
Salivary glands

What and where are salivary glands?

Salivary glands make the saliva in your mouth, which is very important for the health of your mouth and teeth (eg it stops your mouth drying out) - and also for the first stages of digestion of food (it contains some enzymes and salts).

There are three major salivary glands around the mouth (1) sublingual - under the tongue, 2) parotid - overlying the cheek, and 3) submandibular gland- close to the jawline).

There are also many small (minor) salivary glands, which are scattered throughout the mouth (eg you can feel them as little bumps in your cheeks and lips).

Both the major and minor glands have ducts, which are the channels down which the saliva travels on its way to the mouth.

What can go wrong with salivary glands?

The most common problem with salivary glands that people notice is a swelling and/or infection of glands. This is usually because of a sudden blockage (obstruction) of the salivary ducts.

This can be caused by either a 'stone' or thicker saliva in the ducts of the major salivary glands or because of injury to the minor salivary glands and ducts (eg you might have bitten your cheek or lips accidentally).

Does a swelling in my glands mean I might have cancer?

It is very common for people to notice lumps and swellings of their salivary glands. Some of these get better on their own and your dentist (or doctor) will be able to work out the cause.

It is possible to get cancer of the salivary glands but this is very rare.

As for all changes in your body that you might notice, it is better to have things 'checked out' by your dentist, doctor or an oral and maxillofacial surgeon than worry about them -

especially if they haven't got better on their own after about two or three weeks.

Where are the parotid glands and what can go wrong with them?

You have two parotid glands, which are situated on either side of your face between the back part of the lower jaw and the ear.

The ducts of each gland open inside the mouth in the upper cheek on both sides (you can feel this as a small lump and can even see saliva dribble out of it if you are patient).

One of the most common problems of the parotid glands is mumps, which is an acute virus infection that gives pain and swelling usually on both sides.

The ducts of parotid glands can also get blocked, leading to swelling, infection and pain.

Where are the submandibular glands and what can go wrong with them?

You have two submandibular glands, which are situated under the lower jaw at the corner on both sides.

The ducts open close to each other behind the lower front teeth under the tongue (you can see these as raised bumps).

These ducts often develop stones, which can block them causing swelling, infection and pain. You might be able to see or feel the stone under the tongue.

What are the sublingual glands and what can go wrong with them?

You have two sublingual glands, which are situated in the front of the mouth under the tongue. They share ducts with the submandibular glands (see above).

They can develop the same type of stones as the other major glands, with similar consequences.

What are salivary stones and what do you do to treat them?

The saliva stone is full of calcium and other minerals and sometimes, when the salivary flow is sluggish and thick, stone formation is enhanced.

What is a mucocoele ('mew-co-seal')?

The minor salivary glands are scattered throughout the mouth, including on the inner aspect of the lips and cheek.

The most common problem with minor salivary glands is called a mucocoele.

A mucocoele is a swelling of a minor salivary gland, and is often on the inner aspect of the lower lip or cheek. It happens when the duct is blocked and therefore the saliva collects in the gland.

Sometimes these are small and will 'pop' on their own without the need for treatment.

Sometimes they can get quite large or recur frequently. If this is the case, your oral and maxillofacial surgeon will probably recommend having them removed, which can be done under local anaesthetic with dissolving stitches to close the small wound.

When are salivary glands active?

When you are at rest, up to 75% of your saliva comes from your submandibular and sublingual glands. When the glands are stimulated by the smell or sight of food, up to 95% of your saliva is from your parotid glands.

When might I need to have an operation on my salivary glands?

The following problems with salivary glands can need attention from an oral surgeon:

- When the ducts are blocked, for example by a stone (or calculus).
- When a cyst has formed in the gland, which is sometimes because of a previous infection. See also dental cysts
- When repeated infections of your salivary gland have caused scarring, inflammation and continuous discomfort.
- If you have an uncoordination between your nerves to the glands and the muscles of your mouth (neuromuscular uncoordination), which can lead to an excess of saliva, which can't be easily swallowed or wiped away (leading to drooling/dribbling).
- Your oral and maxillofacial surgeon might advise removal of the selected salivary gland or redirection of salivary duct(s).
- When a tumour has formed in the gland. This is quite rare but your oral and maxillofacial surgeon will want to send some or all of it for microscopic analysis to make sure that it is benign and not a cancer.

