting a small scope into the joint to examine and treat the joint, (arthroscopy).

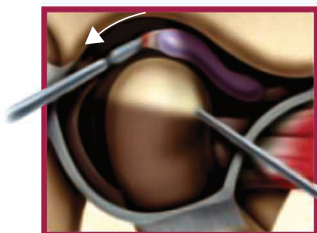
In more severe cases, an open joint surgery may be required.

Arthrocentesis



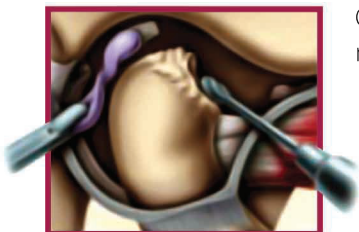
Flushing fluid from the joint and gently stretching it.

Arthroscopy



Using a miniature telescoping instrument to diagnose and repair the joint.

Arthrotomy



Open joint surgery for more complex cases.

Department of Oral & Maxillofacial Surgery

Appointments

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