

Jaw Pain & Clicking — TMJ Disorders Explained

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Description:

Jaw pain, clicking, or locking? Learn about TMJ disorders, causes, diagnosis, and treatment options with CSSC's oral surgeons in Melbourne.

Details:

Collins Street Specialist Centre — TMJ Disorders: Diagnosis and Management of Jaw Joint Conditions

A click when you open your mouth. A grinding sensation when you chew. Pain in front of your ear that spreads into your temple. A jaw that locks open or won't open fully. These are characteristic signs of a temporomandibular joint (TMJ) disorder — a group of conditions affecting the jaw joint and the muscles that control jaw movement.

TMJ disorders (sometimes called TMD — temporomandibular disorders) are far more common than most patients realise. Research suggests up to 30% of adults experience TMJ symptoms at some point in their lives, though only a fraction seek professional assessment. For most, symptoms are mild and intermittent. For others, they're genuinely debilitating — affecting eating, speaking, sleeping, and overall quality of life.

Collins Street Specialist Centre (CSSC) is a Melbourne-based specialist centre whose oral and maxillofacial surgeons are trained to diagnose and manage the full spectrum of TMJ disorders, from conservative strategies through to surgical intervention when clinically indicated. This guide explains what the TMJ is, what can go wrong, how conditions are diagnosed, and what evidence-based treatment options are available.

Understanding the TMJ — a uniquely complex joint

The temporomandibular joint is where your lower jaw (mandible) connects to the temporal bone of your skull, just in front of each ear. You have two TMJs — one on each side — and they work together every time you open, close, or move your jaw.

What makes the TMJ anatomically distinctive

Unlike most joints in the human body, the TMJ performs two types of movement simultaneously:

1. **Rotation** — the lower jaw rotates within the socket (encompassing the first 20 mm or so of mouth opening) 2. **Translation** — the jaw then slides forward along a bony ridge, allowing full opening range

This combination of rotation and translation makes the TMJ one of the most biomechanically complex joints in the body, and one that is susceptible to a distinctive range of problems as a result.

Key anatomical structures

- **Articular disc** — a small, oval disc of fibrocartilage that sits between the ball (condyle) of the jaw and the socket (fossa) of the skull. This disc cushions the joint, absorbs masticatory forces, and facilitates smooth movement. - **Muscles of mastication** — the masseter, temporalis, medial pterygoid, and lateral pterygoid muscles control jaw movement and generate the substantial forces required for chewing. - **Ligaments** — connect the disc and the mandible to the skull, guiding and limiting the range of movement. - **Synovial fluid** — lubricates the joint surfaces and nourishes the avascular disc.

When any of these components are damaged, displaced, or dysfunctional, TMJ symptoms develop. Understanding which structures are involved is fundamental to directing appropriate treatment.

Types of TMJ disorders

TMJ disorders fall into three broad categories, and many patients present with more than one simultaneously.

1. Muscle disorders (myofascial pain)

The most common presentation. Myofascial TMD involves pain and tension in the muscles that control jaw movement — particularly the masseter (the large muscle at the angle of the jaw) and the temporalis (the fan-shaped muscle at the temple).

Symptoms: - Aching pain in the jaw, temple, or cheek — often worst in the morning, which points to nocturnal clenching or grinding - Muscle tenderness on palpation of the jaw or temporal region - Limited or painful jaw opening - Headaches, particularly tension-type headaches - Earache in the absence of ear infection - Pain that spreads into the neck and shoulders

Common contributing factors: - Bruxism (teeth clenching and grinding) - Stress and anxiety — both directly increase muscle tension and parafunctional clenching - Poor posture — forward head posture increases strain on the muscles of mastication - Jaw overuse — excessive gum chewing, nail biting, or repeated wide yawning

2. Disc displacement (internal derangement)

The articular disc shifts out of its normal position — typically anteriorly — relative to the condyle. This is the most common structural cause of TMJ clicking and locking.

Disc displacement with reduction: - The disc is displaced when the mouth is closed - As you open, the disc "reduces" (returns to its correct position) — producing the characteristic click or pop - Clicking is frequently painless or mildly uncomfortable - The click may come and go, and may be more pronounced on some occasions than others

Disc displacement without reduction ("closed lock"): - The disc remains displaced and fails to reduce on opening - The jaw locks — full opening is not achievable (typically limited to 25–30 mm rather than the normal 40–50 mm) - This can occur suddenly — often the preceding clicking stops and is replaced by restricted opening - Pain is common in the acute phase, though it may gradually diminish even if the mechanical limitation persists

3. Degenerative joint disease (arthritis)

Progressive breakdown of the joint surfaces — the cartilage covering the condyle and fossa — due to wear, inflammation, or other pathological processes.

