ENT Conditions and Procedures

Submandibular gland excision - Surgery for infection and/or recurrent blockage - NEW

Quick Links

ABOUT THE CONDITION

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What is the submandibular gland?

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The submandibular gland is the second largest of the main salivary glands (see Figure 1). It is the size of a walnut and sits just below the jawbone on either side of the neck. The gland produces saliva, which drains through a duct (tube) into the front of the mouth under the tongue.

Figure 1. The position of the main salivary glands

What symptoms may I develop from the submandibular gland?

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An **infection** may cause swelling of the submandibular gland. The gland may feel hot and sore, or tender, to touch. This can be treated with antibiotics. Sometimes patients need to go to hospital for intravenous antibiotics (antibiotics delivered into the veins with a drip). Rarely, a patient may develop an abscess (collection of pus) which needs to be drained, usually under a general anaesthetic.

Sometimes the gland suffers **repeated infections** and the treatment for this may be to remove the gland completely.

The submandibular gland may swell when you eat or drink, then shrink afterwards if the duct has an **obstruction to the flow of saliva**. The obstruction may be caused by a narrowing of the duct due to scar tissue formed after repeated inflammation.

Sometimes a **growth or tumour** can develop in one of the glands, but this is rare. Please refer to the leaflet *Submandibular gland excision – surgery to remove a lump*.

ABOUT THE OPERATION - BENEFITS AND ALTERNATIVES

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What is the benefit of having surgery to remove the submandibular gland?

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Your surgeon has recommended surgery because you have had a lot of swelling and/or infections, which are not getting better or less frequent with other treatments. Removing the gland should stop any further swelling and infections.

Will I need any tests?

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If your doctor thinks you have an enlarged submandibular gland, they may organise an **ultrasound scan** to obtain more information about the swelling. Sometimes the person performing the ultrasound will take a sample of cells (called a biopsy) from the gland with a small needle. This is called fine needle aspiration (FNA). Sometimes a sample of tissue is taken with a larger needle. This is called a core biopsy. Biopsies are usually taken when there is a lump in the submandibular gland.

Other scans (such as an x-ray, a CT scan, or an MRI scan) may be required to give your specialist more information about the enlarged salivary gland. These scans will only be organised if your specialist thinks that they are is necessary.

A tiny telescope may be used to see if there is a blockage in the duct. This is called **sialendoscopy**. This service is not available in every hospital. Only certain people with a blocked duct will benefit from this test.

What does submandibular gland surgery involve?

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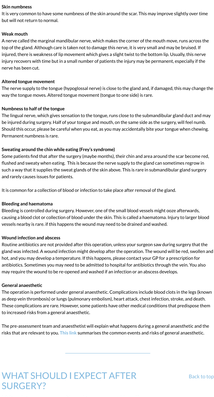
The operation is performed while you are asleep under a general anaesthetic. A cut is made below the jaw line. The cut is about five cm long and we try to hide it in a skin crease or wrinkle in your neck. The gland is disconnected from its blood vessels and nerves. The gland is removed, and the stump of the salivary duct is tied off.

A wound drain may be required if the gland was large or if you had a lot of infections of the gland. This is a plastic tube inserted through the skin, which prevents blood and fluid from collecting by allowing it to drain away. The skin will be closed with stitches or tissue glue.



What are the alternatives to surgery? What will happen if I do not have the operation if it has been recommended to me?

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If the swelling in the gland is due to **infection**, this can be treated with antibiotics. If the infection is very severe than you may require admission to hospital for intravenous antibiotics (antibiotics given into the veins by a drip). Rarely, you may need an operation to drain an abscess or a collection of pus from the gland.

Swelling in the gland caused by an **obstruction or blockage** of the duct can be treated by massaging the gland to encourage the flow of saliva through the duct. Eating and drinking substances that increase saliva production (e.g. sucking sweets/lozenges) is also helpful. We encourage drinking a lot of water. Most cases of partial obstruction are managed this way.

If blockages are stuck in the submandibular gland or duct and these blockages cannot be removed, then you will continue to have painful swelling of the gland every time you eat. You may wish to put up with these recurrent episodes of discomfort instead of having surgery because of the risks associated with surgery described below.

Sometimes the obstruction needs to be treated by dilating or stretching a narrowed duct, removing a blockage from the duct or opening the duct surgically. This may be done in the outpatient clinic under local anaesthetic (while you are awake) or sometimes it requires an operation under general anaesthetic (while you are asleep). Your surgeon will carry out this procedure only after the worst of the swelling has settled down.

ABOUT THE RISKS

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Are there any complications to this operation?

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All operations have an intended benefit but also have risks. Some of the risks described may be more common if there have been a lot of infections of the submandibular salivary gland, as this means it will be surrounded by scar tissue. Scar tissue can make important structures such as nerves and blood vessels difficult to identify.

