PROCEDURE

Salivary gland biopsy

A salivary gland biopsy removes a small tissue sample for laboratory examination.

PURPOSE
Identify inflammation, infection, or abnormal cells in salivary tissue

PROCEDURE TYPE
Diagnostic; minimally invasive needle biopsy or minor surgical biopsy

WHERE IT IS DONE
Outpatient clinic, radiology department, or operating theatre

ANAESTHESIA
Local; sedation or general anaesthesia for selected surgical biopsies

HOW LONG IT TAKES
Usually 15 to 45 minutes

PREPARATION
Medication review; fasting only for sedation or general anaesthesia

RECOVERY
Same day; no driving after sedation or general anaesthesia

MAIN RISKS
Bleeding, infection, numbness, nerve or salivary duct injury

RESULTS
Pathology results usually available within several days

Overview

A salivary gland biopsy removes a small sample of tissue so it can be examined under a microscope. It is a diagnostic procedure, meaning it helps identify a condition rather than treat it.

There are several ways to take the sample. The method depends on which gland is being tested and what your healthcare team needs to learn.

A minor salivary gland biopsy , also called a lip biopsy, takes several tiny glands from inside the lower lip. It is often used when testing for Sjögren disease, an immune system condition that can reduce tear and saliva production.

A needle biopsy takes cells or a narrow core of tissue from a larger gland, such as the parotid gland near the ear or the submandibular gland under the jaw. Ultrasound may be used to guide

the needle.

An open biopsy uses a surgical cut to reach the gland. It provides more tissue but is more invasive, so it is used selectively.

Why the procedure is performed

Your healthcare team may recommend a biopsy to investigate:

A biopsy cannot always provide a final answer. A needle sample may contain too few cells, or the tissue may not show the most important part of a lump. Another biopsy or surgery may then be needed.

- A persistent lump in or near a salivary gland
- Unexplained enlargement of a gland
- Imaging results that need tissue testing
- Possible inflammation or infection
- Possible Sjögren disease when other tests do not give a clear answer
- Abnormal cells that could be benign or cancerous

Who should and should not have it

A biopsy may be appropriate when the result is likely to clarify a diagnosis or change your treatment. For example, it can help distinguish inflammation from a tumour or support a diagnosis of Sjögren disease when blood, eye, and saliva tests are inconclusive.

It may not be the right next step if imaging or less invasive tests can answer the question. It may also be unnecessary when the result would not change your care.

The procedure may be delayed or adapted if you have:

Blood-thinning medicine does not automatically prevent a biopsy. Your team should balance the bleeding risk against the reason you take the medicine. Do not stop aspirin, warfarin, apixaban, clopidogrel, or another blood thinner unless the clinician managing the procedure tells you to.

For a major salivary gland lump, an open biopsy is not always preferred because nearby facial nerves and salivary ducts can be injured. A needle biopsy or planned surgical removal may be safer or more informative.

- An active infection at the planned biopsy site
- A bleeding disorder that has not been addressed
- Medicines that significantly increase bleeding risk
- A medical condition that makes sedation or surgery unsafe at that time
- Difficulty remaining still for a needle biopsy

How to prepare

Your treating facility's own instructions take priority because preparation differs by biopsy method and anaesthesia.

Tell the team about all prescription medicines, over-the-counter medicines, vitamins, and supplements you take. Mention previous bleeding problems, medicine allergies, pregnancy, and reactions to local or general anaesthesia.

Ask specifically whether you should change any blood-thinning or diabetes medicines. Never make these changes on your own.

You can usually eat and drink normally before a biopsy performed only with local anaesthetic. If you will receive sedation or general anaesthesia, you will be given fasting instructions.

Arrange for someone to drive you home if sedation or general anaesthesia is planned. Wear comfortable clothing and leave jewellery near the face or neck at home.

What happens during the procedure

Before starting, the clinician confirms the biopsy site and explains which method will be used. Your skin or inner lip is cleaned. Local anaesthetic is injected to numb the area; this may sting briefly.

For a needle biopsy, the clinician may use ultrasound to locate the gland and nearby blood vessels. A thin needle removes cells, or a slightly larger core needle removes a narrow piece of tissue. Several samples may be taken. Pressure and a small dressing are applied afterward.

For a minor salivary gland biopsy, a small cut is made inside the lower lip. Several tiny glands are removed. The cut may be closed with dissolving stitches.

An open biopsy involves a larger incision and may require sedation or general anaesthesia. The surgeon carefully works around facial nerves and salivary ducts. The incision is closed with stitches, and a dressing may be applied.

The samples are labelled and sent to a pathology laboratory. A pathologist is a doctor who examines cells and tissue for signs of disease.