What sort of things do you do during surgery of the salivary glands?

There are several main approaches to surgery of the salivary glands, which include

- Removal of the object that is obstructing the duct.
- The oral and maxillofacial surgeon will try to repair the duct so that the gland will resume its previous function.

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- Removal of part or all of a salivary gland.
 - If it is a major gland, the ducts might need to be re-routed.

What will I feel like after surgery for salivary gland problems?

How you will feel after salivary gland surgery will depend on what you have done, on the cause of the problem and also on how you react to surgery in general.

Your oral and maxillofacial surgeon will be able to advise you on what will be done, under what kind of anaesthetic and how long it is likely to take you to recover. In general:

- For minor surgery under local anaesthetic, you will probably just feel a bit sore for a day or two and wait for the dissolvable sutures to fall out.
- For more major surgery, especially after a general anaesthetic, you will feel tired after the anaesthetic, take longer to recover and might have some swelling for a week or so.
- For some surgery, we can approach the area safely through the mouth so any scars will be inside the mouth.
- For other surgery, it will be necessary to approach the area through the skin of the face/neck, which will leave some small scars on the skin.
- These will fade with time and are designed to lie in skin creases so they are less noticeable. We use fine sutures for these, which are removed after five to seven days.
- Sometimes you will need to have some wound drains put in, which are just small tubes. They are left in for a day or two to keep the wound dry.

I am having an operation on my parotid gland, what might I experience after the surgery?

The parotid gland is situated outside the mouth between the ear and the jaw. Its duct, however, discharges its saliva into the mouth via an opening in the cheek.

Surgery to the gland is complicated by the presence of the facial nerve that happens to run through it. This nerve provides sensation to some areas of the face (including the ear lobe) but also includes the nerves that control movement of that side of the face (including the lower eyelid).

During surgery, we take great care to protect the facial nerve from direct damage. However, after surgery the following might affect you:

- Numbness of the earlobe and skin associated with the scar. This can be temporary or permanent and is caused by damage to small sensory nerve fibres.
- Temporary weakness of the facial nerve. This is caused by the surgeon moving and touching it (manipulation). Usually full movement recovers with time.
- Permanent weakness of the facial nerve.
- This is very rare but can be distressing. It will only affect the same side of the face that

has been operated on.

- Sweating of the skin of the face at meal times.

This is called Frey's syndrome. This occurs because after surgery the nerves to the parotid gland that control the production of saliva sometimes link with the nerves that control sweating in the skin.

Your oral and maxillofacial surgeon will advise you about the appropriate treatment.

- Saliva can leak through the skin (called a salivary fistula) or collect under the skin (called a sialocele). This is very rare.

I am having surgery to my submandibular gland, what might I experience after surgery?

Surgery to the submandibular glands is fairly common and usually straightforward. This surgery requires an incision (cut) under your lower jaw on a skin crease line. Sometimes, however, you might experience:

- Weakness of movement of the lower lip. This is because there has been some disturbance to a lower branch of the facial nerve. The weakness is usually temporary and rarely permanent.
- Rarely, numbness of the tongue. This is because the lingual nerve (which supplies the tongue) has been bruised during or after surgery. This numbness is usually temporary and rarely permanent.
- Extremely rare: weakness of movement of the tongue, which is caused by bruising of the hypoglossal nerve, which supplies the tongue.

I am having surgery to my sublingual gland, what might I experience after surgery?

Surgery to the sublingual glands is fairly common and usually straightforward. Surgeons gain access via the mouth so you won't have any scarring of the face or neck. Sometimes, however, you might experience:

- Some swelling inside the mouth due to surgery near to the tongue and in the floor of the mouth;
- Some temporary discomfort when swallowing when tongue muscles are affected;
- Numbness of the tongue, which is caused by bruising of the lingual nerve during surgery. The numbness is usually temporary and rarely permanent.