CONDITION

Temporomandibular (TM) disorders

Temporomandibular disorders cause pain or movement problems in the jaw joints and the muscles used for chewing.

WHAT IT IS
Pain and movement conditions affecting the jaw joint and muscles

BODY SYSTEM
Jaw joints, chewing muscles, and nearby nerves

MAIN SYMPTOMS
Jaw pain, facial pain, clicking, limited movement

WHAT CAUSES IT
Multiple factors; sometimes injury, arthritis, or clenching

HOW IT IS DIAGNOSED
Symptom history and jaw examination; imaging when needed

MAIN TREATMENT
Self-care, pain relief, physical therapy, selected dental appliances

CAN IT BE CURED?
Sometimes - symptoms often settle over time

IS IT AN EMERGENCY?
Sometimes - major injury or breathing difficulty

LONG-TERM OUTLOOK
Most improve, but some have recurring or persistent pain

Overview

Temporomandibular disorders, often shortened to TMDs, are conditions affecting the jaw joints, chewing muscles, or both. The temporomandibular joints sit just in front of your ears and connect your lower jaw to your skull.

These joints allow your jaw to open, close, and move from side to side. A small disc inside each joint helps the bones move smoothly. Pain can come from the joint, the disc, the surrounding muscles, or a combination of these structures.

"TMD" describes a group of conditions rather than one disease. Some mainly cause muscle pain. Others affect movement inside the joint or involve arthritis, which means inflammation or wear in a joint.

TMD symptoms may affect eating, speaking, sleep, and concentration. However, jaw noises without pain or limited movement are common and usually do not need treatment.

"TMJ" is often used to mean a jaw disorder, but it technically refers to the temporomandibular joint itself. "TMD" is the more accurate name for problems involving this area.

Symptoms

Symptoms may occur on one or both sides. They can remain mild, come and go, or become more persistent.

Common symptoms include:

Pain may spread toward the ear even when the ear itself is healthy. TMD can therefore feel similar to earache, tooth pain, sinus discomfort, or some types of headache.

Clicking alone does not necessarily mean that the joint is damaged. It is more important when it is painful, starts after an injury, or occurs with locking or reduced movement.

- Pain or tenderness in the jaw, temple, cheek, or in front of the ear
- Pain when chewing, yawning, or opening the mouth widely
- Difficulty opening the mouth fully
- A jaw that briefly catches or locks
- Clicking, popping, or grating during movement
- Headache or aching in the face and neck
- A tired or tight feeling in the chewing muscles
- A change in how the upper and lower teeth seem to meet

Causes and risk factors

There is often no single cause. Jaw pain may develop through a combination of joint changes, muscle strain, pain-system sensitivity, sleep problems, and everyday habits.

Clenching or grinding the teeth can overload the chewing muscles in some people. This may happen while awake or asleep. Many people occasionally clench without developing TMD, so it is not always the main cause.

Possible causes and contributing factors include:

Stress does not mean that the pain is imagined. Pain is real, but stress and disrupted sleep can

change muscle tension and how strongly the nervous system processes it.

TMD is not usually caused by slightly uneven teeth or by not having a "perfect" bite. Procedures that permanently change the teeth or bite should not be assumed to fix jaw pain.

- An injury to the jaw or face
- Repeatedly holding the jaw tense
- Frequent gum chewing or other prolonged chewing
- Arthritis affecting the jaw joint
- Movement or damage of the disc inside the joint
- Conditions that increase sensitivity to pain
- Poor sleep, stress, or anxiety that increases muscle tension

Diagnosis

There is no single test that confirms every type of TMD. Diagnosis usually begins with a medical and dental history and an examination.

A dentist, doctor, or other appropriately trained professional may ask where the pain occurs, how long it lasts, and what makes it better or worse. They may also ask about injuries, locking, headaches, tooth grinding, sleep, and other joint or pain conditions.

During the examination, they may:

Imaging is not needed for every person. An X-ray or computed tomography scan, often called a CT scan, can show bone problems. Magnetic resonance imaging, or MRI, can show the joint disc and other soft tissues. Imaging is more likely when there has been an injury, movement is severely limited, joint disease is suspected, or initial care has not helped.

Blood tests may be considered if symptoms suggest inflammatory arthritis, infection, or another medical condition. Other causes of facial pain must sometimes be ruled out before TMD is diagnosed.

- Observe how far and how evenly your jaw opens
- Feel the jaw joints and chewing muscles
- Listen or feel for clicking and grating
- Check whether movement reproduces your usual pain
- Examine your mouth, teeth, ears, face, and neck

Treatment and management

Treatment is based on the type of problem, its severity, and how long it has been present. Care usually starts with approaches that do not permanently change the teeth, bite, or joint.

For a short period during a painful flare, it may help to choose softer foods and avoid very wide opening, gum chewing, nail biting, or resting your chin on your hand. A completely liquid diet is rarely needed, and staying on very soft food for a long time may weaken the chewing muscles.

Heat or a wrapped cold pack may ease symptoms. Which feels better differs from person to person. Gentle jaw movement is usually preferred to keeping the jaw still, unless an injury or specialist advice requires otherwise.

Non-prescription pain medicines may help some people. Anti-inflammatory medicines are not suitable for everyone, including some people with stomach ulcers, kidney disease, bleeding risks, or pregnancy. A pharmacist or healthcare professional can help you check whether a medicine is appropriate. Prescription medicines are sometimes used for muscle spasm or persistent pain, but they are not the main treatment for everyone.

