CONDITION

Palatal myoclonus

Palatal myoclonus is a rhythmic, involuntary movement of the soft palate that may cause clicking sounds or swallowing and speech problems.

WHAT IT IS
Rhythmic involuntary movement of the soft palate

BODY SYSTEM
Nervous system

MAIN SYMPTOMS
Palate movement, ear clicking, speech changes, swallowing difficulty

WHAT CAUSES IT
Brain pathway injury, unknown cause, or functional movement disorder

HOW IT IS DIAGNOSED
Observed palate movement and brain MRI

MAIN TREATMENT
Cause-directed care, symptom medicines, or botulinum toxin

CAN IT BE CURED?
Sometimes - treating a reversible cause may help

IS IT AN EMERGENCY?
Sometimes - sudden stroke symptoms need emergency care

LONG-TERM OUTLOOK
Often persistent; function reflects the underlying cause

Overview

Palatal myoclonus is a repeated, involuntary movement of the soft palate at the back of the roof of your mouth. The movement is usually rhythmic and may affect one or both sides.

Although the traditional name is palatal myoclonus, specialists now often use palatal tremor . "Myoclonus" usually means brief, shock-like muscle jerks, while this condition more often produces a steady rhythm.

The palate helps with swallowing, speech, and keeping food or liquid from entering the nose. Its muscles also lie close to the tubes connecting the middle ears to the throat. Palatal movement can therefore cause clicking sounds, changes in speech, or swallowing problems.

There are two main patterns. Essential palatal tremor occurs without a structural abnormality

being found in the brain. It commonly causes an audible ear click. Symptomatic palatal tremor is linked to damage in a network connecting the brainstem and cerebellum, the part of the brain that coordinates balance and movement.

A third pattern may occur as part of a functional movement disorder. This means the nervous system is not controlling movement normally, even though the brain's structure may appear normal. The symptoms are real and are not intentional.

The condition itself is not usually life-threatening. However, new palatal tremor sometimes signals another neurological problem that needs investigation.

Symptoms

The main sign is a regular movement of the soft palate. You may not notice the movement unless someone examines your mouth.

Possible symptoms include:

The clicking happens when palatal muscles repeatedly open the Eustachian tube, which connects the middle ear to the throat. Other people may sometimes hear it. This differs from most forms of tinnitus, in which sound is perceived without an outside sound being produced.

Symptoms may be continuous or intermittent. They can become more noticeable with stress, tiredness, or attention. In some people, the movement continues during sleep; in others, it becomes less active or stops.

When palatal tremor is caused by a wider neurological condition, it may occur with unsteadiness, slurred speech, weakness, altered sensation, or abnormal eye movements. These additional symptoms reflect the underlying condition rather than the palate movement alone.

- Repeated clicking in one or both ears
- A feeling of movement or fluttering in the throat
- Changes in voice or speech
- Difficulty swallowing
- Food or liquid coming back through the nose
- Problems with balance or coordination
- Rhythmic eye movement or a bouncing visual sensation

Causes and risk factors

Essential palatal tremor has no visible structural cause on a brain scan. It is often linked to repeated contraction of the tensor veli palatini, a muscle that tightens the soft palate and helps open the Eustachian tube. Why this starts is not always clear.

Symptomatic palatal tremor follows damage to a specific circuit deep in the brain. This circuit links the cerebellum, red nucleus, and inferior olive-areas involved in coordinating movement. Damage can lead to abnormal enlargement and activity of the inferior olive, called hypertrophic olivary degeneration .

Conditions that can damage this pathway include:

The tremor may begin weeks or months after the original brain injury. This delay happens because the affected nerve pathway changes gradually after it has been damaged.

Some people have palatal tremor together with slowly worsening problems with balance and coordination. This pattern is called progressive ataxia and palatal tremor . Ataxia means poor control of balance and coordinated movement. It has several possible causes, including uncommon inherited or degenerative conditions.

Functional palatal tremor may change in speed or pattern and may reduce when attention is directed elsewhere. These features can help a specialist identify it, but they do not mean the movement is imagined or consciously produced.

- Stroke or bleeding in the brain
- Multiple sclerosis or another inflammatory disorder
- Head injury
- A brain tumour or treatment affecting nearby tissue
- Infection involving the brain
- Degenerative neurological conditions

Diagnosis

Diagnosis usually starts with an examination by a neurologist, an ear, nose and throat specialist, or both. The clinician may watch your palate while you open your mouth and listen for clicking near your ear.

Your eye movements, speech, swallowing, strength, sensation, coordination, and walking may also be checked. This helps show whether the palate movement is isolated or part of a broader neurological condition.

A brain MRI is usually important when palatal tremor is new or unexplained. MRI uses a strong magnet to create detailed images. It may identify a stroke, inflammation, tumour, or injury involving the relevant brain pathways. It can also show hypertrophic olivary degeneration. A normal scan is common in essential and functional palatal tremor.

Further testing is chosen according to your symptoms and medical history. It may include hearing tests, a swallowing assessment, blood tests, or electrical recording of muscle activity. If inherited or degenerative disease is suspected, more specialised testing may be offered.

Because several conditions can produce ear clicking or throat movement, the examination also helps rule out muscle spasms around the middle ear, jaw problems, and other movement disorders.

Treatment and management

Treatment is based on the type of palatal tremor, how much it affects daily life, and whether an underlying cause can be treated. Mild symptoms that are not troublesome may only need observation and follow-up.

