CONDITION

# Glossitis

Glossitis is inflammation of the tongue that can cause redness, soreness, swelling, or a smooth surface.

**WHAT IT IS**
Inflammation that changes the tongue's surface or size

**BODY SYSTEM**
Mouth and digestive system

**MAIN SYMPTOMS**
Sore tongue, smooth redness, swelling, taste changes

**WHAT CAUSES IT**
Nutrient deficiency, irritation, infection, allergy, or immune conditions

**HOW IT IS DIAGNOSED**
Mouth examination, with blood tests or swabs when needed

**MAIN TREATMENT**
Treating the cause and relieving mouth discomfort

**CAN IT BE CURED?**
Sometimes - reversible causes can be treated

**IS IT AN EMERGENCY?**
Sometimes - rapid swelling can block breathing

**LONG-TERM OUTLOOK**
Usually improves after the underlying cause is treated

## Overview

Glossitis means inflammation of the tongue. The tongue may become red, sore, swollen, unusually smooth, or sensitive to food and drink. Its normal small bumps, called papillae, may flatten or disappear.

Glossitis is a condition rather than one specific disease. It may develop after irritation or an allergic reaction, or it may be a sign of nutrient deficiency, infection, dry mouth, or another health problem. Some cases begin suddenly; others develop slowly or keep returning.

A smooth, shiny tongue caused by loss of papillae is sometimes called atrophic glossitis . "Atrophic" means the normal surface has thinned or worn down.

Most cases are not emergencies. However, sudden tongue swelling can affect the airway,

especially during a severe allergic reaction. Persistent tongue changes should also be assessed because several mouth conditions can look similar.

## Symptoms

Glossitis can affect the whole tongue or one area. Symptoms may include:

Some people have no pain and notice the change only while brushing their teeth or looking in a mirror.

Appearance can provide clues but does not confirm the cause. A smooth red tongue may occur with iron or vitamin B12 deficiency. White coating or patches may suggest a yeast infection. Irregular map-like patches may be geographic tongue, a separate benign condition also called benign migratory glossitis.

- Redness or a darker red colour than usual
- A smooth, shiny surface with fewer visible papillae
- Burning, tenderness, or pain
- Swelling or a tongue that feels thicker
- Sensitivity to spicy, acidic, salty, or hot foods
- Changes in taste
- Difficulty chewing, swallowing, or speaking when swelling is significant

## Causes and risk factors

Glossitis has many possible causes, and more than one may be present.

Low iron, vitamin B12, or folate can affect renewal of the tongue's surface. Deficiencies may result from limited intake, blood loss, poor nutrient absorption, coeliac disease, or pernicious anaemia, which prevents normal vitamin B12 absorption.

Local irritation may come from a sharp tooth, poorly fitting dental appliance, tongue biting, burns from hot food, tobacco, alcohol, or strongly flavoured mouth products. Dry mouth can increase vulnerability to irritation.

Candida yeast can overgrow in the mouth and cause oral thrush. This is more likely after antibiotics like amoxicillin or doxycycline , with inhaled corticosteroids or dentures, or when illness or treatment weakens the immune system. Bacterial and viral causes are less common.

Food, medicine, toothpaste, mouthwash, or dental materials can trigger an allergic reaction. A

serious reaction may cause rapid swelling rather than surface soreness alone.

Inflammatory mouth disorders, some skin conditions, and illnesses affecting the whole body may also be associated with glossitis. Certain medicines can contribute by causing dry mouth, irritation, or nutrient deficiency.

Risk factors alone do not identify the cause. Examination and, when needed, testing are important.

## Diagnosis

A dentist or medical professional will examine your tongue, teeth, gums, and the rest of your mouth. They may ask when the change began, whether it is painful, and what makes it better or worse.

They may also ask about your diet, medicines, dental appliances, tobacco or alcohol use, recent antibiotics, stomach or bowel symptoms, and changes such as tiredness, weight loss, numbness, or pale skin.

Tests may be used to identify the cause or rule out similar conditions. These can include:

A biopsy removes a small tissue sample for examination. It is not routinely needed for straightforward glossitis but may be recommended for a persistent lump, ulcer, firm area, or unexplained patch.

- Blood tests for anaemia or iron, vitamin B12, or folate deficiency
- A mouth swab or scraping if infection is suspected
- Tests for an absorption, immune, or inflammatory problem
- Allergy assessment if symptoms repeatedly follow an exposure

## Treatment and management

Treatment depends on the cause. There is no single treatment for every type of glossitis.

If testing finds an iron, vitamin B12, or folate deficiency, treatment usually involves replacing the nutrient and finding out why it became low. Treating the deficiency without investigating its source may leave blood loss or poor absorption unaddressed. Do not take large doses of supplements without advice, because they may cause harm or affect test results.

A confirmed Candida infection may be treated with an antifungal medicine. Antibiotics do not treat yeast-related or non-infectious glossitis and are used only for an appropriate bacterial

infection.

If a medicine may be contributing, the prescriber can review alternatives. Do not stop prescribed medicine suddenly unless advised to do so.

Managing irritation may involve smoothing a sharp tooth, adjusting a dental appliance, treating dry mouth, or avoiding a product that triggers symptoms. Inflammatory or allergic causes may need specific treatment.