Forms encountered in the TMJ include: - **Osteoarthritis** — the most common degenerative form in the TMJ, involving gradual cartilage loss, bony remodelling, and sometimes crepitus (a grinding or crunching sensation on movement) - **Inflammatory arthritis** — systemic conditions such as

rheumatoid arthritis, psoriatic arthritis, or ankylosing spondylitis can involve the TMJ - **Traumatic arthritis** — arising after a direct blow to the jaw or other significant trauma

Symptoms: - Grinding or crunching sounds (crepitus) — acoustically and qualitatively distinct from the clean click of disc displacement - Aching pain in the joint, particularly during function - Progressive limitation of opening range - Changes in occlusal alignment as joint surfaces remodel over time

Causes and risk factors

TMJ disorders are typically multifactorial — several contributing factors frequently combine to produce symptoms in a given individual:

- **Bruxism** — clenching and grinding places substantial forces on the TMJ. Many patients brux during sleep without any awareness of doing so. - **Stress** — a significant contributor to both bruxism and muscular hyperactivity. - **Trauma** — a direct blow to the jaw, whiplash injury, or prolonged wide opening during dental or medical procedures. - **Bite problems (malocclusion)** — while the relationship between occlusion and TMJ disorders remains debated, significant bite discrepancies can be a contributing factor. - **Joint hypermobility** — individuals with generalised ligamentous laxity (including those on the Ehlers-Danlos spectrum) show increased susceptibility to disc displacement. - **Hormonal factors** — TMJ disorders are more prevalent in women of childbearing age, suggesting a hormonal influence on joint and ligament behaviour. - **Osteoarthritis** — age-related joint degeneration affecting the articular surfaces. - **Systemic inflammatory conditions** — rheumatoid arthritis and related conditions can directly involve the TMJ. - **Psychological factors** — anxiety, depression, and pain catastrophising can amplify the experience and chronicity of TMJ symptoms.

Diagnosis — identifying the underlying problem accurately

Accurate diagnosis matters here because treatment approaches differ substantially depending on whether the primary problem is muscular, disc-related, articular, or some combination.

Clinical examination

A thorough TMJ assessment covers:

- **History** — onset and duration of symptoms, aggravating and relieving factors, history of trauma, bruxism habits, stress levels, and relevant systemic health conditions - **Palpation** — systematic assessment of the jaw muscles and joint for tenderness, trigger points, and swelling - **Range of motion** — measurement of maximum mouth opening (normal range 40–50 mm), assessment of lateral and protrusive movements, deviation of the jaw on opening, and whether movement reproduces symptoms - **Joint sounds** — identification of clicks, pops, or crepitus, with attention to the point in the opening or closing arc at which sounds occur - **Bite assessment** — evaluation of how the teeth occlude and whether discrepancies are present - **Neck and postural assessment** — because cervical and postural dysfunction can refer pain to the jaw region and contribute to symptom maintenance

Imaging

- **Panoramic X-ray (OPG)** — provides a broad overview of the jaw joints and surrounding structures. Useful as a screening tool but limited in fine structural detail. - **Cone-beam CT (CBCT)** — produces detailed three-dimensional images of the bony joint surfaces. Particularly valuable for identifying osteoarthritic changes, bony remodelling, and fractures. Available on-site at CSSC. - **MRI** — the gold standard for visualising the soft tissue components of the TMJ, including disc position, disc morphology, joint effusion, and inflammatory change. Typically performed at a radiology centre. - **Ultrasound** — occasionally used to assess disc position dynamically during jaw movement.

At Collins Street Specialist Centre, our oral surgeons combine clinical examination findings with appropriate imaging to arrive at a specific, anatomically grounded diagnosis — not merely a generic label of "TMJ disorder," but a precise characterisation of which structures are involved and what pathological process is occurring.

Treatment — a conservative-first approach

The reassuring reality is that the majority of TMJ disorders respond well to conservative, non-surgical management. Clinical guidelines consistently recommend exhausting conservative options before any consideration of surgical intervention.

