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We created this book to help laryngectomees, spouses, caregivers, companions and loved ones gain a greater understanding of what to expect after a total laryngectomy. The information is not intended to replace the advice of your medical team but rather to complement their guidance. Ultimately, our goal is to allow you to make informed choices that will help you live well after your surgery.

This book does not replace the Instructions For Use (IFU) for each product. Always read the accompanying IFU before using product.

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Who we are

At Atos Medical, we are committed to giving a voice to people who breathe through a stoma, with design solutions and technologies built on decades of experience and a deep understanding of our users.

Since the introduction of the first Provox® voice prosthesis in 1990, Atos Medical has become the world leader in laryngectomy care.

Our commitment and dedicated specialization in this field, along with our substantial level of evidence, has allowed us to gain a deep understanding of the needs of our customers. This understanding drives our innovation process and allows us to continuously bring cutting-edge solutions to our users.

Our comprehensive laryngectomy care portfolio includes a complete range of voice and pulmonary rehabilitation devices. This broad selection of high-quality products allows for a personalized combination of solutions for each user.

Atos Medical understands that being the leader in this field comprises more than product development. Supporting clinical research and educating both professionals and users is an integral part of our business. Our products are featured in over 150 peer-reviewed publications. We support and conduct hundreds of conferences, educational programs and thousands of events across the country for users and caregivers each year.

We are proud of our history, accomplishments and mission toward customer-driven innovation. We continue to be excited by learning from our users and being inspired to provide the best products, services and education in laryngectomy care.



What is a total laryngectomy?

Undergoing a total laryngectomy can be overwhelming and lead to changes in the way you live, but you are not alone. More than 100,000 people around the world have been through the same thing and many have found ways to live well as a laryngectomee. Your unique journey to recovery after surgery begins now. By reading this book, you have taken the first step in getting back to enjoying life. At Atos Medical, we are prepared to take this journey with you every step of the way. We are always here to help!

A total laryngectomy is a surgery often performed in the advanced stages of laryngeal cancer. The procedure involves removing the larynx and epiglottis. The larynx, also known as the voice box, plays several important roles. It houses the vocal folds that produce the sound of your voice. The larynx also plays a role in breathing and swallowing. Removal of the voice box not only leads to changes in the voice, it also changes the way you breathe, swallow and smell. Going through a total laryngectomy means breathing through a stoma instead of your nose and mouth, and also learning to speak in a new way.

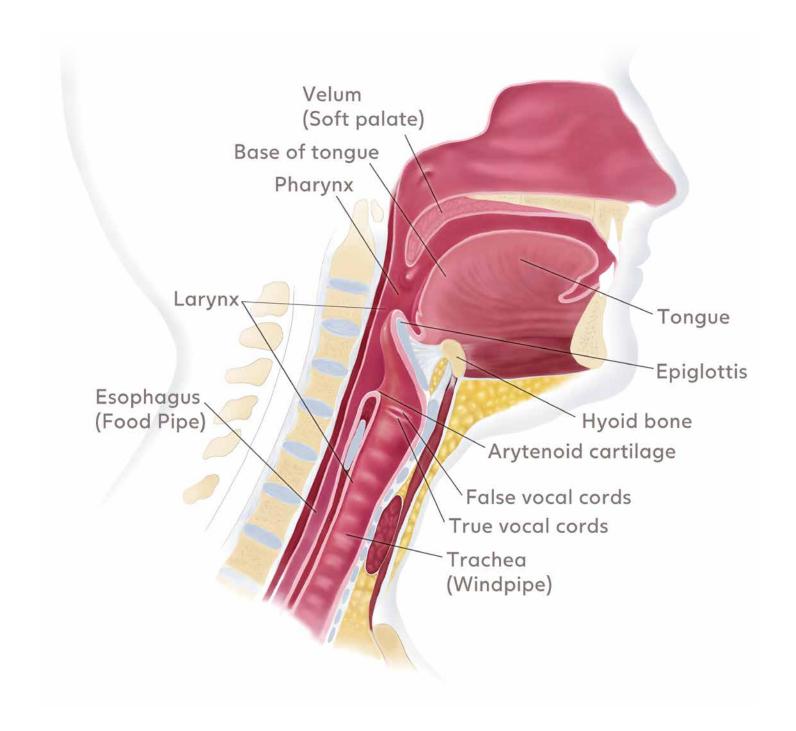
There are proven ways to regain the power of your speech after a laryngectomy. Thousands of laryngectomees can tell you so — with their own voices! Although one of the biggest changes after a total laryngectomy is losing your vocal cords, with some patience and perseverance, most people can learn to speak again. More details about speech options are provided in this book.

