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GLOSSECTOMY

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CONTENTS

Glossectomy

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 cancer care team; it is not intended to replace advice or discussion between you and your **cancer care team**.

AN OVERVIEW TO GLOSSECTOMY

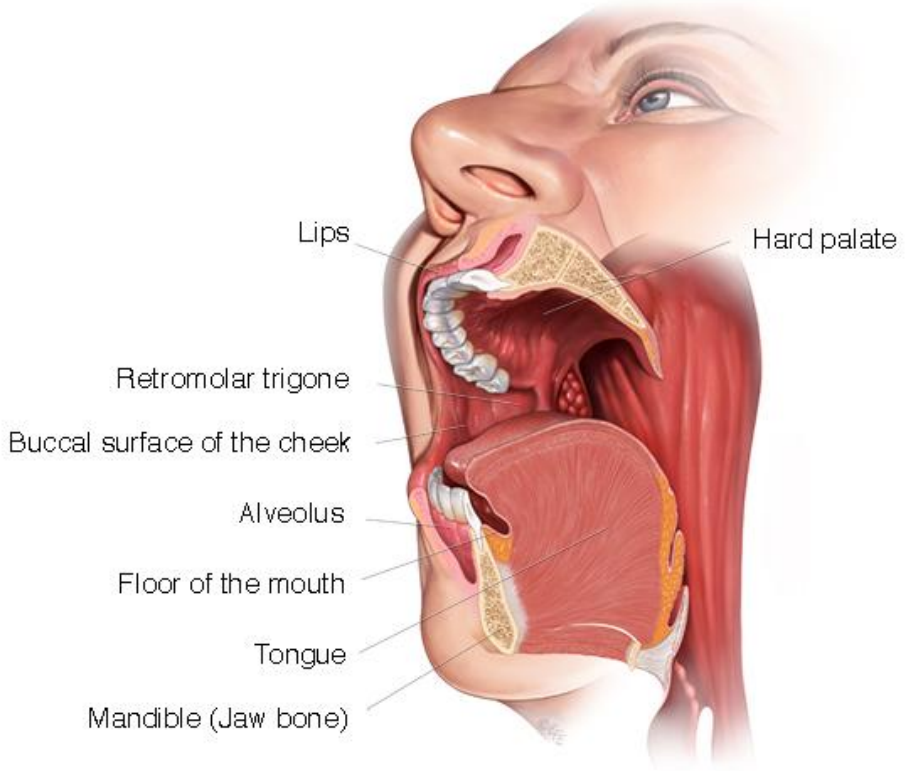
- The tongue is important for talking, tasting, chewing and swallowing food (see diagram below).
- If the tongue cannot move properly, either because of loss of muscle from surgery or getting stuck from scarring which limits movement, then talking and the ability to eat may be affected greatly.
- A *glossectomy* is an operation to remove part of, or all of the tongue (ie partial or total glossectomy). This is the main treatment for tongue cancer. The extent of surgery depends on the type and size of the cancer and how much the cancer invades into the tongue into the tongue muscles as well as how deep it has grown into the tongue. A *partial glossectomy* is the removal of part of the tongue. A *hemiglossectomy* is a surgery where doctors remove about half of a person's tongue.
- a *total glossectomy* is removal of the entire tongue, including the base of the tongue in the throat. It is very rare to need a total glossectomy and the issues around this surgery will not be discussed in this information sheet.

WHY IS A GLOSSECTOMY NEEDED

- A glossectomy, partial, hemi or total, is performed if there is cancer that needs to be removed from the tongue.
- The cancer together with an area of normal-appearing tissue is removed, to reduce the chance of any cancer cells being left behind.
- After the operation, the tissue that was removed will be looked at very closely by a special doctor called a pathologist. They use a microscope to check for cancer cells. The pathologist will look at

how big the tumour is, how different the cancer cells look from normal cells (this is called differentiation and can be mild, moderate, or severe), **how much the cancer has spread into nearby areas and whether all the cancer was removed during surgery** (this is called checking the margins). This careful check helps doctors figure out the **stage of the cancer**. Staging tells how far the cancer has spread and helps doctors decide if more treatment is needed. Further information about staging of cancer is available on the **Head and Neck Cancer Australia website**.

