# Learning to Speak Again After Laryngeal Surgery



Laryngeal cancer is cancer of the larynx, or voice box. Treatment may include a full laryngectomy. This means the larynx is surgically removed. This surgery takes away your ability to speak using your vocal cords.

Modern advances in surgery, radiation, and chemotherapy treatment can often save the larynx or part of it. Keeping the larynx saves the voice, even if its quality is changed. If the cancer is very advanced (a large tumor), removing the larynx may still be the best choice.

#### What is the larynx?

The larynx, also known as the voice box, opens to help you to breathe. When you swallow, it keeps food out of the trachea, which is the windpipe. Air passing through the larynx causes the vocal cords to vibrate, making sound. With the help of your mouth, teeth, tongue, and lips, that sound becomes your voice.

#### What happens when the larynx is removed?

When the larynx is removed, the surgeon trims and turns the trachea to create an opening in the front of the neck. This opening, called a stoma, is the new passage for breathing. It bypasses the nose and mouth. During the operation, the surgeon puts a tracheostomy (trach) tube in the stoma to hold it open. A few weeks later, the healthcare provider may replace the tube with a tracheostomy button, often called a stoma button. Some people without a larynx leave the trach tube in. Others, after some time, don't use either the tube or the button.

#### **Preparing for surgery**

A speech-language pathologist (SLP) or speech therapist will meet with you before your surgery. The SLP will evaluate your speech and explain your communication options after surgery.

SLPs counsel people before surgery to put them at ease and to let them know that they'll be able to communicate right after surgery.

You need to know that even if only a part of your larynx is removed, your voice won't sound the same as it did before the operation. It will have a lower pitch. It may be hard to be heard in loud places. You'll need to practice each type of speech, try to relax when speaking, and be patient.

Your sense of smell and taste may also be affected. This is because air doesn't travel through your nose, You can be taught how to recover some sense of smell, and that can help your sense of taste. This treatment might be called olfactory rehabilitation. Talk with your healthcare team to learn more about it.

#### After surgery

For a few days after surgery, you won't be allowed to speak. This is so you don't move your tongue around and pull apart the sutures. To help you heal, you'll be fed through a feeding tube for a week or so. The type of feeding tube and length of time you'll need it depend on the type of surgery you've had. A humidifier in your hospital room will moisten the air to help keep your stoma from drying out. You may also be taught how to use a suction machine to remove excess mucus at the stoma.

#### Speaking again

Before learning to speak again, you can communicate by writing. You might want to bring a computer, tablet, or phone with you to the hospital so that you can write notes to caregivers and send emails to family and friends.

Speech therapy usually starts before you leave the hospital. Once your healthcare provider gives approval, the SLP will begin speech lessons with you. Learning to talk again may involve things like esophageal speech, an artificial larynx, or a tracheoesophageal puncture (TEP). Each is described below.

## **Esophageal speech**

Esophageal speech is when you take air into your esophagus and let it out. The top of your esophagus then vibrates and produces sound. It's kind of like a belch, but different—the air isn't coming from the stomach. Air is pulled in (inhaled or taken in using the lips or the tongue) right below that vibrating segment, and then it comes out. It's a more controlled way to make sound. You'll learn how to use your lips, tongue, and teeth to form words from the released air.

Esophageal speech is difficult and takes time to learn—often up to 6 months.

After you leave the hospital, you'll continue to learn esophageal speech with the SLP, probably about once a week. You may also have a home health speech therapist visit a few times a week. Some hospitals offer intensive laryngectomee (someone who has had cancer and laryngectomy surgery) workshops to teach esophageal speech. Learning to speak this way may be hard. But you won't need any tools or more surgery.

### **Artificial larynx**

You can learn to use an artificial larynx (AL) while you're still in the hospital. This is a battery-operated device that helps create a mechanical voice for you. The device makes a vibrating sound. You can form this sound into speech by moving your mouth and tongue. With a little practice, you can communicate with an AL and can even use it to speak on the telephone.

There are two types of artificial larynxes—neck type and intraoral:

- The neck type is placed on your skin on the side of your neck, under your chin, or on your cheek. It may
  take some practice to find the position on your neck or near your mouth that makes the best-sounding
  voice.
- The intraoral type of AL is a small tube that goes in your mouth. It's best to use your nondominant hand
  to hold the AL so that your dominant hand is free to write or shake hands.

Some people stick with the AL as their form of speech because they can communicate right away and don't need another operation to use it.

Although communication is immediate with ALs and the devices are easy to use, some people don't like the mechanical quality it gives their voice.

## Tracheoesophageal puncture (TEP)

A TEP prosthesis is put into a small hole or puncture that the surgeon makes between your windpipe and your esophagus. You may need another operation for this. Some healthcare providers perform a TEP at the same time as the laryngectomy. Usually, you can decide if you want a TEP. Or the healthcare provider and the SLP may suggest it if esophageal speech isn't working.

To speak with a TEP, you take a deep breath and then cover the stoma so that when you exhale, the air that would normally come out of the stoma is shunted through a little prosthesis (a TEP valve). The air goes through the one-way valve of the prosthesis, then up your esophagus, where muscle vibrations help to produce voice. You can either cover your stoma with your finger when speaking, or you can get a hands-free tracheostoma valve. A TEP lets you develop a natural-sounding voice and good sound quality within a few weeks after surgery.

#### **Learn from others**

When the larynx is removed, the usual method of producing voice is also lost. It's important to remember that laryngectomees can speak again. You just have to learn a new way to speak.

A laryngectomee is sometimes called a "lary." You can find a lary to talk to through laryngectomee clubs or support groups. You'll find lists of clubs, and other resources, on the <a href="International Association of Laryngectomees website">International Association of Laryngectomees website</a>.

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