

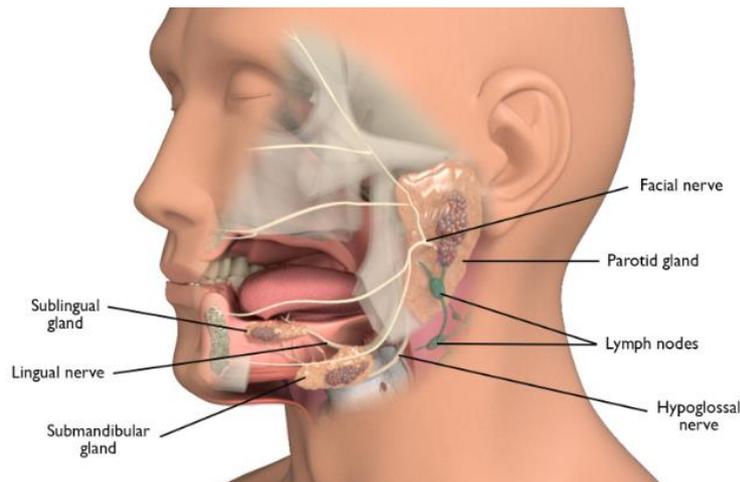
SUBMANDIBULAR AND SUBLINGUAL SALIVARY GLAND SURGERY

This information aims to help you understand the operation, what is involved and some common complications that may occur. It may help answer some of your questions and help you think of other questions that you may want to ask your surgeon; it is not intended to replace advice or discussion between you and your [cancer care team](#).

AN OVERVIEW TO SUBMANDIBULAR OR SUBLINGUAL GLAND SURGERY

[Salivary glands](#) can be either **major (large)** or **minor (small)** (see picture below).

- There are three pairs of major salivary glands – parotid, submandibular glands, and sublingual glands.



- The submandibular glands lie under the jawbone, one on each side. They release saliva into the mouth through a duct (tube) that opens in the floor of the mouth, under the tip of the tongue.
 - Three important nerves are found next to the submandibular glands – the hypoglossal nerve, lingual nerve and marginal branch of the facial nerve. These nerves give movement, feeling and taste to the tongue and move the lower lip.
- Tumours of the submandibular gland can be benign (not cancer) or malignant (cancer).
- The sublingual glands lie under the tongue, one on each side. They release saliva into the submandibular duct and are near the lingual nerves which give feeling and taste to the front of the tongue.

- The sublingual glands are the smallest of the major salivary glands and rarely develop tumours, but tend to be malignant (cancer) when they do develop.
- The minor salivary glands are found inside the mouth, just under the surface including the lips, cheeks and top of the mouth (soft palate).

WHY IS SUBMANDIBULAR OR SUBLINGUAL SURGERY NEEDED

- Surgery to remove the submandibular or sublingual glands is recommended when a tumour develops in these glands. The submandibular gland can also develop stones (calculi) that may require removal of the gland. The sublingual gland is also removed to treat swellings caused by leaks of saliva called a ranula.
- If the tumour is a cancer, it may grow outside of the gland and tissue nearby may need to be removed in order to reduce the chance of any cancer cells being left behind.
- Sometimes the lymph nodes in the neck may need to be removed in addition to the cancer in the salivary glands. This is called a [neck dissection](#). The submandibular gland is often removed during a neck dissection because it is surrounded by lymph nodes. You may want to download information on neck dissection, which is available on the [Beyond Five website](#).
- Tissue removed from the submandibular or sublingual gland surgery will be examined in detail by a specialist pathologist, under a microscope to look for cancer cells and to assess whether additional treatment is needed. Through this examination, the cancer can be [accurately staged](#). Further information about staging of cancer is available on the [Beyond Five website](#).

HOW TO PREPARE FOR THE OPERATION

Before the operation:

- You will need to fast (have nothing to eat or drink) for 6 hours before your operation (unless advised differently by your surgeon or anaesthetist) because the submandibular or sublingual gland surgery is performed under a general anaesthetic (you will be asleep and will not remember what happens during the operation).
- Your surgeon will explain the details of your operation. Be sure to bring up any questions or concerns, and share your needs and wishes with your surgeon (see box).
- You should speak to your doctor about how to manage aspects of your lifestyle, such as smoking, drinking alcohol and chronic conditions (e.g. diabetes and obesity) that may increase the risk of complications.
 - If you take blood thinning medication for a heart condition or blood clots (such as warfarin, Plavix, aspirin or Pradaxa), make sure your surgeon is aware. Some of these medications need to be stopped more than a week before the operation. Sometimes a short-acting blood thinner (such as Clexane) is used before and after the surgery.

Possible questions that you may want to ask your surgeon

- What sort of food should I eat after the surgery?
- What are the risks of surgery?
- Will I still produce any saliva?
- How long does the operation take? How long will I stay in hospital?
- If the tumour is a cancer, will I need radiation therapy?

