CONDITION

Burning mouth syndrome

Learn about burning mouth syndrome, including oral burning, possible causes, diagnosis, treatment options, self-care, and when to seek medical help.

WHAT IT IS
Ongoing oral burning with normal-looking tissues

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Burning or scalding, tingling or numbness, dry-mouth sensation, altered taste

WHAT CAUSES IT
Unknown, likely nerve-related

HOW IT IS DIAGNOSED
Mouth examination and exclusion of other causes

MAIN TREATMENT
Underlying cause treatment and pain management

CAN IT BE CURED?
Sometimes - underlying cause can be treated

IS IT AN EMERGENCY?
Sometimes - breathing difficulty or mouth swelling

LONG-TERM OUTLOOK
Often persistent without permanent mouth damage

Overview

Burning mouth syndrome is ongoing burning, scalding, or tingling in the mouth when the tissues look normal during an examination. The tongue is affected most often, but discomfort can also involve the lips, gums, roof of the mouth, throat, or the whole mouth.

Symptoms may be present every day for months or longer. Some people wake without pain and notice that it builds during the day. Others have symptoms from morning to night or experience symptoms that come and go.

Doctors distinguish between primary burning mouth syndrome and secondary oral burning . In primary burning mouth syndrome, no other medical or dental condition explains the symptoms. Research suggests that changes in the nerves that control pain, taste, and temperature may be involved. Secondary oral burning is caused by another problem, such as dry mouth, a

nutritional deficiency, an oral infection, or irritation from a dental product.

The condition does not usually damage the tissues of the mouth or develop into cancer. However, persistent discomfort can interfere with eating, sleep, mood, and quality of life. A careful evaluation matters because several treatable conditions can cause similar symptoms.

Symptoms

The main symptom is a burning or scalding feeling. Some people compare it with the sensation that follows drinking a very hot beverage, even though there is no visible burn.

Other symptoms may include:

The tongue, especially its front portion and sides, is a common location. Symptoms often affect both sides of the mouth rather than one small, clearly defined spot.

Burning mouth syndrome generally occurs without visible sores, swelling, or major color changes. A clinician should evaluate persistent burning accompanied by an ulcer, lump, bleeding area, or red or white patch because these findings may point to a different condition.

Seek emergency care if mouth burning begins with swelling of the lips, tongue, or throat; difficulty breathing; faintness; or trouble swallowing saliva. These symptoms could reflect a serious allergic reaction rather than burning mouth syndrome.

Arrange prompt medical or dental care for rapidly increasing swelling, fever, severe pain that prevents drinking, or signs of dehydration. Otherwise, mouth burning that lasts for more than a few weeks can usually be addressed through a routine appointment.

- Tingling, numbness, soreness, or a raw feeling
- Dry-mouth sensations, even when saliva production is normal
- A bitter, metallic, or otherwise altered taste
- Reduced ability to taste
- Increased thirst
- Symptoms that improve temporarily while eating or drinking

Causes and risk factors

The exact cause of primary burning mouth syndrome is not fully understood. Evidence suggests that it is a type of nerve-related pain. The nerves that carry pain, temperature, and taste signals may process sensations differently even though the lining of the mouth appears

healthy.

Primary burning mouth syndrome is more commonly recognized in women around or after menopause. Hormonal changes may contribute, but the relationship is not clear enough to explain every case.

Anxiety, depression, chronic stress, and sleep problems are more common in some people with persistent oral burning. This does not mean that the symptoms are imaginary or caused solely by emotions. Chronic pain can affect mood and sleep, while stress can also make pain harder to manage.

Secondary oral burning may be related to:

A person may have more than one contributing factor. In other cases, testing does not identify an underlying condition.

- Dry mouth: Saliva may decrease because of medicines, dehydration, salivary gland disease, or other health conditions.
- Nutritional deficiencies: Low levels of iron, vitamin B12, folate, zinc, or other nutrients can sometimes contribute to oral soreness.
- Oral candidiasis: This fungal infection, also called thrush, may cause burning, altered taste, redness, or white patches.
- Diabetes or thyroid disease: These conditions may affect nerves, saliva, or the tissues of the mouth.
- Acid reflux: Stomach contents reaching the throat or mouth may cause irritation in some people.
- Dental irritation: Poorly fitting dentures, a rough tooth, or certain dental materials may irritate nearby tissue.
- Contact reactions: Flavorings, fragrances, preservatives, or other ingredients in toothpaste, mouthwash, foods, or dental products may cause irritation.
- Oral habits: Frequent tongue rubbing, jaw clenching, teeth grinding, or biting the lips or cheeks may worsen discomfort.
- Medicines: Some medicines can contribute to dry mouth or, less commonly, changes in taste and oral sensation.

Diagnosis

There is no single test that confirms burning mouth syndrome. Diagnosis begins with a detailed medical and dental history and an examination of the mouth.

