PROCEDURE

Laryngectomy

Laryngectomy is surgery to remove part or all of the voice box, usually to treat cancer.

PURPOSE
Remove the diseased larynx and control cancer

PROCEDURE TYPE
Therapeutic surgery through an incision in the neck

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General anaesthesia

HOW LONG IT TAKES
About 5-12 hours, including reconstruction when needed

PREPARATION
Fasting and medication review; facility instructions take priority

RECOVERY
Usually 1-2 weeks in hospital; no driving until cleared

MAIN RISKS
Bleeding, infection, fistula, swallowing or breathing problems

RESULTS
Surgical findings immediately; final pathology within days

Overview

A laryngectomy is an operation that removes part or all of the larynx, commonly called the voice box. The larynx sits in your neck above the windpipe. It helps you breathe, speak, and keep food and liquid out of your airway.

In a partial laryngectomy , only part of the larynx is removed. You may keep some ability to speak through the usual airway.

In a total laryngectomy , the entire larynx is removed. Your windpipe is permanently brought forward to an opening in your neck called a stoma . You then breathe only through this opening, not through your nose or mouth.

A total laryngectomy changes how you speak, breathe, smell, and protect your airway. Speech and language therapists, dietitians, specialist nurses, and rehabilitation teams help you prepare

for and manage these changes.

Why the procedure is performed

Laryngectomy is most often used to treat cancer of the larynx or nearby hypopharynx, which is the lower part of the throat.

It may be recommended when:

A partial operation may treat selected smaller tumours while preserving more natural speech and breathing. A total laryngectomy may provide better cancer control when preserving the larynx is not realistic or safe.

- A tumour is too large or extensive for a smaller operation
- Cancer has returned after radiation or chemoradiation
- The larynx no longer works safely after cancer treatment
- Severe damage causes repeated aspiration, meaning food or liquid enters the airway

Who should and should not have it

Your cancer team considers the tumour's location, size, spread, previous treatment, and the expected effect of each option on swallowing, speech, and breathing. Your general health and personal priorities also matter.

Laryngectomy may be appropriate if surgery can remove the cancer with acceptable margins, meaning a border of healthy-looking tissue around it. It may also be considered when a damaged larynx causes ongoing aspiration or breathing problems that cannot be managed another way.

The operation may not be the right option if the cancer cannot be usefully controlled by surgery, another treatment offers similar control with less loss of function, or the risks of a major operation outweigh the likely benefit.

Surgery may need to be delayed while an infection, poor nutrition, dehydration, or an uncontrolled heart or lung condition is addressed. Medicines that affect bleeding may also require a planned adjustment. These decisions are individual and should be discussed before you consent.

How to prepare

The treating facility's own instructions take priority because fasting times and medicine plans differ.

You will usually meet an anaesthetist and have blood tests, heart or lung testing, and imaging if needed. Tell the team about all prescription medicines, over-the-counter products, supplements, allergies, and previous reactions to anaesthesia.

Do not stop a blood thinner like warfarin or apixaban on your own. Your team will explain whether and when it should be paused.

Before surgery, you may meet a speech and language therapist to discuss communication after the operation. Options can include an electronic speaking device, oesophageal speech, or a voice prosthesis placed between the windpipe and food passage.

Dental care, nutrition support, and stopping smoking can help healing. You may also be measured for stoma supplies or shown how the stoma will be cared for. Arrange practical help for your discharge and recovery.

What happens during the procedure

You will be asleep under general anaesthesia. The surgeon makes an incision in the neck and removes part or all of the larynx.

Nearby lymph nodes may be removed if there is a risk that cancer has spread to them. This is called a neck dissection . Part of the thyroid gland may also need to be removed.

After a total laryngectomy, the surgeon separates the breathing passage from the mouth and food passage. The windpipe is attached to the skin of the neck to form a permanent stoma. The throat is closed so that food can pass from the mouth into the oesophagus, the tube leading to the stomach.

If a large amount of tissue is removed, tissue from another part of your body may be used to rebuild the throat. This is called flap reconstruction.

You may have drains in your neck and a temporary feeding tube. In some cases, a voice prosthesis is placed during the same operation.

Recovery and what to expect afterward

Pain: Your neck and throat will be sore. Pain medicine is given regularly at first and then reduced as healing progresses. Neck stiffness, swelling, numbness, or shoulder weakness can

occur, especially after lymph node surgery.

Eating: You will not eat or drink by mouth immediately. Nutrition is provided through a feeding tube while the throat heals. Your team may check for leakage before allowing drinks and soft food. A dietitian and speech and language therapist can help with swallowing.

Activity: You will be encouraged to sit up and walk soon after surgery to reduce the risk of blood clots and chest infection. Avoid heavy lifting and strenuous exercise until your surgeon says the wound has healed. You will learn how to clean, humidify, and protect the stoma.