When eating and drinking, the larynx and epiglottis seal off the pathway to the lungs during swallowing. After they are removed during surgery, you need another way to protect your airway. The surgeon permanently separates your windpipe from your esophagus. This allows you to eat and drink without the risk of having food or fluids enter your windpipe and lungs. So you can breathe, the surgeon attaches your windpipe to an opening that is created in your neck. You then do all of your breathing through this opening, called a tracheostoma or more commonly, a stoma.

Another change is the loss of nasal function. You may not realize it, but your nose does more than just smell. It plays an important role in keeping your lungs healthy and working well. Because the air you breathe is not filtered through your nose and upper airway anymore, the air is cooler and less moist than it should be for good lung health. This causes your lungs to produce more mucus and cause you to cough. Fortunately, heat and moisture exchangers (HMEs) have been designed to help your lungs by conditioning the air you breathe in and help to do what your nose used to do. HMEs are your "new nose".

While there are changes to expect and it may take some time to adjust, know that most people can get back to doing the things they enjoy. And Atos is here to help you!

Before total laryngectomy



Epiglottis

The flap that covers and protects your airway (trachea/windpipe) while swallowing.

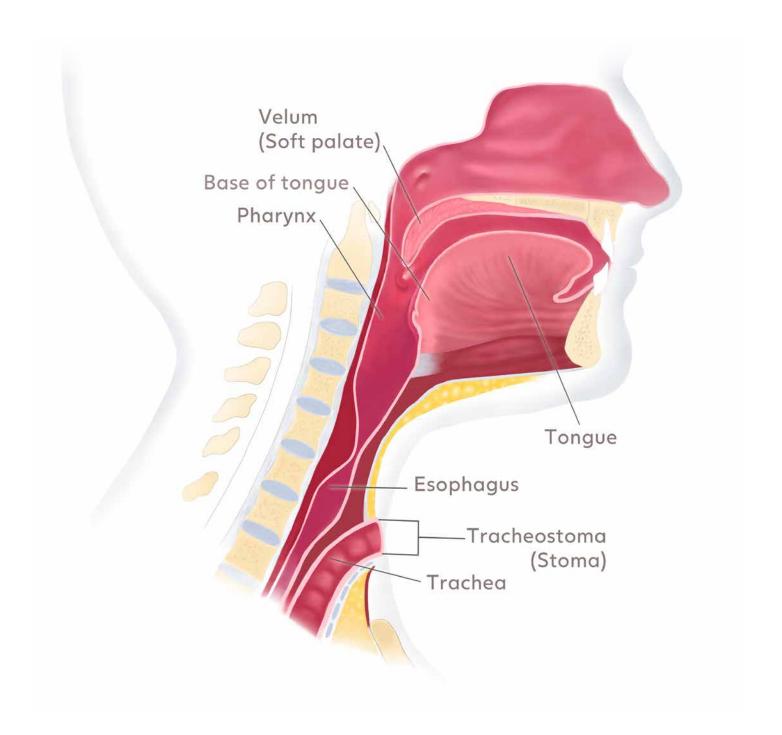
Esophagus

The esophagus (food pipe) connects the throat (pharynx) to your stomach.

Larynx

The larynx (voice box) sits on top of your trachea (windpipe). It contains your vocal cords which vibrate to produce sound for your voice.

After total laryngectomy



Pharynx

The pharynx (throat) is the muscular tube connecting your mouth and nose to the esophagus.

Trachea

The trachea (windpipe) extends from the bottom of the larynx to the upper part of your lungs.

Stoma

The permanent opening at the base of your neck for breathing after a laryngectomy.

Before Surgery

There are some simple things you can do to help you prepare before your laryngectomy. Being well prepared can help you feel calmer before your surgery and more at ease when you return home. Below you will find suggestions and tips to help you prepare for life after your laryngectomy.

ALERT: NECK BREAK

EMERGENCY CARD - NECK BREATHER IONLY BREATHETHROUGH AN OPENING IN MY NECK My Hame: ICC Construct Confident First Uses a Voice Prostretate: ID yes ID Not (If you see below) EMERGENCY CARD - NECK BREATHER I AM A LARYNGECTOME NO VOCAL CORDS WAYN Attermedical And Analysis (ID) WAYN Attermedical Analysis (ID) WAYN Attermedical Analysis (ID) LEDOCLANGE TO THE TO



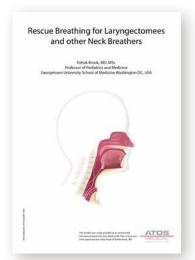
Emergency information

After surgery, it is important for medical workers to know you have a special airway since you will only breathe in and out through your neck. In an emergency, oxygen must be provided to your stoma, not your nose or mouth.