While the tongue heals:

Strong mouthwashes, vigorous tongue scraping, and repeated home remedies can worsen soreness. If toothpaste or mouthwash seems to trigger symptoms, stop that product and ask a dental professional or pharmacist about an alternative.

- Choose soft, cool foods if chewing is painful
- Avoid tobacco, alcohol, and foods that sting
- Drink enough water and address dry mouth
- Use a soft toothbrush and clean the mouth gently
- Follow package directions for suitable non-prescription pain relief

## Complications

Glossitis usually improves without lasting tongue damage once the cause is treated. However, pain can make eating and drinking difficult, contributing to dehydration, weight loss, or inadequate nutrition. Swelling may affect speech, sleep, or denture fit.

Untreated iron or vitamin B12 deficiency can cause anaemia, weakness, shortness of breath, tingling, or numbness. Some nerve damage from prolonged vitamin B12 deficiency may not fully reverse.

Rapid tongue swelling can narrow the airway and requires emergency care.

A persistent ulcer, lump, hard area, or red or white patch may be another mouth disorder and needs assessment even if it is painless.

## Prevention

Not every case can be prevented, particularly when glossitis results from an immune condition or absorption problem.

Reduce avoidable irritation by caring for teeth and dentures, avoiding tobacco, and avoiding

products or foods that repeatedly cause soreness. A dentist can correct sharp teeth or poorly fitting appliances.

A balanced diet provides iron, vitamin B12, and folate, but diet cannot prevent deficiencies caused by bleeding or poor absorption. People who exclude animal products should seek reliable advice about vitamin B12, which is not naturally present in most plant foods.

Good denture hygiene and rinsing after using an inhaled corticosteroid like budesonide or fluticasone may reduce Candida overgrowth. Continue using inhalers as prescribed rather than stopping because of mouth symptoms.

## Living with it and what to expect

Recovery depends on the cause. Irritation from a burn or rubbing may settle within days after the trigger is removed. Infection or nutrient deficiency may take longer because the tongue needs time to repair.

Symptoms may return if the underlying issue remains. For example, iron replacement may help temporarily, but glossitis can recur if ongoing blood loss or poor absorption is not addressed.

Some conditions require follow-up blood tests, dental review, or monitoring of an inflammatory mouth disorder. Arrange further review if treatment helps only partly or the tongue changes again.

Most people can continue normal activities. During painful episodes, choose softer foods and avoid personal triggers. Visible improvement alone does not always mean the underlying cause has been corrected.

## When to get medical help

Call emergency services if tongue swelling is rapid or you have trouble breathing. Other emergency warning signs include throat tightness, inability to swallow saliva, faintness, widespread hives, or swelling of the lips, face, or neck. These may indicate a serious allergic reaction.

Seek prompt medical care if swelling is worsening, you cannot drink enough, or you have fever with severe mouth pain or spreading swelling. Prompt advice is also important if you have a weakened immune system and develop new mouth inflammation or signs of infection.

Arrange a routine dental or medical appointment if symptoms last longer than about two weeks, keep returning, or interfere with eating. Seek assessment if glossitis occurs with

tiredness, pale skin, unexplained weight loss, bowel symptoms, numbness, or tingling.

A tongue ulcer, lump, hard area, or unexplained red or white patch that does not heal should be examined. These findings often have non-cancerous causes but should not be assumed to be glossitis.

## Common questions

Is glossitis contagious?

Glossitis itself is not contagious. Nutrient deficiency, irritation, allergy, and most inflammatory causes cannot spread between people. Some infections can spread, although Candida often reflects overgrowth of yeast already present in the mouth.

Why is my tongue smooth and shiny?

The tongue looks smooth when its papillae become flattened or are lost. This is called atrophic glossitis. Possible causes include iron, vitamin B12, or folate deficiency, but examination and blood tests may be needed.

Can stress cause glossitis?

Stress is not usually a direct cause. It may worsen tongue biting, affect eating, or make discomfort more noticeable. Persistent burning or pain should be assessed because it may have another cause.

How long does glossitis take to go away?

Mild irritation may improve within days after the trigger is removed. Glossitis caused by infection, deficiency, or an ongoing condition may take longer and can return unless the cause is treated. Arrange an assessment if it has not improved after about two weeks.

Is glossitis the same as geographic tongue?

No. Geographic tongue causes smooth red patches with pale or white borders that change location over time. It is benign and often needs no treatment. Despite its medical name, benign migratory glossitis, it differs from widespread inflammation caused by deficiency, infection, or irritation.

Can glossitis be a sign of vitamin B12 deficiency?

Yes. Vitamin B12 deficiency can cause a sore, red, smooth tongue, sometimes with tiredness, anaemia, numbness, or tingling. These symptoms have other causes, so testing is more reliable than starting high-dose supplements without assessment.

## Sources

- MedlinePlus Medical Encyclopedia: Glossitis , U.S. National Library of Medicine
- Glossitis , StatPearls, NCBI Bookshelf
- Common Tongue Conditions in Primary Care , American Family Physician , 2010;81(5):627-634
- Vitamin B12: Fact Sheet for Health Professionals , National Institutes of Health Office of Dietary Supplements
- Iron: Fact Sheet for Health Professionals , National Institutes of Health Office of Dietary Supplements
- Mouth cancer , NHS