- Depending on the pathological assessment, additional treatment may be recommended to help reduce the risk of cancer coming back. This can be either be a further operation on the lymph nodes (if not performed at the time of the glossectomy). radiation therapy alone or radiation combined with chemotherapy. Adding another form of treatment after surgery is called adjuvant therapy.



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HOW TO PREPARE FOR THE OPERATION

BEFORE THE OPERATION:

- Your surgical and anaesthetic team will let you know if you need to fast before the surgery and for how long before you will need to fast.
- A glossectomy is performed s 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. Please bring up any questions or concerns and share your needs and wishes with your cancer care team (**see questions at the end of this information sheet**).
- You may be asked to attend a preadmission appointment to assess your health and fitness before major surgery.
- 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. This should be discussed with you at your preadmission appointment.
- Talk to your surgeon and cancer care team about any likely side effects to expect following the operation. You may find it useful to talk to a dietitian, speech pathologist or specialist head and neck nurse about these issues.

Visit the Head and Neck Cancer Australia website for further information on health professionals who may be part of your cancer care team

WHAT TO EXPECT DURING THE OPERATION

- There are a number of different *approaches to glossectomy* depending on where the cancer is and how large it is. These include:
    - **Transoral:** This means the glossectomy is done entirely through the mouth. This is the most common approach for cancer in the front of the tongue.
    - **Transoral robotic surgery (TORS):** The surgical robot is only used to remove cancers at the back of the tongue (tongue base) and is not used if the cancer can be seen in the tongue that is in the front of the mouths. This can also be done using laser. You may want to download information about TORS, which is available on the **Head and Neck Cancer Australia website**.
    - **Mandibulotomy:** For cancers in the back of the tongue or very big cancers of the oral tongue, the surgery may be done by cutting through the jawbone and temporarily moving the jaw to the side to access the cancer. This is called a mandibulotomy. You may want to download information about mandibulotomy, which is available on the **Head and Neck Cancer Australia website**.
- The surgery may take as little as 1–2 hours for a small partial glossectomy, but most patients will need additional procedures (as described below). The duration of surgery then depends on the extent and complexity of surgery, often taking 12 hours or longer when reconstruction is required.
- **Neck dissection:** Most patients with tongue cancer also need to have the lymph nodes in the neck removed. Generally, this is when the cancer has spread to the lymph nodes, or if there is a high risk of microscopic cancer in the lymph nodes. Neck dissection is often carried out on one side of the neck but some patients need surgery on both sides. You may want to download information about neck dissection, which is available on the **Head and Neck Cancer Australia website**.
- **Reconstruction:** Some patients may have a large portion of their tongue removed and require reconstruction at the same time. This aims to reliably close the wound and keep the tongue moving freely during speech and swallowing.

  Usually the reconstruction is performed using a *free flap*, meaning tissue from somewhere else in the body is used to rebuild the tongue. This tissue has its own blood vessels that are joined to the blood vessels in the neck using microsurgery to give it a blood supply.

This is most commonly performed using skin from the forearm (*radial forearm free flap*) or the thigh (*anterolateral thigh flap*) but other sites might be used instead. You may want to download information about soft tissue free flaps from the **Head and Neck Cancer Australia website**.