Complications are grouped into the following categories:

Nerve damage
Nerve damage can occur, as there are a lot of important nerves right next to the gland. The tissue around the gland can be very inflamed and scarred if you have had a lot of infections. Your surgeon will be working as carefully as possible around the nerves, but they can be bruised or cut.

Skin numbness
It is very common to have some numbness of the skin around the scar. This may improve slightly over time but will not return to normal.

Weak mouth
A nerve called the marginal mandibular nerve, which makes the corner of the mouth move, runs across the top of the gland. Although care is taken not to damage this nerve, it is very small and may be bruised. If injured, there is weakness of lip movement which gives a slight twist to the bottom lip. Usually, this nerve injury recovers with time but in a small number of patients the injury may be permanent, especially if the nerve has been cut.

Altered tongue movement
The nerve supply to the tongue (hypoglossal nerve) is close to the gland and, if damaged, this may change the way the tongue moves. Altered tongue movement (tongue to one side) is rare.

Numbness to half of the tongue
The lingual nerve, which gives sensation to the tongue, runs close to the submandibular gland duct and may be injured during surgery. Half of your tongue and mouth, on the same side as the surgery, will feel numb. Should this occur, please be careful when you eat, as you may accidentally bite your tongue when chewing. Permanent numbness is rare.

Sweating around the chin while eating (Frey's syndrome)
Some patients find that after the surgery (maybe months), their chin and area around the scar become red, flushed and sweaty when eating. This is because the nerve supply to the gland can sometimes regrow in such a way that it supplies the sweat glands of the skin above. This is rare in submandibular gland surgery and rarely causes issues for patients.

It is common for a collection of blood or infection to take place after removal of the gland.

Bleeding and haematoma
Bleeding is controlled during surgery. However, one of the small blood vessels might soon afterwards, causing a blood clot or collection of blood under the skin. This is called a haematoma. Injury to larger blood vessels rarely is rare. If this happens the wound may need to be drained and washed.

Wound infection and abscess
Routine antibiotics are not provided after this operation, unless your surgeon saw during surgery that the gland was infected. A wound infection might develop after the operation. The wound will be red, swollen and hot, and you may develop a temperature. If this happens, please contact your GP for a prescription for antibiotics. Sometimes you may need to be admitted to hospital for antibiotics through the vein. You also may require the wound to be re-opened and washed if an infection or an abscess develops.

General anaesthetic
The operation is performed under general anaesthetic. Complications include blood clots in the legs (known as deep vein thrombosis) or lungs (pulmonary embolism), heart attack, chest infection, stroke, and death. These complications are rare. However, some patients have other medical conditions that predispose them to increased risks from a general anaesthetic.

The pre-assessment team and anaesthetist will explain what happens during a general anaesthetic and the risks that are relevant to you. This link summarises the common events and risks of general anaesthetic.

WHAT SHOULD I EXPECT AFTER SURGERY?

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What happens after the operation?

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After the operation, you will be transferred to the recovery area. When your anaesthetic has worn off, you will be taken back to the ward or day surgery unit.

Will I have a drain in my neck?

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A wound drain may be required, especially if the wound oozed a lot during surgery. The nursing staff will monitor your neck and drain. You will be reviewed on the ward round and a decision will be made regarding when the drain can be removed.

How long will I stay in hospital?

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Some operations can be done as a day case, which means you can be discharged a few hours after your surgery.

If you are staying in hospital because a drain has been inserted during surgery, you will be discharged once the drain has been removed. This is usually the day after the operation. Your surgeon will need to be satisfied that your neck wound is healthy, and you are fit enough to go home.

If for any reason, there is a complication following surgery, then you might need to stay in hospital for longer.

What is the recovery period?

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We recommend a couple of weeks to recover from the operation. If you need a sick note, please ask your surgical team.

Do I have stitches?

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Some surgeons will close the wound with staples, stitches or skin glue. If you have staples or stitches, the ward nurse will organise for these to be removed either at your GP practice, usually seven days after the operation, or in the ENT outpatient department.

Follow-up

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A pathologist in a laboratory examines the gland after it has been removed. It may take a few weeks for you to get the result.

You will be advised by your surgical team, who will either write to you with the result of your pathology (what the lump is) or organise to tell you about the result in person, in clinic.

Will my mouth be dry?

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No. Removing a salivary gland does not significantly affect the production of saliva. There are other salivary glands in the mouth which will still produce saliva and keep your mouth moist.

QUICK FACTS

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- The skin on your upper neck, around the scar, maybe numb after surgery. Gentlemen should be careful when shaving.
- The nerve to the corner of your mouth may be temporarily weak after surgery. Sometimes the weakness is permanent.
- Altered tongue movement (tongue to one side)

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