Physical therapy may include guided jaw exercises, posture work, muscle relaxation, and hands-on treatment. Exercises should be matched to the problem because forcing a painful or locked jaw can make symptoms worse.

A removable dental appliance, sometimes called a splint or night guard, may be considered when grinding, clenching, or joint loading is a concern. It should not permanently alter the bite. Benefits are mixed, and the appliance should be reviewed if it increases pain or changes how the teeth meet.

Support for sleep, stress, and pain coping can be useful when symptoms persist. Approaches such as relaxation training or cognitive behavioural therapy can reduce the effect of pain on daily life. This does not suggest that the condition is "all in your head."

Injections or surgery are reserved for selected problems. They may be considered for severe structural joint disease, repeated dislocation, or ongoing loss of function after conservative care. Irreversible dental treatment or joint surgery is not usually the first step for uncomplicated TMD.

Complications

Many TMDs do not cause lasting joint damage. The main concern is often persistent pain and its effect on daily life.

Possible complications include difficulty eating a balanced diet, reduced jaw movement,

disturbed sleep, headaches, and avoiding social activities that involve talking or eating. Long-lasting pain can also affect mood, concentration, and energy.

A jaw may occasionally remain locked open or closed. Arthritis or significant joint injury can lead to more lasting movement problems.

Unnecessary or irreversible treatment can create additional problems. Permanently reshaping teeth, changing the bite, or having surgery without a clear reason may fail to relieve pain and can be difficult to reverse.

Prevention

Not every TMD can be prevented. Arthritis, an unexpected injury, disc changes, and differences in pain sensitivity may occur despite reasonable care.

You may be able to reduce avoidable strain by noticing daytime clenching and allowing your teeth to rest slightly apart when you are not eating. Limiting repeated gum chewing and taking breaks from activities that trigger symptoms may also help.

Protective equipment can reduce the chance of facial injury during contact sports or other high-risk activities. A sports mouthguard is different from a dental appliance used for grinding.

There is no proven reason to change a healthy bite or remove healthy teeth to prevent TMD.

Living with it and what to expect

Many episodes improve over weeks or months with time and conservative care. Symptoms may fluctuate, especially during periods of poor sleep, increased clenching, stress, illness, or unusually heavy jaw use.

Some people have occasional flares separated by long periods with little or no pain. Others develop persistent pain that needs ongoing management. Long-term symptoms do not always mean that joint damage is getting worse.

Recovery may involve gradually returning to a normal diet and normal jaw movement rather than avoiding movement indefinitely. Keeping track of triggers can help you notice patterns, but constant checking of the jaw may make pain more distracting.

If symptoms continue, treatment often focuses on restoring comfortable function, improving sleep, and reducing the effect of pain on everyday life. Follow-up is useful if your jaw movement, bite, or symptoms change, or if an appliance is being used.

When to get medical help

Arrange a routine dental or medical assessment if pain lasts for more than a few weeks, keeps returning, or interferes with eating, sleep, work, or school. You should also seek assessment for repeated locking, steadily reduced movement, or a new change in how your teeth meet.

Prompt assessment is appropriate if your jaw becomes locked open or closed, you develop notable facial swelling or fever, or symptoms begin after an injury. These problems may need treatment for a dislocation, fracture, infection, or another condition rather than routine TMD care.

Seek emergency help after a major facial injury if there is heavy bleeding, severe deformity, loss of consciousness, or difficulty breathing or swallowing. Breathing or swallowing difficulty with rapidly increasing swelling is also an emergency.

Sudden facial weakness, difficulty speaking, or weakness in an arm or leg is not a typical TMD symptom and requires emergency assessment.

Common questions

Does jaw clicking mean I have TMD?

Not by itself. Painless clicking is common and may reflect movement of the small disc inside the joint. It usually does not need treatment unless it is accompanied by pain, locking, or reduced movement.

Can TMD go away on its own?

It can. Many episodes settle over time, particularly when jaw strain is reduced and normal movement is maintained. Some people have recurring or persistent symptoms, so ongoing pain should be assessed rather than simply endured.

Is TMD the same as arthritis?

No. Arthritis is one possible cause of a TMD, but many cases involve the chewing muscles or the disc inside the joint rather than arthritis. An examination and, when appropriate, imaging can help identify the structures involved.

Can stress cause jaw pain?

Stress can contribute to jaw pain by increasing muscle tension, clenching, sleep disruption, and sensitivity to pain. It is rarely the only factor, and stress-related pain is still physical and real.

Do wisdom teeth cause TMD?

Wisdom teeth are not an established general cause of TMD. Tooth infection or pressure

around an erupting wisdom tooth can cause pain in a nearby area, so a dental examination may be needed to tell these problems apart.

Will I need surgery?

Most people do not. Treatment usually begins with education, temporary activity changes, pain management, and physical approaches. Surgery is considered only for selected joint problems after a careful specialist assessment.

Sources

- National Institute of Dental and Craniofacial Research. TMD (Temporomandibular Disorders)
- National Academies of Sciences, Engineering, and Medicine. Temporomandibular Disorders: Priorities for Research and Care . National Academies Press; 2020
- Schiffman E, Ohrbach R, Truelove E, et al. Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) for Clinical and Research Applications . Journal of Oral & Facial Pain and Headache . 2014;28(1):6-27
- Busse JW, Casassus R, Carrasco-Labra A, et al. Management of chronic pain associated with temporomandibular disorders: a clinical practice guideline . BMJ . 2023;383:e076227
- NHS. Temporomandibular disorder