- **Tracheostomy:** This is a tube placed into the windpipe through a small cut just above the breast bone to assist with breathing safely after surgery if there is swelling or bleeding. It is usually removed after 3–5 days. You may want to download information about tracheostomy, which is available on the **Head and Neck Cancer Australia website**.
- **Feeding tube:** Used to deliver nutrition to patients after surgery. In most cases, a feeding tube is only required for a short time until they can eat again. You may want to download information about feeding tubes, which is available on the **Head and Neck Cancer Australia website.**

WHAT TO EXPECT AFTER THE OPERATION

- The length of recovery and the time you spend in hospital will depend on the extent of your operation and whether reconstruction is required. You may stay in hospital for up to two weeks or longer in some cases.
- After the operation, once you are fully awake, you will be moved to a bed in the hospital room where you will begin your recovery.
- For some patients who are having long operations, they may be kept asleep until the morning after surgery and go to an intensive care unit for the first few days.
- Patients having a partial glossectomy without any other procedures are often able start eating soon after surgery.
- You may need to start with fluids and then stay on puree or soft food for 1–2 weeks after the operation. This will be guided by a speech pathologist and dietician.
- A drip might be placed in your arm and/or a feeding tube may be necessary for those who cannot eat straight away to keep their body healthy and promote healing.
- As the tongue is quite sensitive, pain may be felt around the site of surgery. Your anaesthetist and surgical team will give you medicine to help control any pain and nausea after the operation**.** Inform your care team if your pain is persisting despite treatment.
- Your speech and swallowing will not be normal in the early post-operative period but for most patients this improves with time as the swelling settles down.

- Many surgeons may ask you to use antibacterial mouthwash in the first few weeks after surgery to keep the surgical site clean.
- Dissolving stitches are used to close the tongue wound. These do not need to be removed and fall out on their own after several weeks.
- You can usually go home after 1-2 nights in hospital and sometimes even on the same day if only a small part of the tongue has been removed

For patients having a partial glossectomy and neck dissection, in addition to the above:

- Refer to **the neck dissection information sheet** for more details of what to expect. Usually you will have 1-2 surgical drains in the neck and stay in hospital until these are ready to be removed. On average, this takes 5-7 days or when the output is minimal.

For patients having a glossectomy, neck dissection and reconstruction, in addition to the above:

- You will not be able to eat for a week or two after surgery so the reconstruction has time to heal. You will receive nutrition through a feeding tube during this time. When it is safe to start eating, most patients start with fluids and then stay on puree food for a week or two after surgery. The aim is to slowly return to normal food under the supervision of your surgeon and speech pathologist.
- Once you can eat enough by mouth to stay well nourished, the feeding tube will be removed.
- The reconstruction (**soft tissue free flap**) is regularly reviewed by the Medical Team based on the protocol of the individual surgeons and hospital. This may involve hourly checks and may interrupt your sleep in the initial stages of your recovery. This is to ensure that there is early warning of potential complications and gives your surgical team an opportunity to address these issues in a timely manner.
- You may also have a button to push that delivers strong pain relief (patient-controlled analgesia, or PCA), or you may have to ask the nurse for extra pain medication.
- If you have a tracheostomy, it will be difficult to talk, and you may need to write things down that you want to say to people. It is useful to have a pen and paper, mini white board or iPad/tablet in hospital to write down anything you want to say.
- Tracheostomy tubes need to be suctioned regularly to stop them clogging with phlegm and mucus. This will make you cough, and it can feel uncomfortable to start with. Visit the Head and Neck Cancer Australia website for further information on tracheostomy.

- Adequate rest and sleep are important parts of your recovery. In the first few days after your surgery, you may find it difficult to sleep due to the new environment, the sounds from alarms and the general bustle of a busy Surgical ward. Your treating team understands that you may be tired, anxious, irritated and frustrated at times during your recovery. This is normal and to be expected as the cancer journey is a difficult time in your life.
- You will usually spend at least 10-14 days in hospital. The discharge planning process begins early in your hospital stay. Your discharge planning team includes doctors, nurses, social workers, physiotherapists and occupational therapists. They will work with you and your family to determine the best place for you to go once you're discharged from hospital. While many patients go home from the hospital, with or without visiting nurses or home help, others might go to a rehabilitation or skilled nursing facility for a short while before being ready to return home.

