

Chapter 1: Anatomical Changes After Laryngectomy

A laryngectomy is a complex surgery that involves removal of the larynx, also known as the “voice box,” as well as reconstruction of the throat. During this surgery, your surgeon redirects your trachea or “windpipe.” A permanent opening, or “stoma” is then created at the front base of your neck. This will be the opening through which you breathe in and out. It is permanent and will not be reversed or closed. The importance of this opening and why it is permanent is often a great concern for patients and will be thoroughly explained in this material. You will also likely have many other questions and concerns. This information is meant to help guide you through a better understanding of the anatomic and physiologic changes it will bring. Please take the time to read this information completely as it will help to answer many common questions and concerns patients and their families have when going into this surgery and recovery process. Understanding what to expect can often help ease concern and anxiety when heading into the surgery and recovery process.

*“If it will save my life, I have no problem breathing through my neck.”
- WD, Brownwood, TX*



Before a laryngectomy



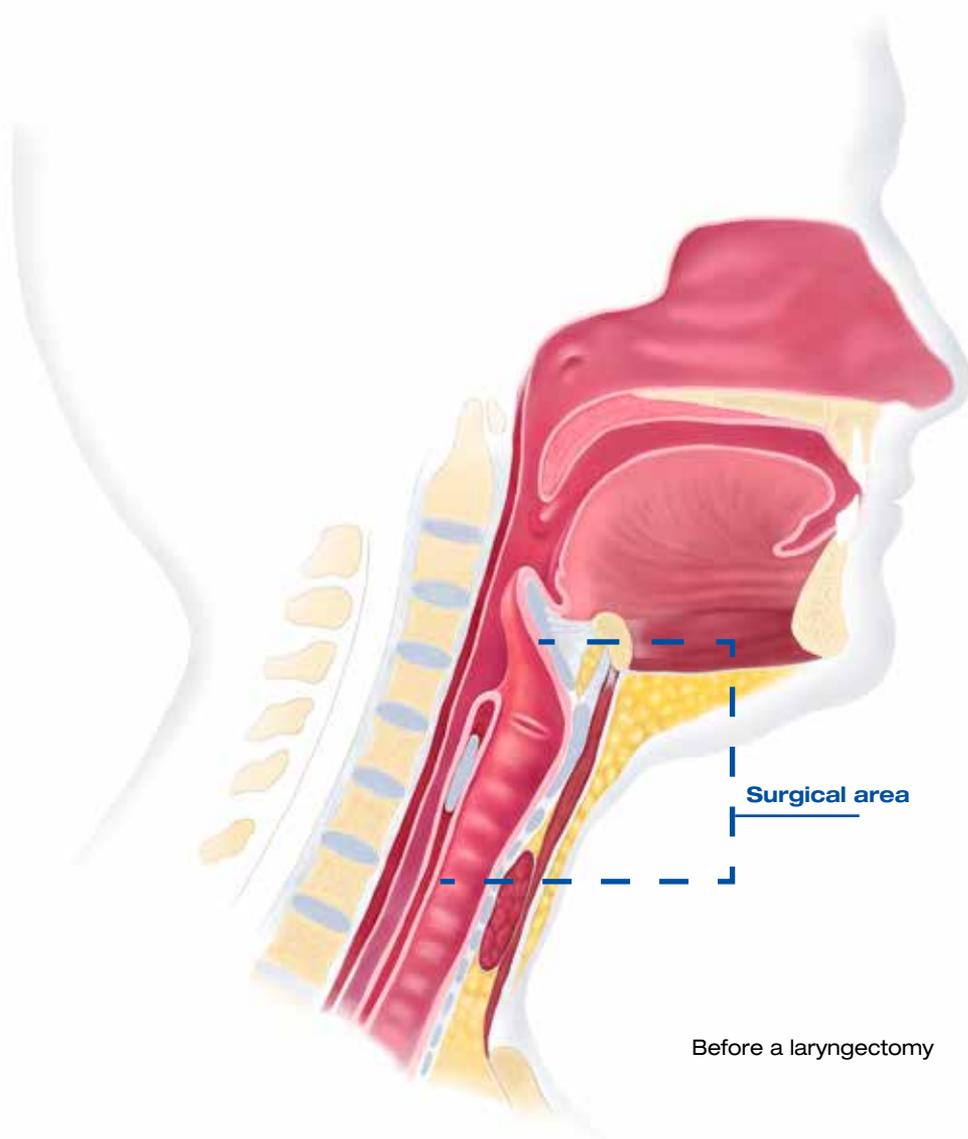
After a laryngectomy

See pages 14-15 for full size illustrations

In addition to removing the vocal cords, there are other structures that are also parts of your larynx that will be removed. Many of these removed structures are important in swallowing safely and ensuring you do not choke. This explains, when there is a laryngeal cancer, why so many patients find it difficult to eat without choking. Often times, there are diseased parts of the larynx that prevent them from swallowing safely.

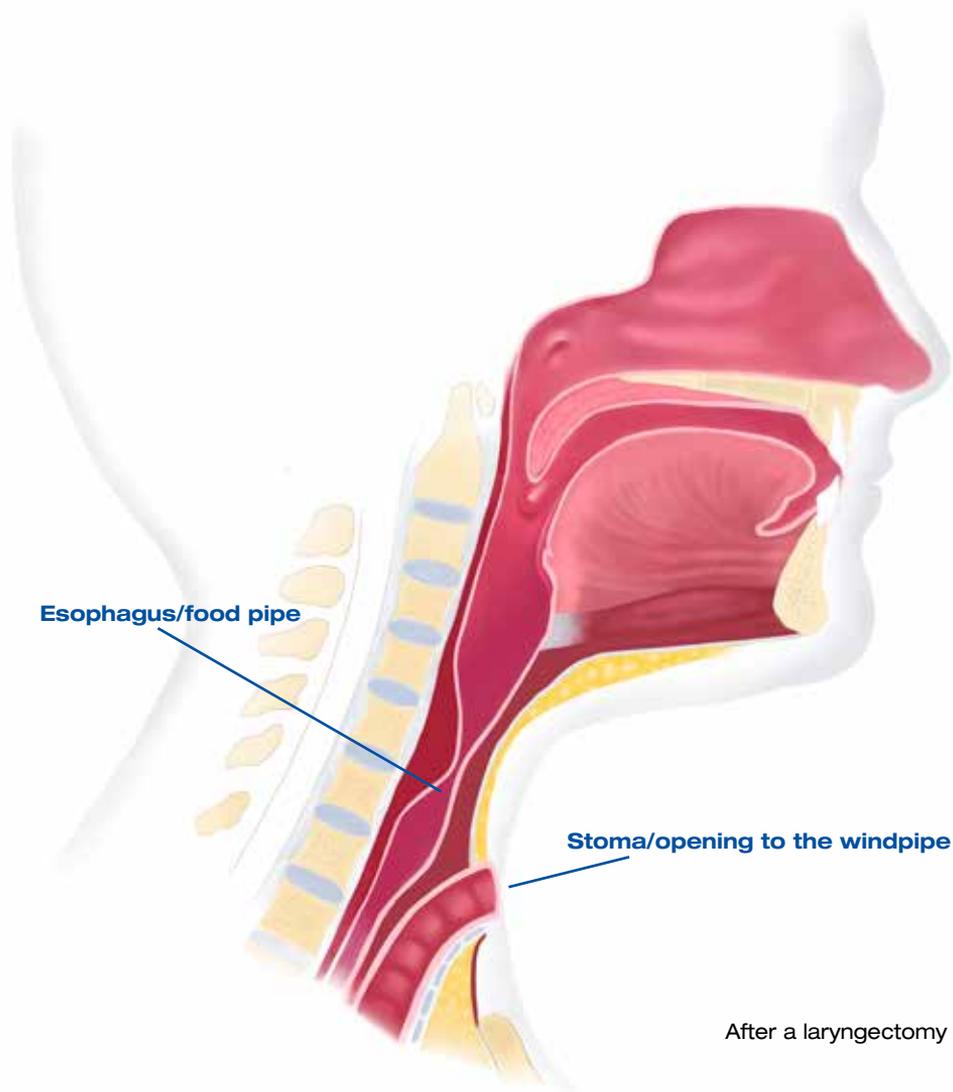
When your larynx is removed, including these structures important for safe swallowing, the trachea, or “windpipe” would be left open and unprotected, as a large opening for the food you eat and drink to fall into as it passes through the throat. If left like this, without protection, anything you attempt to swallow, including your own saliva, will enter your windpipe and your lungs, making it impossible to eat or drink without choking significantly. For this reason, your trachea is diverted, or “redirected.”