Self-management and lifestyle modification

Patients can make a meaningful contribution to their own recovery through targeted behavioural changes:

- **Soft diet** — reducing mechanical load on the jaw by avoiding hard, chewy, or crunchy foods during symptomatic periods
- **Jaw rest** — avoiding excessive opening (wide yawning, biting into large foods), habitual gum chewing, and parafunctional habits such as nail biting
- **Heat and cold therapy** — warm compresses for muscle-dominant pain; cold packs for acute joint inflammation
- **Stress management** — mindfulness practice, cognitive behavioural strategies, and regular physical exercise can meaningfully reduce clenching behaviour and muscular tension
- **Postural awareness** — particularly relevant for patients who spend extended hours at a desk or using screens
- **Sleep position** — avoiding prone sleeping, which places lateral forces on the jaw joint

Occlusal splint (night guard)

A custom-fabricated splint worn over the teeth — most commonly at night — is one of the most consistently effective treatments for TMJ disorders where bruxism is a contributing factor:

- Reduces the forces transmitted to the TMJ during clenching and grinding episodes
- Provides a stable, even occlusal surface that reduces muscle hyperactivity
- Protects the dentition from bruxism-related wear
- Professional fabrication from accurate impressions is essential — over-the-counter devices don't provide equivalent occlusal stability and can, in some cases, make symptoms worse

Physiotherapy

A physiotherapist with specific experience in orofacial and TMJ conditions can contribute significantly to recovery through:

- **Jaw exercises** — structured programmes of gentle stretching and graduated strengthening to improve range of motion and reduce pain
- **Manual therapy** — hands-on techniques to release muscular tension, address trigger points, and mobilise the joint
- **Dry needling** — targeted treatment of trigger points in the jaw and cervical musculature
- **Postural rehabilitation** — addressing head, neck, and shoulder posture that may be perpetuating symptoms

Medication

- **Anti-inflammatory analgesics** (ibuprofen, naproxen) — for pain management and reduction of joint inflammation during acute flare-ups
- **Muscle relaxants** (short-term use) — for patients presenting with severe muscular spasm
- **Low-dose tricyclic antidepressants** (e.g. amitriptyline at sub-therapeutic doses) — used for chronic pain modulation and reduction of nocturnal bruxism activity
- **Botulinum toxin (Botox) injections** — administered into the masseter and/or temporalis muscles to reduce clenching force and alleviate muscle pain. This is an off-label application, though the supporting evidence base is growing.

Arthrocentesis

A minimally invasive office-based procedure in which the joint space is washed out with sterile fluid under local anaesthesia:

- Particularly effective for disc displacement without reduction (acute closed lock) - Removes inflammatory mediators and degradative byproducts from the joint environment - Can disrupt adhesions that may be mechanically restricting disc movement - Frequently combined with intra-articular injection of corticosteroid or hyaluronic acid - Performed as an outpatient procedure by an oral and maxillofacial surgeon - Published success rates of approximately 70–80% for improving jaw opening and reducing pain

Arthroscopy

A small-diameter camera is introduced into the joint space through a minimal incision, allowing direct visualisation of intra-articular structures and enabling the surgeon to perform targeted procedures including:

- Lysis of adhesions (division of restrictive scar tissue) - Disc repositioning or plication - Removal of inflamed synovial tissue - Thorough joint lavage under direct vision

Arthroscopy is more invasive than arthrocentesis but substantially less so than open joint surgery. It is typically considered when arthrocentesis has not produced adequate or durable improvement.

Open joint surgery

Reserved for cases that have not responded to conservative and minimally invasive treatment, open surgical options include:

- ****Disc repair or repositioning**** — surgical reduction of the displaced disc to its anatomically correct position, with stabilisation - ****Discectomy**** — removal of a severely damaged or irreparably degenerate disc. The joint frequently adapts well following discectomy, with fibrous tissue forming a functional replacement. - ****Condylotomy**** — modification of the condylar geometry to alter the relationship between the condyle and disc - ****Total joint replacement**** — in cases of end-stage arthritis, failed prior surgery, or neoplastic involvement, a custom or stock prosthetic joint can replace the damaged TMJ

Open surgery is uncommon in TMJ management — the substantial majority of patients achieve satisfactory outcomes without reaching this stage of the treatment pathway.

Living with TMJ disorders — long-term management

For many patients, TMJ symptoms follow an episodic course — flaring during periods of heightened stress or physical demand, and settling with attentive conservative management. Sustainable long-term strategies include:

- Consistent use of a night splint where bruxism is an identified factor - Ongoing engagement with stress management practices - Conscious awareness of parafunctional habits (jaw clenching during concentration, resting jaw posture) - Regular review with your treating specialist to monitor for change - Prompt presentation if symptoms change in character, intensity, or pattern

Understanding your condition — what drives it, what aggravates it, and what helps — is central to managing it effectively over time. Our surgeons at Collins Street Specialist Centre treat patient education as an integral part of the management process, not an afterthought.