POSSIBLE RISKS OF GLOSSECTOMY

All operations carry general 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 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 compression stockings to reduce the risk of blood clots.

Risks common to all operations:

- **General anaesthetic** is very safe but does carry a very small risk of serious complications such as allergic reaction, heart attack, stroke or even death. General anaesthetic can also affect your judgment, coordination and memory for 24 hours so during this time you must avoid driving,

operating machinery, going to work or school, making important decisions or signing legal documents.

- **Chest Infection:** For people who smoke, the risk of chest infection may be reduced by stopping at least a few weeks before surgery. After surgery, it may help to begin walking as soon as your care team recommend, practicing deep breathing exercises and following the instructions of the physiotherapist.
- **Wound Infection:** After the operation, the wound may be exposed to bacteria. Antibiotics may be given to reduce the risk of infection.
- **Blood clots:** Such as deep vein thrombosis (in the legs) or pulmonary embolism (in the lungs) may occur. To prevent this, a small injection is usually given during the hospital stay; there are also special stockings that help reduce the risk of blood clots and are usually recommended whilst in hospital. You can help by regularly exercising your legs and walking as much as you are able. Stopping smoking may also help reduce this risk.
- **Glossectomy is safe in experienced hands**. However, all surgery has some risk of complications, and your surgeon will discuss these with you. The specific risks of glossectomy depend on factors such as the size and location of the cancer, its relationship to important structures (such as nerves), previous surgery or radiation to the area, and whether additional procedures are needed (such as neck dissection and/or reconstructive surgery). The most important complications include:
- **Bleeding:** Bleeding after glossectomy is uncommon. Minor bleeding usually stops on its own or with special mouthwashes. There is a small chance of major bleeding that might need urgent surgery to stop the bleeding and even a blood transfusion.
- **Salivary leak (fistula):** When glossectomy is combined with a neck dissection, saliva may leak from the neck if the mouth is not completely sealed from the inside of the neck. This may cause serious infection, and those who have had previous cancer treatment in the area are at an increased risk since wound healing may be affected.
    - Salivary fistulas are usually treated by draining the fluid and any infection, giving antibiotics, and also giving the body time to heal on its own without eating anything by mouth.
    - During this time, nutrition is usually received through a feeding tube that goes through the nose down into the stomach (nasogastric tube).

- Usually this will lead to healing within a few weeks but in some cases, further surgery might be needed to close the leak.

There are specific issues and risks related to additional procedures that may be done with glossectomy. Depending on the exact details of the operation, you may find it useful to also read the information sheets on *neck dissection, soft tissue free flap reconstruction, tracheostomy, and feeding tubes*. Visit the **Head and Neck Cancer Australia website** to download these information sheets.

SIDE EFFECTS AND THEIR MANAGEMENT

A glossectomy can lead to a number of side effects, but you may not experience all of these. Speak with your doctor if you have any questions or concerns about treatment side effects.

Side effects common for all operations include:

- **Nausea:** General anaesthetic may cause nausea. This will settle down soon after surgery and can be treated with medications.
- **Sore throat**: Your throat may be sore initially because of the breathing tube placed during the operation.

Side effects specific to glossectomy include:

- **Numbness and changes to taste:** Some cancers are located near the nerves that transport the sensation of taste and feeling. If this nerve is removed as part of the cancer surgery, feeling may be lost on that side of the tongue, which may be permanent.
- **Changes in speaking and swallowing:** These changes can range from mild temporary changes to severe permanent difficulties, although this is rare. This depends on factors such as how much tongue is removed; which part of the tongue is removed; whether reconstruction is necessary; previous treatment; and, whether radiation therapy is needed after surgery. Every person is different in how they respond to surgery, so it is important to discuss see what you should expect with your surgeon and/or treating team.
  - Speech and swallowing in the early post-operative period usually improves dramatically as swelling settles down and you practice talking.
  - Most patients benefit from working with a speech pathologist, starting from the early stages after surgery.