Recovery and what to expect afterward

Pain: Mild soreness, swelling, bruising, or tenderness is expected. A lip biopsy can leave temporary numbness around the incision. Use pain relief recommended by your team and follow instructions about ice packs or dressings.

Eating: After a lip biopsy, wait until the numbness has worn off before eating or drinking hot liquids. Soft, cool foods may feel more comfortable at first. Spicy, acidic, sharp, or very hot foods can irritate the wound.

Activity: Plan to rest for the remainder of the day. Avoid touching the wound or doing strenuous activity for the period specified by your team. Follow any instructions for changing a dressing or rinsing your mouth.

Driving: You should not drive after sedation or general anaesthesia. Follow the facility's stated restriction. After local anaesthetic alone, driving may be possible if you feel well and can safely control the vehicle.

Work: Many people return to non-physical work within a day or two. You may need longer after an open biopsy, a physically demanding job, or general anaesthesia.

Risks and possible complications

Possible risks include:

Local anaesthetic, sedation, and general anaesthesia also have their own risks. Your team should explain those that apply to your planned procedure.

- Bleeding or a collection of blood under the skin
- Infection
- Pain, swelling, or bruising
- Temporary or persistent numbness, especially after a lip biopsy
- Scarring
- An inadequate sample that requires another procedure
- Damage to a salivary duct, which can cause saliva leakage or swelling

- Nerve injury near a major gland, potentially causing facial weakness

Results and follow up

A pathologist usually needs several days to process and examine the sample. Special stains or molecular tests may take longer.

The report may describe normal tissue, inflammation, infection, immune system changes, a benign growth, cancerous cells, or an inconclusive sample. A minor salivary gland report may include a focus score , which measures clusters of immune cells. This result must be interpreted with your symptoms and other tests; it does not diagnose Sjögren disease by itself.

Ask when and how you will receive the result. Routine follow-up may include checking the wound, removing non-dissolving stitches, reviewing the pathology report, or planning more tests.

Alternatives

The useful alternatives depend on what the biopsy is intended to investigate.

For a salivary gland lump, ultrasound, CT, or MRI can show its size and location without removing tissue. Imaging is easier and avoids a wound, but it often cannot reliably determine the exact cell type.

A fine-needle aspiration removes individual cells through a thin needle. It is less invasive than a core or open biopsy, but it provides less tissue and may give an inconclusive result.

A core needle biopsy provides more tissue and preserves its structure. It may give more information than fine-needle aspiration, but it uses a larger needle and may carry a greater risk of bleeding or injury to nearby structures.

Some lumps can be monitored with examinations and repeat imaging. This avoids an immediate procedure but delays a definite tissue diagnosis and may not be suitable if the finding is concerning.

For suspected Sjögren disease, alternatives include blood tests for antibodies, eye tests, and measurements of saliva production. These avoid a lip incision but may not settle the diagnosis. A biopsy is most useful when uncertainty remains and the result would affect care.

Surgical removal can provide the most tissue and may also treat a removable lump. It requires a larger operation and carries greater risks, including scarring and nerve or salivary duct injury.

When to call your healthcare team

Contact your healthcare team promptly if you develop increasing redness, warmth, swelling, pus, fever, worsening pain, or bleeding that returns after initially stopping. Also report new facial weakness, persistent saliva leaking from the wound, or numbness that is worsening rather than improving.

Seek emergency care for trouble breathing, rapidly increasing mouth or neck swelling, fainting, or heavy bleeding that does not stop with firm pressure.

Mild bruising, tenderness, and limited swelling can be part of routine recovery. Keep your planned follow-up even if the wound feels well, because the pathology result still needs review.

Common questions

Will I be asleep?

Most needle and lip biopsies use local anaesthetic, so you are awake but the area is numb. Sedation or general anaesthesia may be used for a more involved surgical biopsy.

Can I drive home?

Not after sedation or general anaesthesia. After local anaesthetic alone, ask the facility whether it is safe to drive and arrange backup transport if possible.

How painful is it?

The numbing injection can sting briefly. You may feel pressure or pulling during the biopsy. Mild soreness afterward is common, while severe or worsening pain needs medical advice.

When will I know the result?

The sample must be processed by a pathology laboratory, so results usually take several days. Additional testing can take longer.

Will a lip biopsy leave a scar or numbness?

The incision is inside the lower lip, so an external scar is not expected. Temporary numbness can occur. Persistent altered sensation is possible and should be discussed before you consent.

What if the biopsy does not give an answer?

Your team may ask the pathologist to perform additional tests, repeat the biopsy using another method, monitor the area, or recommend surgical removal.

Sources

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