Collins Street Specialist Centre's approach to TMJ disorders

Our oral and maxillofacial surgeons at Collins Street Specialist Centre take a systematic, evidence-based approach to the assessment and management of TMJ disorders:

1. **Thorough, specific diagnosis** — identifying precisely which structures are involved and what pathological process is present, rather than applying a generic diagnostic label 2. **Conservative-first management** — the majority of patients achieve meaningful improvement with non-surgical treatment, and this is always the starting point 3. **Stepped, proportionate care** — progression to more interventional treatment is considered only when conservative measures have not achieved adequate clinical improvement 4. **Multi-disciplinary collaboration** — working alongside physiotherapists, sleep physicians, rheumatologists, and other relevant specialists when the clinical picture warrants it 5. **Patient education and active participation** — ensuring patients understand their condition and are equipped to participate meaningfully in their own management

Where TMJ symptoms intersect with dental concerns — tooth pain of muscular origin, or occlusal factors contributing to joint dysfunction, for example — the specialist team at Collins Street Specialist Centre can assess both dimensions within the one clinical setting.

Referring practitioners are welcome to contact our team to discuss complex presentations prior to formal referral.

Book a TMJ assessment at Collins Street Specialist Centre

If you are experiencing jaw pain, clicking, locking, or headaches that may have a temporomandibular origin, our oral and maxillofacial surgeons at Collins Street Specialist Centre can provide a thorough specialist assessment and a clearly explained, individualised management plan.

The majority of TMJ disorders respond well to conservative management when the diagnosis is accurate and treatment is appropriately directed. Getting that diagnosis right from the outset is what everything else depends on.

Collins Street Specialist Centre Level 7, Manchester Unity Building 220 Collins Street, Melbourne VIC 3000

[Book an appointment] or ask your doctor or dentist to refer you to our oral surgery team.

Frequently asked questions

What does TMJ stand for: Temporomandibular joint

What does TMD stand for: Temporomandibular disorders

Are TMJ and TMD the same thing: Yes, used interchangeably

Where is the TMJ located: In front of each ear, on each side of the skull

How many TMJs does a person have: Two, one on each side

What bones does the TMJ connect: The lower jaw (mandible) to the temporal bone of the skull

What is the articular disc: A small oval fibrocartilage disc inside the TMJ

What does the articular disc do: Cushions the joint and facilitates smooth movement

What is crepitus: A grinding or crunching sensation in the joint

****What is bruxism:**** Clenching and grinding of the teeth

****How prevalent are TMJ disorders:**** Up to 30% of adults experience symptoms at some point

****Do most people with TMJ symptoms seek treatment:**** No, only a fraction seek professional assessment

****Can TMJ disorders affect daily life:**** Yes, they can affect eating, speaking, and sleeping

****What type of specialists treat TMJ disorders at CSSC:**** Oral and maxillofacial surgeons

****Where is Collins Street Specialist Centre located:**** Level 7, Manchester Unity Building, 220 Collins Street, Melbourne

****What are the three main categories of TMJ disorders:**** Muscle disorders, disc displacement, and degenerative joint disease