Additional questions are listed at the end of this factsheet.

Visit the [Beyond Five website](#) for further information on the health professionals who may be part of your [cancer care team](#)

WHAT TO EXPECT DURING THE OPERATION

- During submandibular gland surgery, the surgeon will make an incision (cut) in the upper neck about 4cm below the jaw. The nerves to the lower lip and tongue will be carefully separated from the gland and the tube that drains saliva into the mouth (duct) will be sealed.
- During sublingual gland surgery, the surgeon will make a cut under the tongue into the floor of the mouth to remove the gland. The nerves to the tongue and the submandibular duct will be carefully separated from the gland.
- The operation usually takes about an hour, depending on how complex your operation may be.
- If there is a risk that cancer has spread into the nearby lymph nodes, these will also be removed. Visit the [Beyond Five website](#) to download information about removal of lymph nodes ([neck dissection](#)).

WHAT TO EXPECT AFTER THE OPERATION

- After the operation, once you are fully awake, you will be moved to a bed in the hospital.
- If you had the submandibular gland removed, you will have a surgical drain coming from the site of surgery to allow blood or lymphatic fluid to escape and prevent swelling. These will be removed before you go home.
- Your anaesthetist and surgical team will give you medicine to help control any pain and nausea after the operation.
- You should not notice any effect of dry mouth, as you have many salivary glands that make saliva.
- If the operation was through the mouth, usually you can have soft food to eat but sometimes you may need to wait a few days after the operation before you can eat to allow your mouth to heal. If this is the case, you will receive nutrition through a [feeding tube](#). You may want to download information on feeding tubes, which is available on the [Beyond Five website](#).
- Most patients stay in hospital overnight and go home the next day, however this will depend on the extent of the operation and how you recover.

POSSIBLE RISKS OF SUBMANDIBULAR AND SUBLINGUAL GLAND SURGERY

All operations carry some risks such as blood clots, wound infections, bleeding, chest infection, adverse reactions to anaesthetic, and other complications. These risks will be explained by your cancer specialist and anaesthetist.

Your doctor will explain details of the operation, general risks and side effects of the operation, they may recommend:

- **stopping smoking** before the operation
- **stopping blood thinners** (e.g. aspirin) before surgery to reduce the risk of bleeding
- **a blood thinner** (called heparin) may be injected before and after surgery to reduce the risk of blood clots
- antibiotics to reduce to risk of wound infection
- **early mobilisation** to reduce the risk of blood clots and chest infection
- **special stockings** to reduce the risk of blood clots.

Salivary gland surgery is very safe but there are some specific risks you need to know about.

Some people undergoing submandibular gland surgery may also experience:

- **Nerve damage:**
 - The nerves that move the tongue (hypoglossal nerve) and help you feel and taste with your tongue (lingual) are on the inner aspect of the submandibular and sublingual glands. It is rare for these nerves to be damaged during surgery but you may notice some numbness in the tongue or difficulty with your speech. Most problems are temporary and people usually have full movement and feeling back within a few weeks, though for some it may take a few months.
 - The nerve that moves the lower lip (marginal branch of the facial nerve) is on the outer aspect of the submandibular gland. It is common to have temporary weakness of the lower lip after submandibular gland surgery but usually this gets better over a few weeks or months. This means that your smile may be crooked or you bite your lower lip until the nerve recovers.

Some people undergoing sublingual gland surgery may also experience:

- **Nerve damage:** The lingual nerve that controls taste on one side of the tongue runs very close to the sublingual gland. Occasionally, some of these nerves are injured or need to be removed during the operation. If the nerves have been injured or bruised during the operation, the loss of taste may go away after a few months, but, if a nerve is removed during the operation, the taste sense from one side of the tongue may be permanent.
- **Changes in speaking:** Sublingual gland surgery may affect speaking. Usually this is temporary and mostly improves once the swelling and bruising has gone. It may be useful to have a tablet/portable device or pen and paper to write down what you want to say.

SIDE EFFECTS AND THEIR MANAGEMENT

As with all operations, there is a chance that submandibular or sublingual gland surgery may lead to a number of side effects. You may not experience all of the side effects. Speak with your doctor if you have any questions or concerns about treatment side effects.

Side effects common for submandibular and sublingual surgery may include:

- **Nausea:** General anaesthetic may cause nausea. This will settle down soon after the operation and can be treated with medications.
- **Sore throat:** Your throat may be sore initially because of the breathing tube placed during the operation.
- **Numbness:** After the operation the skin above the incision near the jaw on the side of your face will be numb for some time.
- **Bleeding or bruising:** Some people may experience a blood clot or bruise underneath their skin in the area of the surgery. Occasionally an operation may be needed to remove this.
- **Pain management:** Your anaesthetist will give you pain medicine during the operation to keep you comfortable when you wake up, and you may continue on pain medicines to ensure pain is under control. Ensure you take pain relief medications as prescribed by your doctor and speak to your cancer care team if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download further information about [pain management](#), which is available on the [Beyond Five website](#).

