PROCEDURE

Tongue biopsy

A tongue biopsy removes a small tissue sample for examination under a microscope.

PURPOSE
Remove tongue tissue for laboratory diagnosis

PROCEDURE TYPE
Diagnostic or therapeutic, surgical through the mouth

WHERE IT IS DONE
Outpatient clinic or operating theatre

ANAESTHESIA
Local; sedation or general for selected biopsies

HOW LONG IT TAKES
Usually 15-30 minutes

PREPARATION
Medication review; fasting for sedation or general anaesthesia

RECOVERY
Same day; no driving after sedation or general anaesthesia

MAIN RISKS
Bleeding, infection, pain, tongue numbness

RESULTS
Several days to two weeks for pathology

Overview

A tongue biopsy is a procedure that removes a small piece of tissue from your tongue. A pathologist, a doctor who examines cells and tissues, studies the sample under a microscope.

Most tongue biopsies are done through the mouth in an outpatient clinic using local anaesthetic. Local anaesthetic numbs the area while you remain awake. A biopsy farther back on the tongue, or one requiring a larger sample, may be done in an operating theatre with sedation or general anaesthesia.

An incisional biopsy removes part of an abnormal area. An excisional biopsy removes the whole area when it is small and safe to remove. A punch biopsy uses a small circular tool to take a sample.

Why the procedure is performed

A biopsy can help explain a tongue change that cannot be identified reliably by examination alone. Examples include:

The results may show inflammation, infection, a non-cancerous growth, precancerous cell changes, or cancer. A biopsy is used to establish a diagnosis; being offered one does not mean that cancer has been found.

Sometimes the procedure also removes the entire abnormal area. Further treatment may still be needed after an excisional biopsy, depending on the laboratory findings and whether the edges of the sample are clear.

- An ulcer that does not heal as expected
- A lump, thickened area, or unusual growth
- A persistent red, white, or mixed-colour patch
- An area that bleeds easily or feels unusually firm
- A change that remains unexplained after dental or medical assessment

Who should and should not have it

A biopsy may be appropriate when a tongue lesion persists, has concerning features, or cannot be diagnosed confidently by examination and imaging. It may also be needed to plan treatment for an already identified condition.

It may not be the right first step if an area clearly relates to recent trauma, such as biting the tongue or rubbing against a sharp tooth, and is healing normally. Your healthcare team may first address the cause and arrange a planned review.

A biopsy may need to be delayed or modified if you have:

Tell the team about allergies, previous problems with anaesthesia, and any condition affecting healing or immunity. Blood-thinning medicine does not always prevent a biopsy, but it changes how the procedure should be planned. Do not stop prescribed medicine unless the treating team tells you to.

- An uncontrolled bleeding problem
- Medicines that significantly affect clotting and require a specific plan
- An active infection at or near the biopsy site

- A medical condition that makes sedation or surgery temporarily unsafe
- A suspected blood-vessel abnormality, which could bleed heavily if sampled routinely

How to prepare

The treating facility's own instructions take priority because preparation differs according to the biopsy site and type of anaesthesia.

Give the team an up-to-date list of your medicines, vitamins, and supplements. Include aspirin, warfarin, apixaban, rivaroxaban, clopidogrel, and other medicines that affect bleeding. The clinician arranging the biopsy should tell you whether any changes are needed.

If only local anaesthetic is planned, you can often eat and drink normally beforehand. If you will receive sedation or general anaesthesia, you will need to stop eating and drinking at specified times. Follow those fasting instructions exactly.

Arrange for an adult to take you home if you are having sedation or general anaesthesia. You may also need someone to stay with you afterward. Tell the facility if you become unwell before the appointment or develop a new mouth infection.

What happens during the procedure

You will usually sit in a dental-style chair or lie on an operating table. The team checks your identity, the planned biopsy site, allergies, and consent.

For local anaesthesia, an injection is placed into or near the tongue. It may sting briefly. The area should then feel numb, although you may notice pressure, pulling, or movement. Tell the clinician if you feel sharp pain.

The clinician holds the tongue steady and removes a small sample using a scalpel, punch tool, scissors, or another surgical instrument. If the area is small, the whole lesion may be removed. Bleeding is controlled with pressure, stitches, heat treatment, or other surgical methods.

Stitches are often dissolvable. The tissue is placed in a labelled container and sent to a pathology laboratory. A simple biopsy usually takes about 15 to 30 minutes, although additional examination, anaesthesia, or a difficult location can make it longer.

Recovery and what to expect afterward

Pain: Your tongue may feel sore once the local anaesthetic wears off. Use the pain medicine

recommended by your treating team. Some discomfort, mild swelling, and a small amount of blood-stained saliva can occur. Pain should gradually improve rather than become more severe.

Eating: Wait until numbness has worn off before chewing or drinking hot liquids so you do not bite or burn your tongue. Start with cool or lukewarm soft foods. Spicy, acidic, sharp, or very hot foods may irritate the wound. Follow any instructions about mouth rinsing and tooth brushing.

