

What is the Temporomandibular Joint?



Doncaster and Bassetlaw
Teaching Hospitals
NHS Foundation Trust

The Temporomandibular Joint (TMJ) is also commonly known as the jaw joint. There are two TMJs, one in front of each ear. TMJ connects the lower jaw bone (the mandible) to the base of the skull on each side of the head with ligaments and muscles surrounding the joint.

TMJ is a ball and socket type of joint with a cartilaginous disc in between the two bones.

When you open your mouth, the ball (condyle) on each side of the mandible glides/rotates along the joint socket at the skull base and when you close your mouth, the ball slides back into its original position.

What are Temporomandibular Disorders (TMDs)?

TMDs are a group of disorders characterised by pain in the TMJ and surrounding tissues.

What are the common symptoms of TMDs?

TMDs are relatively common, affecting up to 30% of the population at some time. Common symptoms may include:

Joint noises such as clicking, cracking, crunching, grating, popping or a big clunk. Joint noise occurs if the disc in the joint moves out of its normal position between the bones of the jaw joint.

Most commonly the disc slips forwards and a noise is made when it returns to its normal position.

The noise sounds louder to some patients than others because the joint is just in front of the ear.

Jaw joint pain - usually a dull ache in and around the ear, which is usually worse on movement. Referred pain may cause headaches, facial/ear pain and neck/shoulder aches.



Limited mouth opening which is caused by failure of the disc to recapture and/or spasm in the surrounding muscles/ligaments.

TMD patients may also suffer with comorbid conditions such as chronic fatigue syndrome, chronic headache, fibromyalgia, irritable bowel syndrome, low back pain and sleep disorders.

What causes TMD?

Problems may be caused by grinding, clenching, habitual (nail-biting), posturing, missing back teeth, uneven bite, trauma, repeated injuries (including dental procedures or prolonged mouth opening), various forms of arthritis, autoimmune diseases, infections, genetic, hormonal and environmental factors. Sometimes a single cause remains unclear and it can be multifactorial.

Also included under the heading of TMD are disorders involving the jaw muscles and ligaments which may accompany the jaw joint problems or occur independently.

Depending on the severity, one or both joints may be involved and sometimes no obvious cause is found.

Correct diagnoses is imperative as there are conditions such as decayed or abscessed teeth, sinus or ear infections, various types of headache, facial neuralgia (nerve-related facial pain), and even tumour that may present like TMD.

What are the simple treatment options?

Treatment varies depending on the severity and diagnosis. Basic treatments include patient education, jaw joint exercises or a bite raising appliance (jaw splint).

Most people with TMD have relatively mild or periodic symptoms which may improve on simple conservative treatment instructions.

Eating soft foods, applying ice or moist heat, replacing missing teeth to balance the bite and avoiding extreme jaw movements (such as wide yawning, loud singing, and gum chewing) and biting from front teeth are also helpful measures in easing symptoms.

Other treatments include medications such as low dose tricyclic antidepressants, antiepileptic medications, anti-inflammatory topical and oral medication.

Physiotherapy, Cognitive Behavioural Therapy (CBT) and acupuncture are other treatment modalities which may work in tandem.

What happens if initial simple treatment methods do not produce an improvement?

Minor surgical procedures include muscle relaxing injections into the masticatory muscles, Intra-articular injection, arthrocentesis (jaw joint washouts), arthroscopy (small camera into the joint) and cryosurgery (freezing treatment) of the surrounding sensory nerves. MRI or CT scan may also aid diagnoses.

Major open jaw joint surgery of various forms and joint replacement are only recommended when the patient has not responded to other treatment modalities and are considered as the last resort.

Patient Advice & Liaison Service (PALS)

The team are available to help with any concerns, complaints or questions you may have about your experience at the Trust. Their office is in the Main Foyer (Gate 4) of Doncaster Royal Infirmary. Contact can be made either in person, by telephone or email.

The contact details are:

Telephone: 01302 642764 or 0800 028 8059

Email: dbth.pals.dbh@nhs.net