This means the trachea is sewn, or “sutured” to an opening made in your neck. This opening is your new airway through which you will inhale and exhale, called a “stoma.” When this is done, your trachea will be disconnected from the rest of your throat, therefore ensuring you will no longer be at risk for choking when you eat.



This also means, however, that there is no longer a connection between the lungs and the nose and mouth. Following surgery, 100% of the air you breathe, both inhale and exhale, will be breathed through the stoma. There will no longer be any air moving through your nose or mouth during the respiratory process.

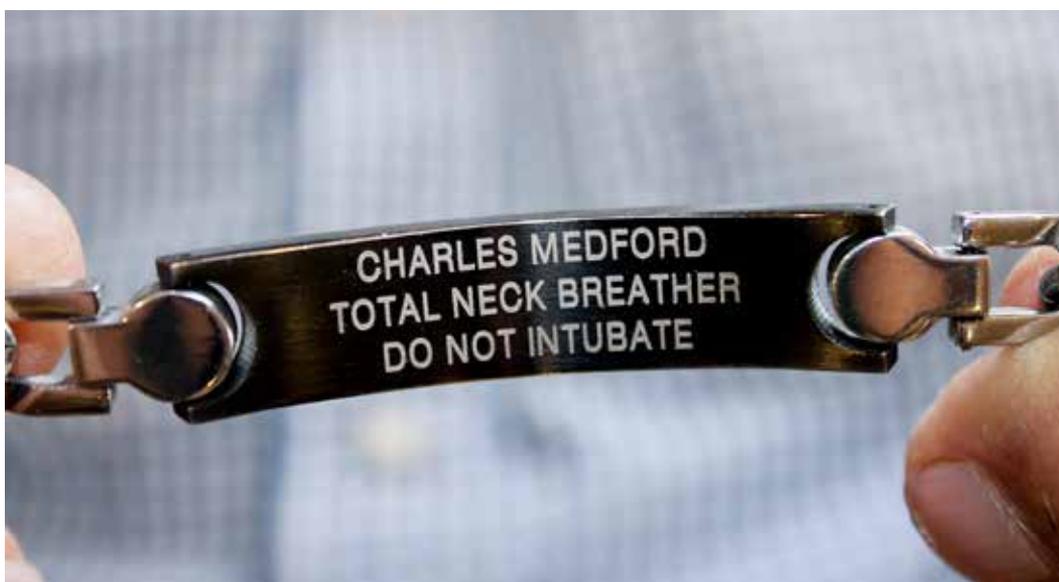
For this reason, after your surgery, it is very important that everyone involved in your care understand that you breathe differently from other people. Family members, caregivers and other health care professionals should be aware that you no longer can take air in through your nose and mouth. This is VERY important should you ever need CPR because breaths need to be given through the stoma in your neck or it will not get to your lungs.



MedicAlert

You should purchase a medical alert bracelet, necklace or lapel pin that states “Neck Breather.” It is important that you wear this at all times. Emergency CPR cards for laryngectomees are available through various organizations. Placing one in your car dashboard or windshield can help emergency responders in the event of an accident. Additionally, taking one of these cards to your local fire station, alerting them to your address as well, can assist them in the event of an emergency at your home.

It is important to NEVER assume that any medical provider, including a medical doctor, will understand the unique needs of a laryngectomee patient. All laryngectomees are encouraged to be proactive in informing the doctors, nurses and others caring for them about their unique needs as a laryngectomee/neck breather.



