

Submandibular Gland Surgery

What is the submandibular gland?

The submandibular glands are a pair of salivary glands under the jaw bone. Each gland produces saliva which goes through a long duct to its opening under the tongue at the front of the mouth. The production of saliva increases when we eat. The saliva secreted by the submandibular gland is a bit thicker than that produced by other salivary glands. Because of its thickness this saliva can sometimes form little stones.

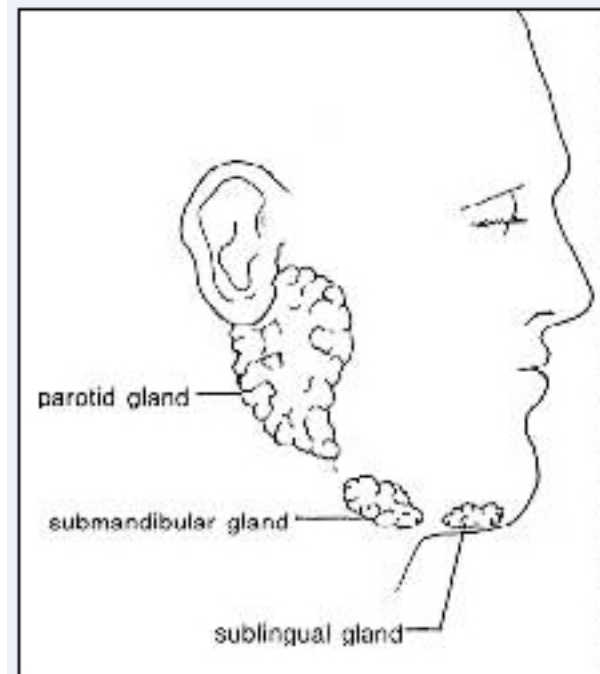


Diagram of Salivary Glands

What problems can you have with the submandibular gland?

The commonest problem is blockage of the salivary duct. This can be caused by the presence of stones or simply a narrowing of the salivary duct. Blockage of the salivary duct can cause a painful swelling of the gland when you eat. Sometimes the swelling may settle on its own. When the blockage is severe, it can lead to persistent inflammation of the gland. Occasionally, a painless lump may develop within the submandibular gland. Those lumps are often benign but need thorough checking, as up to half of them may be or become cancerous. Even benign lumps can get gradually bigger.

What investigation are you likely to have?

An **X-ray** or **CT scan** of the submandibular gland to see if there are stones inside the gland or the duct. **Sialogram** The doctor fills the duct at the front of the mouth with some contrast liquid and then takes x-rays. This will show up stones or narrowing inside the duct.

Ultrasound: This test uses sound waves to detect any lumps inside the gland. **Fine needle aspiration:** This can help to find out the nature of the lump. The doctor uses a fine needle to draw some cells out from the lump. The cells are sent to the laboratory for analysis.

Why operate on the submandibular gland?

If stones inside the duct do not come out, the gland may swell up when you eat. These stones can be removed. This procedure is done through the mouth either under a local or general anaesthetic. Your consultant will discuss the options with you. If stones are stuck inside the submandibular gland, the gland can become permanently inflamed and swollen. If it gives you undue discomfort over a longer time, your specialist may advise to have the gland removed. If a lump has developed in the submandibular gland, your surgeon may recommend removing the gland. As a fairly high number of submandibular lumps can be cancerous the whole gland should be removed. By removing the gland we can find out whether it is benign or cancerous.

The operation to remove the gland

The operation is performed under general anaesthetic, which means that you will be asleep throughout. An incision will be made in the neck below the jaw where the submandibular gland lies. The operation will take about an hour. At the end of the operation the surgeon will place a drain (plastic tube) through the skin in order to prevent any blood clot collecting under the skin. Most patients will require 24-48 hours in hospital after the operation before the drain can be removed and they can go home. You will need 2 weeks off work.