Driving: You cannot drive home. Do not drive while taking sedating pain medicine or until you can turn your head comfortably and perform an emergency stop. Your surgical team will tell you when driving is safe.

Work: Returning to work often takes several weeks or longer. Timing is affected by healing, additional cancer treatment, your type of work, and how quickly you become comfortable communicating and caring for the stoma.

After total laryngectomy, water entering the stoma can reach the lungs. You will need precautions for showering, bathing, and swimming. Swimming is generally unsafe unless you use specialist equipment with trained supervision.

Risks and possible complications

Possible risks include:

Changes in speech, smell, taste, coughing, and mucus production are expected after total laryngectomy rather than temporary complications. Rehabilitation helps you adapt to them.

- Bleeding, infection, blood clots, or reactions to anaesthesia
- A leak from the throat into the neck, called a pharyngocutaneous fistula
- Slow wound healing or loss of reconstructed tissue
- Narrowing of the throat, which can make swallowing difficult
- Stoma narrowing, crusting, mucus blockage, or skin irritation
- Pneumonia or other chest problems
- Shoulder weakness, neck stiffness, numbness, or lymph swelling
- Low thyroid function or, after some operations, low calcium levels
- Problems with a voice prosthesis, including leakage or displacement

Results and follow up

The surgeon can usually explain what was found soon after the operation. Removed tissue is examined in a laboratory. The pathology report describes the cancer type, its extent, the surgical margins, and whether lymph nodes contain cancer. This commonly takes several days, although local timing differs.

Your team uses these results to decide whether you need further treatment, such as radiation, chemotherapy, or both.

Routine follow-up checks healing, swallowing, nutrition, thyroid function, stoma care, communication, and signs of cancer returning. Keep scheduled appointments even when recovery is going well. Dental care and long-term speech rehabilitation may also be needed.

Alternatives

The realistic alternatives depend on the cancer's stage, location, previous treatment, and how well the larynx works.

Ask how each option affects the chance of cancer control, natural speech, swallowing, breathing, treatment time, and the possibility of needing later surgery.

- Radiation therapy: May treat some early cancers without surgery. Treatment takes place over multiple visits and can cause lasting swallowing, voice, and tissue changes.
- Chemoradiation: May avoid immediate removal of the larynx in some advanced cancers. It can cause substantial short- and long-term side effects, and laryngectomy may still be needed if cancer remains or returns.
- Transoral laser or robotic surgery: Removes selected tumours through the mouth without a large neck incision. It preserves more tissue but is not suitable for every tumour.
- Partial laryngectomy: Preserves part of the voice box and may allow more natural speech. It is only possible when the tumour's position and extent permit safe removal.
- Systemic or supportive treatment: Medicines and symptom-focused care may be considered when surgery is unlikely to control advanced cancer. These approaches do not offer the same local removal of the tumour.

When to call your healthcare team

Seek emergency help for severe trouble breathing through the stoma, a stoma blockage that

does not clear with your taught care plan, heavy bleeding, blue or grey skin, chest pain, or collapse. After total laryngectomy, tell emergency responders that you are a "neck breather." Oxygen must be delivered through the stoma.

Contact your surgical team promptly for:

Questions about supplies, mild skin irritation, rehabilitation, or appointment timing can usually be handled during routine contact with your care team.

- Fever or increasing redness, warmth, swelling, or drainage
- New fluid or saliva leaking from the neck wound
- Worsening pain rather than gradual improvement
- Increasing difficulty swallowing or keeping down fluids
- A narrowing stoma or repeated mucus blockage
- Voice-prosthesis leakage into the airway
- New calf swelling, shortness of breath, or unexplained weakness

Common questions

Will I be asleep?

Yes. Laryngectomy is performed under general anaesthesia, so you will be unconscious during the operation.

Can I drive home?

No. This is major inpatient surgery. Someone will need to take you home after discharge, and you must wait for clearance before driving again.

How painful is it?

Neck and throat soreness is expected, especially during the first several days. Medicine and positioning usually help. Tell the hospital team if pain is not controlled.

When will I know the results?

The surgeon can discuss the operation afterward. Final decisions usually wait for the pathology report, which often takes several days.

Will I still be able to speak?

A partial laryngectomy may preserve some natural voice. After total laryngectomy, you cannot speak using the vocal cords, but voice prostheses, oesophageal speech, and electronic devices can provide new ways to communicate.

Will I breathe through my mouth and nose?

After total laryngectomy, no. You breathe permanently through the neck stoma. A partial laryngectomy may require a temporary breathing opening while swelling settles.

Sources

- National Cancer Institute. Laryngeal Cancer Treatment-Health Professional Version
- American Cancer Society. Surgery for Laryngeal and Hypopharyngeal Cancers
- NHS. Laryngeal cancer treatment
- Cancer Research UK. Surgery to remove the voice box
- Macmillan Cancer Support. Total laryngectomy