The Air You Breathe

Since you will be breathing through the stoma in your neck, it is also very important that you protect your stoma. Before a laryngectomy, the nose helps to filter the air that is inhaled. After the surgery, all the air you breathe goes in and out of the stoma, bypassing the natural filtration of the nose. It is very important to stay away from smoke, dust and other pollutants, as these will be inhaled directly into your lungs.

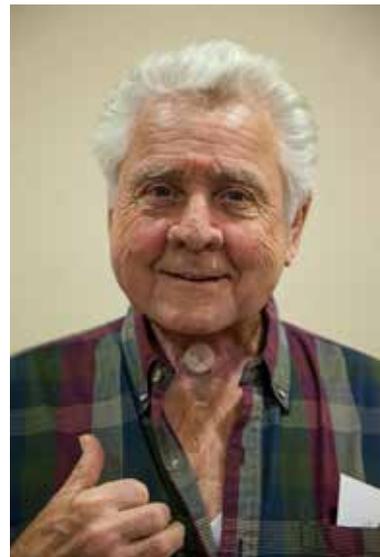
In addition to filtering the air, breathing in through the nose and mouth also helps to heat and humidify air that is inhaled. After a laryngectomy, inhaled air through the stoma enters the lungs without the benefit of first being humidified or heated since it is no longer being inhaled through the nose/mouth.

More recent technological advancements have helped laryngectomees breath with the benefit of heat and humidification. A heat and moisture exchange cassette, or “HME,” will be utilized after your surgery to assist with these changes. This is more thoroughly explained later in this book.

(see Chapter 10: Heat & Moisture Exchange (HME) Cassettes and Adhesive Housings)



Laryngectomee with TEP and HME system.

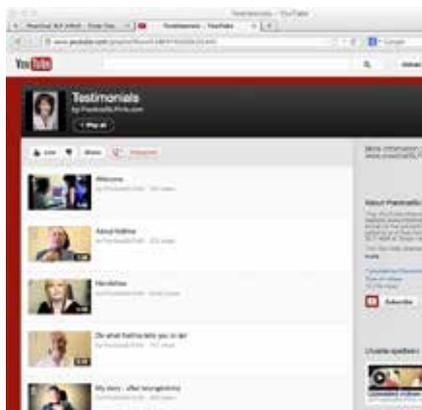


Coughing as a neck breather means anything you should expel from your lungs will be expelled, or coughed out through your stoma. Although you are accustomed to covering your mouth when you cough, you will learn instead to cover your stoma. Initially following surgery and for several weeks thereafter, you will cough a great deal of mucous and secretions from your lungs. The lungs are increasing the output of secretions and mucous in response to the changes in your anatomy and physiology. Regular application of an HME assists with restoring normal lung function by delivering the heated/warmed and humidified air the lungs are accustomed to receiving. Over time, with regular HME application, the secretion production will slow down.

Many patients are concerned to see, despite regular HME application and sufficient healing from surgery, they continue to cough mucous from their stoma. It should be stressed that that lungs **SHOULD NORMALLY** produce mucous in healthy people as a protective layer to help keep lung tissue moist as well as to serve to trap inhaled particles that may be harmful to lung tissue. In a non-laryngectomized patient, these secretions are coughed frequently during the course of a normal day and typically swallowed.

Following a laryngectomy, however, these secretions must be expelled from the stoma and wiped away, no longer able to be swallowed as before since there is no longer a connection between the throat and the trachea. Because of this, the mucous must be dealt with more directly, being coughed and then wiped away, which may cause patients to believe they have more mucous than is normal.

It is important to remember this is quite normal, although your doctor or speech pathologist may be able to offer suggestions for improved secretion management if it seems atypical.



View and listen to patients

**On our Youtube-channel you will find testimonials from patients and relatives:
<http://www.youtube.com/user/PracticalSLPinfo>
or scan the QR code**





This laryngectomee is using a TEP and a hands-free HME device