Possible complications

Blood clot A blood clot can collect beneath the skin (this is called a haematoma). This occurs in up to 5% of patients and it is sometimes necessary to return to the operating theatre and remove the clot and replace the drain. **Wound infection** This is uncommon in the neck but can happen if the submandibular gland was badly infected. Wound infection will require antibiotic treatment. Pus collected under the skin may need to be drained. **Facial weakness** There is an important nerve that passes under the chin close to the submandibular gland. It makes the lower lip move. If it is damaged during the surgery it can lead to a weakness of the lower lip. In most cases this nerve works normally after the surgery, however in some cases weakness of the lower lip can occur, particularly when the gland is badly inflamed or if the nerve is stuck to a lump. This weakness is usually temporary and can last for 6-12 weeks. Occasionally there is a permanent weakness of the lower lip following this surgery. **Numbness of the face and ear** The skin around the wound may be numb after the operation. If that happens the numbness will usually improve over the next three months. **Numbness of tongue** The nerve which gives sensation and taste to one half of the tongue runs close to the duct of the gland. It very rarely gets injured. However, if this nerve is damaged your tongue may feel numb immediately after the operation. This will usually go, and permanent numbness of the tongue is rare. **Injury to the nerve that 'moves' the tongue** Another nerve runs close to the submandibular gland that supplies the muscles of the tongue on that side (and hence helps with movement of the tongue). It would be very unusual for this nerve to be damaged in this surgery. If it were to occur, it is unlikely to produce any noticeable disability.

Will my mouth be dry?

You are very unlikely to notice a dryness of the mouth.

Parotid Surgery

What is the parotid and what causes parotid lumps?

The parotid gland makes saliva; in fact you have 2 glands, one on each side, in front of your ears. Lumps occur in the parotid due to abnormal overgrowth of some part of the salivary glands ("hypertrophy"), but sometimes tumours may grow in the parotid gland. The vast majority of these tumours are benign, which means that they are not cancerous and do not spread to other parts of the body. Rarely, malignant tumours can also affect the parotid. Your

doctor will probably collect a needle sample from the lump in order to try to find out what sort of tumour you have.

Why remove the lump?

Although 80% of these lumps are benign in most cases we recommend that they be removed since they generally continue to grow and can become unsightly, and after many years a benign lump can turn malignant. Also the bigger the lump the more difficult it is to remove. Lastly, there is always some concern regarding the exact cause of the lump until it has been removed.

What is a Parotidectomy operation?

A parotidectomy is the surgical removal of part or all of the parotid gland. The operation is performed under general anaesthesia, which means that you will be asleep throughout. An incision will be made which runs from in front of your ear and down into your neck. This incision heals very well indeed, in fact it is nearly the same incision, which is used in "face lift" surgery, and in time the scar is likely to be minimal. At the end of the operation the surgeon will place a drain (plastic tube) through the skin in order to prevent any blood clot collecting under the skin. Most patients will require 24 - 48 hours in hospital after the operation before the drain can be removed and they can go home. You will need two weeks off work.

Possible complications

- **Facial weakness:** There is a very important nerve, the facial nerve, which passes right through the parotid gland. This makes the muscles of the face move and if it is damaged during the surgery can lead to a weakness of the face (facial palsy). In most cases the nerve works normally after the surgery, however occasionally (about 15-20% of cases), where the tumour has been very close to the nerve, a temporary weakness of the face can occur that can last for a few weeks. In 1% of cases there is a permanent weakness of the face following this sort of surgery for benign tumours. In 1% of cases, where the tumour has been very close to the nerve, a temporary weakness of the face can occur that can last for a few weeks. In 1% of cases there is a permanent weakness of the face following this sort of surgery for benign tumours.
- **Numbness of the face and ear:** The skin of the side of the face will be numb for some weeks after the operation, and often you can expect your ear lobe to be numb permanently.
- **Blood clot:** A blood clot can collect beneath the skin (a haematoma). This occurs in about 5% of patients and it is sometimes necessary to return to the operating theatre and remove the clot and replace the drain.
- **Salivary collection:** In 2-5% of patients the cut surface of the parotid gland leaks a little saliva, in which case this can also collect under the skin. If this happens it is necessary to remove the saliva, usually just with a needle, like a blood test, although it may need to be repeated several times.
- **Freys syndrome:** Some patients find that after this surgery their cheek can become red, flushed and sweaty whilst eating. This is because the nerve supply to the gland can regrow to supply the sweat glands of the overlying skin, instead parotid. This can usually be treated easily by the application of a roll-on antiperspirant