Activity: Take it easy for the rest of the day. Strenuous exercise may restart bleeding. Avoid smoking or vaping around the healing period because they can irritate the wound. Avoid alcohol for as long as your team advises, particularly while taking pain medicine.

Driving: You may be able to drive after local anaesthetic alone if you feel well and the facility agrees. Do not drive home after sedation or general anaesthesia. Follow the facility's restriction, which may continue into the next day.

Work: Many people return to light work within a day or two after a small biopsy. You may need longer if your work is physically demanding, requires extensive speaking, or if you had general anaesthesia or a larger biopsy.

Risks and possible complications

A tongue biopsy leaves a wound, so soreness and minor bleeding are expected. Possible complications include:

The importance of these risks depends on the biopsy's size and position, your health, and medicines that affect bleeding. Significant swelling is especially important because the tongue and floor of the mouth are close to the airway.

- Bleeding that continues or restarts
- Infection
- Swelling
- A reaction to anaesthetic medicine
- Temporary or persistent numbness, altered sensation, or taste change
- Scarring or changes in tongue movement after a larger biopsy
- An inadequate or unrepresentative sample requiring another biopsy

Results and follow up

The clinician may describe what the area looked like immediately, but appearance alone is not the final result. Laboratory processing usually takes several days to about two weeks. It can take longer if special stains, molecular tests, or a second specialist review are needed.

Ask how and when you will receive the result. Do not assume that no news means a normal result.

Your follow-up may include a wound check or a discussion of the pathology report. A non-cancerous result may need no further treatment, monitoring, medicine, or removal of the remaining lesion. Precancerous changes or cancer usually lead to specialist assessment and discussion of treatment options. If the sample does not explain the lesion, repeat biopsy or further testing may be recommended.

Alternatives

The reasonable alternatives depend on how the tongue area looks and why biopsy has been suggested.

Ask why a particular biopsy method is being recommended and what could change if you wait.

- Planned observation: A low-concern area may be photographed and reviewed after a short interval. This avoids a wound but may delay diagnosis if the change does not resolve.
- Treating an obvious source of irritation first: Smoothing a sharp tooth or adjusting a denture may allow a traumatic ulcer to heal. Persistent changes still need reassessment.
- Brush or surface-cell testing: This is less invasive, but it does not collect the deeper tissue needed to assess the full structure of a lesion. An abnormal or uncertain result may still require biopsy.
- Imaging: Ultrasound, CT, MRI, or other scans can show a lesion's size and nearby structures. Imaging usually cannot identify the cell type with the certainty of a tissue sample.
- Removing the whole lesion: This may provide both diagnosis and treatment for a small, suitable lesion, but creates a larger wound than taking only a sample.
- No biopsy: This avoids the procedure but leaves uncertainty and may delay treatment if the change is important.

When to call your healthcare team

Contact your healthcare team promptly for worsening pain, increasing swelling, fever, pus or a bad-tasting discharge, difficulty drinking enough fluid, or a wound that opens. Also call if numbness persists longer than the team told you to expect.

For bleeding, follow the pressure instructions provided by the facility. Seek urgent advice if bleeding continues despite firm, uninterrupted pressure or repeatedly fills your mouth.

Call emergency services or go to an emergency department for:

Routine questions about stitches, diet, pathology timing, or a follow-up appointment can be handled during normal clinic hours.

- Trouble breathing or a feeling that your airway is narrowing
- Rapidly increasing tongue or floor-of-mouth swelling
- Heavy bleeding that does not stop with pressure
- Fainting, severe weakness, or choking on blood

Common questions

Will I be asleep?

Usually not for a small, accessible tongue biopsy. Local anaesthetic numbs the area while you remain awake. Sedation or general anaesthesia may be used for a larger biopsy, a difficult location, or when remaining still would be hard.

Can I drive home?

You may be allowed to drive after local anaesthetic alone. You cannot drive home after sedation or general anaesthesia, and you must follow the facility's stated restriction.

How painful is a tongue biopsy?

The local anaesthetic injection may sting. During the biopsy, you should mainly feel pressure or movement. Soreness after the numbness wears off is common and is usually managed with the pain relief recommended by your team.

When will I know the result?

Most pathology results take several days to about two weeks. Special testing can take longer. Your facility should tell you how the result will be given to you.

Will I be able to eat and talk?

You can usually speak afterward, although your tongue may feel awkward while numb or swollen. Wait for the numbness to wear off before chewing, then begin with soft foods.

Can a biopsy make cancer spread?

A properly performed tongue biopsy is a standard way to diagnose cancer and is not considered to cause it to spread. Getting an accurate tissue diagnosis helps the team plan appropriate care.

Sources

- National Health Service. Mouth cancer: Diagnosis
- American Cancer Society. Tests for Oral Cavity and Oropharyngeal Cancers
- MSD Manual Professional Edition. How To Do an Oral Biopsy
- StatPearls, NCBI Bookshelf. Oral Surgery, Biopsies
- Memorial Sloan Kettering Cancer Center. About Your Oral Biopsy
- National Institute for Health and Care Excellence. Suspected cancer: recognition and referral (NG12)