A clinician may ask where the burning occurs, when it began, and whether it changes during the day. Other useful details include changes in taste, dry-mouth symptoms, recent dental work, new medicines, nutritional habits, reflux symptoms, and products used in the mouth.

The examination looks for conditions that may mimic burning mouth syndrome, including infection, ulcers, inflammatory disorders, dental irritation, and suspicious tissue changes. The clinician may also assess saliva flow, dentures, teeth, and jaw or tongue habits.

Depending on the history and examination, testing may include:

A medication review is also important. Do not stop a prescribed medicine on your own. If a medicine could be contributing, the prescribing clinician can discuss whether an alternative or supervised adjustment is appropriate.

Primary burning mouth syndrome is usually diagnosed only after other reasonable causes have been excluded. Evaluation may involve a dentist, primary care clinician, oral medicine specialist, ear, nose, and throat specialist, neurologist, or another professional, depending on the findings.

- Blood tests for anemia, blood glucose, thyroid function, or selected vitamin and mineral levels
- An oral swab or culture if a fungal or bacterial infection is suspected
- Saliva testing when true dry mouth is possible
- Allergy or patch testing when a contact reaction is suspected
- A biopsy of abnormal tissue, although biopsy is not routinely needed when the mouth looks normal

Treatment and management

Treatment depends on whether an underlying cause is found. When oral burning is secondary to another condition, addressing that condition may reduce the symptoms.

For example, a clinician may treat a confirmed fungal infection, manage diabetes or thyroid disease, correct a documented nutritional deficiency, or address true dry mouth. Dental adjustments may help when dentures or a rough surface are causing irritation. Treatment should match the confirmed problem; taking vitamins or antifungal medicine without evidence of a deficiency or infection may not help and can delay a more useful evaluation.

Primary burning mouth syndrome can be challenging to treat. No single therapy works for everyone, and improvement may be gradual. The goal is often to reduce symptoms and improve eating, sleep, and daily function rather than promise an immediate cure.

Clinician-supervised options may include:

Evidence for these treatments is limited or inconsistent, and combinations may sometimes be used. A clinician can help weigh potential benefits against adverse effects and other health considerations.

Simple measures may make symptoms easier to manage:

Restrictive diets are not routinely necessary. Avoid only items that repeatedly and clearly worsen symptoms, and seek nutritional advice if eating becomes difficult.

- Cognitive behavioral therapy: This structured therapy teaches practical skills for coping with chronic pain and reducing its effect on daily life. It does not suggest that the pain is imagined.
- Clonazepam: This medicine may be used in the mouth or taken by mouth in selected cases. It can cause sleepiness and carries risks with ongoing use, so medical supervision is important.
- Medicines that modify nerve pain: Certain antidepressant or antiseizure medicines may be considered. When used for pain, they target nerve signaling and are not necessarily being prescribed for depression or seizures.
- Capsaicin: This substance affects pain fibers and is sometimes used in specialized treatment. It can initially increase burning and is not suitable for self-treatment without guidance.
- Alpha-lipoic acid: Studies have reported mixed results. Patients should discuss possible benefits, side effects, and interactions before using supplements.
- Sip cool water or suck on ice chips if safe for your teeth.
- Use sugar-free gum to support saliva flow.
- Choose mild, non-acidic foods when symptoms are active.
- Avoid tobacco and products that clearly trigger symptoms.
- Limit alcohol-containing mouthwash, strong mint or cinnamon flavoring, spicy foods, and highly acidic drinks if they worsen burning.
- Use a gentle, unflavored or mildly flavored toothpaste if regular toothpaste irritates the mouth.
- Keep a brief symptom record to identify patterns involving foods, products, stress, sleep, or medicine changes.

Complications

Burning mouth syndrome does not usually cause ulcers, scarring, or permanent injury to the mouth. Its main complications come from persistent pain and the effect that pain can have on everyday life.

Symptoms may disturb sleep, reduce enjoyment of food, or make social activities uncomfortable. Some people develop frustration, anxiety, low mood, or difficulty concentrating. These effects deserve attention as part of pain care rather than being dismissed as separate or unimportant.

Avoiding many foods can lead to an unbalanced diet or unintended weight loss. Frequent use of sweets or sugary drinks to soothe the mouth may also increase the risk of tooth decay. A clinician or dietitian can help if symptoms are limiting food choices.

Follow up

Routine follow-up allows the clinician to review test results, monitor symptoms, and assess whether treatment is helping. Because improvement may be slow, it can be useful to track pain intensity, sleep, eating, and daily function rather than focusing only on whether burning has disappeared completely.

Contact the treating clinician sooner if symptoms change significantly, a new medicine appears to worsen the burning, or treatment causes troublesome side effects. A repeat examination is appropriate if a sore, lump, bleeding area, or red or white patch develops, especially if it does not heal within about two weeks.

Seek prompt care for fever, spreading swelling, inability to drink, or substantial unintended weight loss. Call emergency services for difficulty breathing, throat or tongue swelling, faintness, or an inability to swallow saliva.

Sources

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