Surgical Procedures: Partial and Total Laryngectomy

A laryngectomy is the removal of part or all of the larynx. The larynx, or voice box, is located in the throat, at the front of the neck. The larynx has many jobs including:

- Voice or sound production from the vocal cords that are in the larynx.
- Preventing food or drink from getting into the lungs when swallowing by closing the epiglottis.
- Allowing air breathed in to get to the lungs.

The larynx is made of cartilage and has three main sections: the supraglottis, the glottis, and the subglottis. When a patient undergoes a laryngectomy, the trachea (windpipe) and the esophagus (food pipe) are disconnected, making breathing and swallowing different after surgery. In order to breathe, a stoma (hole) is placed in the neck, in front of the trachea. After total laryngectomy, you will lose the ability to speak. A partial laryngectomy can allow you to be able to speak. A transesophageal puncture (TEP), a hole in both the trachea and esophagus, may be done for placement of a prosthetic voice box.

A laryngectomy may be used to treat some cases of:

- Laryngeal cancer.
- Injury.
- Radiation necrosis (cell death) caused by radiation treatment.

The person who has the laryngectomy is called a laryngectomee.

There are a few types of laryngectomy surgeries, including:

- **Total Laryngectomy:** The whole larynx (voice box) is removed. A permanent stoma (tracheostomy) is created to create a new way to breathe. This procedure may require removal of a portion of the pharynx (the tubular structure connecting the nose, larynx and lungs), some lymph nodes, and some nearby muscles. The surgeon may perform a transesophageal puncture (TEP), or put a hole in both the trachea and esophagus, for future prosthetic voice box placement.
- **Partial Laryngectomy:** Part of the larynx (voice box) is removed. A temporary tracheostomy may be placed, which can be removed at a later time.

**What are the risks associated with a laryngectomy?**

There are risks and side effects related to having a laryngectomy. Risks and side effects may be:

- Reaction to anesthesia. (Anesthesia is the medication you are given to help you sleep through the surgery, not remember it and to manage pain. Reactions can include wheezing, rash, swelling and low blood pressure.)
- Bleeding.
- Blood clots.
- Infection.
- Pneumonia.
- Heart or lung problems.
- Loss of normal speech.
- Nerve injury.
- Swelling.
- Throat or larynx narrowing, known as stenosis, which may require placement of a tracheostomy.
Narrowing of the stoma, known as stoma stenosis.
- Trouble swallowing, which may lead to the need for a feeding tube.
- Development of a fistula (abnormal connection between the pharynx and the skin) that may require corrective surgery.
- Damage to nearby organs like the thyroid and parathyroid glands. This can lead to hypothyroidism and/or calcium abnormalities. Other organs that can be damaged are the trachea and esophagus.
- Hematoma (collection of blood).

What is recovery like?
Recovery from a laryngectomy will depend on the type of the procedure you have had. At times, an extended hospital stay is needed. Often, you will need a feeding tube to get nutrition until your throat heals.

You will be told how to care for your incisions, tracheostomy, feeding tube and other drains and will be given any other instructions before leaving the hospital. Your healthcare team will talk to you about the need for nebulizers to humidify the air you breathe through your tracheostomy.

Your medical team will discuss with you the medications you will be taking, such as those for pain, blood clot, infection, and constipation prevention and/or other conditions.

Most likely, you will meet with a speech pathologist who will talk to you about communication and swallowing techniques.

Your provider will talk to you about any restrictions you will have. In general:
- Avoid heavy lifting and strenuous exercise for 6 weeks.
- Avoid bending and straining until it is advised by your healthcare team.
- Perform stoma and wound care as directed.
- Speak with your healthcare team about when you can shower and how to protect your stoma from getting wet or getting water in it.
- Avoid wearing tight clothing around your neck.
- Avoid exposure to second hand smoke and those with respiratory infections.
- Avoid contact sports.

What will I need at home?
- Thermometer to check for fever, which can be a sign of infection.
- Wound and stoma care supplies.
- Humidifier.
- A medical alert bracelet stating you are a laryngectomy patient and that you breathe through your neck.

When to call your doctor
- Swelling, bleeding, blistering, scabbing or discharge at the incision.
- New or worsening pain.
- Nausea and vomiting.
- Change in color and/or thickness of sputum.
- Trouble swallowing.
- Change in the size of your stoma.
- Coughing, shortness of breath, chest pain and/or any other concerning symptoms.

How can I care for myself?
You may need a family member or friend to help you with your daily tasks until you are feeling better. It may take some time before your team tells you that it is ok to go back to your normal activity.
Be sure to take your prescribed medications as directed to prevent pain, infection and/or constipation. Call your team with any new or worsening symptoms.

There are ways to manage constipation after your surgery. You can change your diet, drink more fluids, and take over-the-counter medications. Talk with your care team before taking any medications for constipation.

Taking deep breaths and resting can help manage pain, keep your lungs healthy after anesthesia, and promote good drainage of lymphatic fluid. Try to do deep breathing and relaxation exercises a few times a day in the first week, or when you notice you are extra tense.

- Example of a relaxation exercise: While sitting, close your eyes and take 5-10 slow deep breaths. Relax your muscles. Slowly roll your head and shoulders.

This article contains general information. Please be sure to talk to your care team about your specific plan and recovery.