When a structural cause is found, care focuses on that condition. For example, treatment may address inflammation, infection, or another active neurological problem. Treating the cause does not always stop the tremor because changes in the movement pathway may persist.

Botulinum toxin injections can reduce contractions by temporarily weakening a selected palatal muscle. The injection may be guided by electrical muscle recording to improve accuracy. Benefits wear off over time, so repeat treatment may be considered if the first injection helps.

Possible effects of botulinum toxin include temporary swallowing difficulty, nasal-sounding speech, or liquid entering the nose. Treatment is therefore planned carefully and is generally reserved for symptoms that cause meaningful problems.

Medicines that reduce abnormal nerve activity are sometimes tried. Reported options include clonazepam and certain antiseizure medicines, but the evidence is limited and responses are inconsistent. Side effects and other medicines need to be considered before any trial.

Speech and language therapy may help with swallowing, speech, or strategies for managing symptoms. If swallowing is affected, an assessment can identify safer food textures and techniques without imposing unnecessary restrictions.

Functional palatal tremor may improve with a clear explanation of the diagnosis and movement-focused rehabilitation. Treatment may also address pain, poor sleep, anxiety, or other factors that can keep functional symptoms active.

Complications

Persistent clicking can disturb concentration, sleep, work, and social activities. It may be especially intrusive in quiet surroundings.

Swallowing problems can lead to coughing during meals, reduced food intake, or dehydration. Food or liquid entering the airway is called aspiration. This is not common in isolated palatal tremor, but the risk may be higher when another neurological condition affects swallowing.

Speech can become nasal or less clear if the palate does not close properly. Balance and vision problems may occur when the condition also affects the cerebellum or eye-movement pathways.

Complications may also come from treatment. Botulinum toxin can temporarily weaken swallowing or speech, while medicines may cause sleepiness, dizziness, or other side effects. Follow-up allows treatment to be adjusted if these problems occur.

Prevention

Most cases of palatal myoclonus cannot be reliably prevented. Essential and functional forms do not have a known preventable cause, and some underlying neurological conditions are inherited or unpredictable.

Some cases follow stroke. Managing blood pressure, diabetes, cholesterol, smoking, and other cardiovascular risks can lower the overall chance of stroke, but it cannot guarantee that palatal tremor will not develop.

Using appropriate protection against head injury may reduce the risk of brain trauma. There is no exercise, supplement, or diet known to prevent the palatal movement itself.

Living with it and what to expect

The course differs according to the cause. Essential palatal tremor may remain stable, fluctuate, or become less noticeable over time. Clicking can continue for years, but isolated palatal tremor does not usually affect strength, thinking, or life expectancy.

Symptomatic palatal tremor often persists after the original brain injury has stabilised. MRI changes may evolve over months, and the movement can continue even if those scan changes later become less obvious. Daily function is usually influenced more by the underlying stroke, inflammatory disease, or coordination problem than by the palate movement itself.

Progressive ataxia and palatal tremor may gradually affect balance, walking, speech, and independence. Its course is determined by the specific cause, which is not always identified.

Symptoms can be frustrating even when they are medically stable. Practical strategies may include background sound for intrusive clicking, taking extra time with meals, and using speech or balance therapy when needed.

Routine follow-up is appropriate if symptoms are stable. Review is also useful when clicking, swallowing, speech, balance, or treatment side effects begin to interfere more with daily life.

When to get medical help

Arrange a routine medical assessment if you develop repeated ear clicking, visible palate movement, persistent throat fluttering, or unexplained changes in speech or swallowing. New palatal tremor generally deserves evaluation even when it is painless.

Seek prompt medical advice if symptoms are worsening, you are losing weight, you often cough during meals, or balance problems are leading to falls. These signs are not always emergencies, but they may require a swallowing assessment or further neurological investigation.

Call emergency services for sudden symptoms that could indicate a stroke, including:

Emergency help is also needed if you cannot breathe, cannot swallow saliva, are choking, or become suddenly confused or unresponsive.

- Face drooping or weakness on one side
- Sudden arm or leg weakness or numbness
- Sudden trouble speaking or understanding speech
- Sudden severe loss of balance or vision
- A sudden, unusually severe headache

Common questions

Is palatal myoclonus the same as tinnitus?

Not exactly. Palatal movement can create a real clicking sound by opening the Eustachian tube. Most tinnitus is a sound heard without a sound being physically produced nearby. Both can be experienced as noise in the ear.

Why can someone else hear the clicking in my ear?

The contracting palate may repeatedly move structures near the middle ear. This can produce a faint mechanical click that is sometimes audible to another person. It is called objective tinnitus when an examiner can also hear it.

Does palatal myoclonus mean I have a brain tumour?

No. There are several possible causes, and many people have no tumour or other structural brain abnormality. A brain MRI helps look for relevant changes rather than assuming a particular cause.

Will it go away on its own?

It may improve, fluctuate, or persist. The outlook is influenced by whether the movement is essential, functional, or caused by structural damage. Improvement in an underlying condition does not always make the tremor stop.

Can palatal myoclonus affect swallowing?

Yes, although many people do not have significant swallowing trouble. Seek assessment if you cough or choke during meals, food feels stuck, liquid returns through your nose, or eating is becoming difficult.

Can stress make the clicking worse?

Stress does not usually explain the whole condition, but it can make rhythmic movement or awareness of clicking more noticeable. Tiredness and quiet surroundings may have a similar effect.

Sources

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