****What is myofascial TMD:**** Pain and tension in the muscles controlling jaw movement

****Which muscles are most commonly affected in myofascial TMD:**** The masseter and temporalis muscles

****What is the masseter muscle:**** The large muscle at the angle of the jaw

****What is the temporalis muscle:**** The fan-shaped muscle at the temple

****When is jaw pain from myofascial TMD most pronounced:**** Typically in the morning

****Why is morning pain common in myofascial TMD:**** It suggests nocturnal clenching or grinding during sleep

****Can TMJ disorders cause headaches:**** Yes, particularly tension-type headaches

****Can TMJ disorders cause earache:**** Yes, even without ear infection

****Can TMJ pain radiate to the neck and shoulders:**** Yes

****What is disc displacement with reduction:**** The disc displaces but returns to position on opening

****What sound does disc displacement with reduction produce:**** A click or pop

****Is clicking always painful in disc displacement:**** No, it is frequently painless or mildly uncomfortable

****What is disc displacement without reduction:**** The disc remains displaced and does not return to position

****What is another name for disc displacement without reduction:**** Closed lock

****What is the normal mouth opening range:**** 40–50 mm

****What is the typical opening range in a closed lock:**** 25–30 mm

****Does clicking always precede a closed lock:**** Often yes, clicking may cease before locking occurs

****What is osteoarthritis in the TMJ:**** Gradual cartilage loss and bony remodelling of the joint

****Can rheumatoid arthritis affect the TMJ:**** Yes

****Can trauma cause TMJ arthritis:**** Yes, traumatic arthritis can follow a direct blow to the jaw

****Does stress contribute to TMJ disorders:**** Yes, it increases muscle tension and clenching behaviour

****Are TMJ disorders more common in women:**** Yes, particularly women of childbearing age

****Does joint hypermobility increase TMJ risk:**** Yes, especially in those on the Ehlers-Danlos spectrum

****Can poor posture contribute to TMJ disorders:**** Yes, forward head posture increases strain on jaw muscles

****What imaging is considered gold standard for TMJ soft tissue:**** MRI

****What does CBCT imaging show for TMJ:**** Detailed 3D images of bony joint surfaces

****Is CBCT available at Collins Street Specialist Centre:**** Yes, on-site

****What does a panoramic X-ray (OPG) show for TMJ:**** A broad overview of jaw joints and surrounding structures

****Can ultrasound assess the TMJ:**** Yes, occasionally used to assess disc position dynamically

****Is conservative treatment recommended first for TMJ disorders:**** Yes, always

****Do most TMJ disorders respond to conservative treatment:**** Yes, the majority do

****What diet is recommended during TMJ flare-ups:**** Soft diet to reduce mechanical load on the jaw

****Should you chew gum with a TMJ disorder:**** No, avoid habitual gum chewing

****Is heat or cold better for muscle-dominant TMJ pain:**** Heat (warm compresses)

****Is heat or cold better for acute TMJ joint inflammation:**** Cold packs

****What is an occlusal splint:**** A custom-fabricated device worn over the teeth

****When is an occlusal splint typically worn:**** Most commonly at night

****Does a night splint protect teeth from bruxism:**** Yes

****Are over-the-counter night guards as effective as custom splints:**** No, they do not provide equivalent occlusal stability

****Can over-the-counter guards worsen TMJ symptoms:**** Yes, in some cases

****Can physiotherapy help TMJ disorders:**** Yes, significantly

****What does physiotherapy for TMJ include:**** Jaw exercises, manual therapy, and postural rehabilitation

****What is dry needling in TMJ treatment:**** Targeted treatment of trigger points in jaw and cervical muscles

****What medications are used for acute TMJ pain:**** Anti-inflammatory analgesics such as ibuprofen or naproxen

****What medications reduce nocturnal bruxism:**** Low-dose tricyclic antidepressants such as amitriptyline

****Are muscle relaxants used for TMJ:**** Yes, short-term for severe muscular spasm

****Can Botox treat TMJ disorders:**** Yes, injected into masseter or temporalis muscles

****Is Botox for TMJ an approved indication:**** No, it is an off-label application

****What is arthrocentesis:**** A minimally invasive joint lavage procedure under local anaesthesia

****What condition is arthrocentesis particularly effective for:**** Disc displacement without reduction (acute closed lock)

****What is the success rate of arthrocentesis:**** Approximately 70–80% for improving opening and reducing pain

****Is arthrocentesis performed in-office:**** Yes, as an outpatient procedure

****Who performs arthrocentesis:**** An oral and maxillofacial surgeon

****What is TMJ arthroscopy:**** A camera is inserted into the joint to visualise and treat structures

****Is arthroscopy more invasive than arthrocentesis:**** Yes

****Is arthroscopy less invasive than open joint surgery:**** Yes

****When is arthroscopy considered:**** When arthrocentesis has not produced adequate improvement

****What can arthroscopy treat inside the joint:**** Adhesions, disc repositioning, inflamed synovial tissue

****What is a discectomy:**** Surgical removal of a severely damaged articular disc

****What is total joint replacement for TMJ:**** A prosthetic joint replaces the damaged TMJ

****Is open TMJ surgery common:**** No, the substantial majority of patients do not require it

****When is total joint replacement considered:**** End-stage arthritis, failed prior surgery, or neoplastic involvement

****Can TMJ symptoms follow an episodic course:**** Yes, flaring and settling over time

****Does stress worsen TMJ symptoms:**** Yes

****Should a night splint be used long-term if bruxism is identified:**** Yes, consistently

****Can TMJ pain originate from tooth problems:**** Yes, tooth pain of muscular origin can occur

****Can referring practitioners contact CSSC before formal referral:**** Yes

****How can patients book at Collins Street Specialist Centre:**** Via the website or through a doctor or dentist referral