- If swallowing is severely affected, food and liquids may fall into your lungs. This is called aspiration and may cause a chest infection. In most patients, this will improve over time by working with a speech pathologist.

BEFORE GOING HOME

- Any particular instructions for **wound care** or medications will be provided to you before you go home. You may want to download further information about wound care on the **Head and Neck Cancer Australia 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 **Head and Neck Cancer Australia website**.
- After a glossectomy, follow-up will likely be arranged with a speech pathologist. The effects on your speech and swallowing will depend on how much of the tongue has been removed. It may take many months to recover and ongoing rehabilitation may be required with a speech pathologist for assistance. Follow-up may also be arranged with a dietitian.
- You will be assessed by the team involved in your care before you go home and follow-up will be arranged with your surgeon and GP.
- Your recovery at home may vary and you should allow time for your body to recover and heal. With major surgery this can be slow and you may feel lack energy for some time, but regular follow-up helps to assess your progress.

Symptoms to watch for after discharge from hospital

- **Significant swelling**: There may be some mild swelling after the operation. This is normal and may last for some weeks. However, if this becomes very noticeable and painful, contact your surgeon, your family doctor or the hospital.
- **Discharge from the wound:** If the wound becomes red, hot and starts to discharge you may have an infection and should contact your surgeon or your family doctor, as you may need antibiotics.

If your wound discharges a clear fluid this may also be saliva and you should contact your surgeon or family doctor.

- **Fever:** If you develop a fever, contact your surgeon or your family doctor.
- **Bleeding:** Contact your surgeon or seek emergency medical care if there is bleeding from the site of surgery.

OTHER TREATMENT(S)

- Additional treatment(s) 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 but in many cases, it will only be decided after assessing the pathology report from the tissue removed at the operation. This may take two weeks from the operation or more.

FOLLOW-UP CARE

- After your operation, you will continue to have regular follow-up visits with your specialist doctor and cancer care team. **Many patients** may **also need** other health professionals, such as speech pathologists and dietitians to assist with rehabilitation of speech and swallowing and maintenance of nutrition.
- You may also need regular checkups of your mouth and neck after treatment for tongue cancer. This will include a physical exam. Your surgeon may request imaging studies such as **computed tomography** (CT), **magnetic resonance imaging** (MRI) or **positron emission tomography** (PET) scans during follow-up, but this isn't routine for patients with tongue cancer.
- It is important to be diligent with follow-up to ensure that recurrences may be caught early and remain treatable. If you have any concerns between visits you should contact your doctor.

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.**

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QUESTIONS TO ASK YOUR DOCTOR

- 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 reconstruction of the tongue?
- Do I need a feeding tube?
- Do I need a tracheostomy (breathing tube) after the operation? What are the possible side effects of treatment? How can they be prevented or controlled?
- Will I have a scar?
- What effect will the treatment have on my speech and swallowing?
- Do you have a speech pathologist and dietician on your team that will help with my speech, swallowing and nutrition rehabilitation?
- How long will I be in hospital and how long do I need off driving, work and exercise?
- Will I be able to lead a normal life?
- When will I get the pathology results?
- Will I need extra treatment after the operation?
- What follow-up tests will I need after the operation?
- 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

About Head and Neck Cancer Australia

Head and Neck Cancer Australia is the only national charity dedicated to providing free, trusted and easy to understand information, education and support to people affected by Head and Neck Cancer.

We represent over 5,300 people who are newly diagnosed each year and more than 17,000 people who are living with Head and Neck Cancer across Australia.

We also lead the national effort to advocate for government support to encourage prevention, increase early diagnosis and improve the quality of life of people living with Head and Neck Cancer in Australia.

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