OTHER TREATMENT(S)

- If the tumour removed is a cancer, additional treatment(s) will depend on the nature and extent of the cancer.
- Head and neck cancers often require treatment with more than one form of therapy to reduce the risk of the cancer recurring. Many patients need radiation therapy after the operation, and sometimes, may also require chemotherapy.
- Your [cancer care team](#) will be able to discuss the likelihood of needing further treatment before your operation.

BEFORE GOING HOME

- You will be assessed by the team involved in your care before you go home and arrangements will be made for follow up with your surgeon and GP. Instructions for wound care or medications will be provided before you go home. You may want to download information on [wound care](#), which is available on the [Beyond Five website](#).
- Your doctor may prescribe pain medications to help relieve pain following the operation. Ensure you take the pain relief medications as prescribed by your doctor and speak to your cancer care team if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download further information about [pain management](#), which is available on the [Beyond Five website](#).

Care of the wound

- Each surgeon will close the wound in their own way. Often the wound will have sutures under the skin that you cannot see. These will dissolve over time and they do not need to be removed. Avoid wearing any tight or restrictive clothing around your neck for a few weeks after your surgery.
- You may have a small sticky dressing (called a 'steri-strip') over the wound when you are discharged from hospital. Your doctor will have specific instructions regarding when the dressing should be removed and whether you can get your wound wet.
- You may have a waterproof 'glue' dressing (Dermabond) over the wound following surgery. This is a temporary cover to keep the wound clean; it can be peeled off after a week or so.
- At your first postoperative check your surgeon will discuss what to apply to the wound to help avoid a noticeable scar.

Activities

- For the first few days after you arrive home, it is important that you rest and do not do any activities that involve moving your neck a lot. We recommend taking one or two weeks off work depending on whether you need to do manual labour.
- You should not do any heavy lifting, strenuous exercise or contact sports for a month after your surgery although it is ok to go for walks as soon as you feel up to it. If you have small children it is recommended that you **don't lift them** for 1-2 weeks.
- You can drive after a week or as soon as you feel comfortable with the range of movement in your neck but you must not drive if you feel that your ability is impaired.

Symptoms to watch for after discharge from hospital

- **Significant swelling:** You will have some mild swelling after your surgery. This is normal and may last for some weeks. However, if this becomes very noticeable and painful you must contact the surgeon's office, your family doctor or the hospital.
- **Discharge from the wound:** If your wound becomes red, hot and starts to discharge, these are signs of an infection. Contact your surgeon's office or your GP as you may need antibiotics.
- **Fever:** Contact your surgeon's office or GP if you develop a fever.

FOLLOW-UP CARE

- After your operation, you will continue to have regular follow-up visits with your surgeon. If the tumour removed is benign (not cancer) then only one or two visits may be needed. However, if the tumour is a cancer then you will need long-term follow-up.
- Sometimes the diagnosis of salivary gland cancer has been made prior to your surgery based on a [biopsy](#) so you are prepared for this result. However sometimes an unexpected cancer is found. Should this happen, your treatment plan may change.
- Depending on the pathology report it may be recommended that you have radiation therapy and/or chemotherapy treatment following your surgery. You will be referred to doctors (oncologists) who specialise in cancer treatment.
- Other referrals may be arranged, as needed, with other health professionals, such as a speech pathologist, to assist you with speech, voice and swallowing difficulties.
- Any additional reconstruction, cosmetic procedures or treatments that you may need are planned after discharge. This enables time for you to recover from the initial operation, get results of the pathology that examined the tissue removed at the operation, and make the arrangements for any additional treatment or next steps.
- The course of recovery will depend on the surgery you had, and also on any additional reconstruction or treatment.

For further information about the operation for cancer and what to expect, you can also refer to [Understanding Surgery: a guide for people with cancer, their families and friends.](#)

QUESTIONS TO ASK YOUR DOCTOR

- What type of tumour do I have? Is it a cancer and where is it located?
- If it is a cancer, what are the chances that the surgery will cure the cancer?
- What will happen if I don't have the surgery?
- Do I need a neck dissection?
- Do I need a feeding tube?
- What lifestyle changes (diet, exercise) do you recommend I make?
- What are the possible side effects of treatment? How can they be prevented or managed?
- How long will I be in hospital and how long do I need off driving, work and exercise?
- What effect will the treatment have on my speech and swallowing?
- Will I need extra treatment after surgery?
- When will I get the pathology results?
- What follow-up tests will I need after the operation?
- Will I be able to lead a normal life?
- Am I suitable for any clinical trials?
- How much will the operation cost? Will my health insurance cover it?
- If I wanted to get a second opinion, can you provide all my medical details?

You may want to write specific questions here to ask your doctor or cancer care team

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