There are ways to prepare for emergencies and alert emergency medical services (EMS) that your airway is different. There are several complimentary resources that Atos offers for these situations. A soft, silicone Neck Breather Alert bracelet can be worn to inform EMS that you would have to be resuscitated via your neck. An Emergency Card is also available. Keep it easily visible in your wallet and/or at your bedside. The window cling can be used on your car or home window. These important resources are available for free through Atos Medical at **www.atosmedical.us** or by contacting us at **+1.800.217.0025**.

A medical alert bracelet can also be helpful. These store all your medical information and are easy to wear. They are sold at most drug stores and can provide lifesaving information to EMS workers in an emergency.

Most smart phones have emergency settings which allow you to store medical history and an emergency contact. The feature is usually located in the settings, but each phone is different. If you need help, contact customer service for your phone or look for instructions online.



Contact your local Emergency Medical Services (EMS) and/or Fire Department

Rescue breathing is different for laryngectomees. EMS workers often need additional training to understand the differences. Before surgery, inform your local EMS that you will ONLY breathe through your neck. If you need oxygen, it must be provided to your stoma. Oxygen CANNOT be provided to the nose or the mouth and be effective. You can provide a copy of "Rescue Breathing for Laryngectomees and other Neck Breathers" by Itzhak Brook, MD. It is available to download at www.atosmedical.us.

You should also share that you may have trouble speaking after surgery. Ask if there are any programs to text 911 in an emergency. You can also pre-record a message to summon help that you can play over the phone for 911 if you are unable to speak. If you need help, there are government programs in the US and Canada to assist with contacting 911.

What will your insurance cover?

Call your health insurance company to ask the following questions:

- What are your Durable Medical Equipment (DME) benefits?
- Who are the approved DME providers in your area?
- Not every company carries laryngectomy supplies. It is important to ask
 the DME company whether they stock specific items. Examples are heat
 and moisture exchangers (HMEs) and adhesive baseplates. Sometimes
 you must use an out-of-network company to get the items you need.
- Will they cover medical supplies from out-of-network DME companies?

At Atos Medical, we advocate daily for improved insurance coverage and access to products. We are working to become in-network with many insurance companies. Call our Customer Care Team at +1.800.217.0025 or email info.us@atosmedical.com to learn more!

Set up an account with your laryngectomy supply company

If your clinician and/or physician tells you that you will need to order special supplies after your surgery, call the supplier and set up an account ahead of time. This will make the shipping process faster when you are ready to order.



While a laryngectomy does mean a change in your daily routine, it is still possible to return to doing the things you love. Keep your future goals in mind each day. Most people can return to doing the things they enjoyed before the surgery such as exercising, visiting friends and traveling.



What to expect right after surgery

Most people stay in the hospital for several days after a total laryngectomy. Your medical team will decide the length of your stay. Some milestones that help determine when you are ready to go home from the hospital are:

- How are you healing after surgery?
- Are you getting enough nutrition?
- Are you having pain?
- Can you communicate with your caregiver?

How will you communicate?

There are a few ways to communicate after surgery. Some options include writing, gestures, mouthing words, communication apps and speaking with an electrolarynx. If you have a smart phone, it may be helpful to download text-to-speech apps. You can also bring a pen and paper, dry-erase or LCD board to the hospital. These options can help you communicate while you are healing. In some cases, you may start to use an electrolarynx while you are in the hospital. This will depend on if your medical team thinks you are healing well and if you are ready.

If you have a voice prosthesis, you need to wait until you heal to begin speaking. The doctor will let you know when you can start, which is often after you are discharged from the hospital. It takes time to completely heal after surgery, so be patient with yourself.

Caring for your stoma

When you come home from the hospital, it can be a time of adjustment as you learn to take care of your stoma. Now that you breathe through a stoma that leads directly to your lungs, it is important to keep it covered. Use a heat and moisture exchanger (HME) all day and all night. It gives the air you breathe heat and moisture, and helps keep harmful particles out of your lungs. In this way, it does the job that your nose normally would.

It is also important to keep your stoma clean and free of mucus. Your clinician will be able to provide guidance on the best way to do this. Do not clean the area with anything that is small enough to fall in your stoma. Your little finger is a good guide to compare against the size of your stoma. As you are healing, your stoma may shrink. This is normal, but if it becomes too small, it could become difficult to breathe. If this happens or if you experience dry, crusty mucus that affects your breathing (known as a mucus plug), contact your clinician or emergency medical professionals immediately.

Terminology Quick Reference

Chemotherapy: A cancer treatment that uses one or more anti-cancer drugs as part of a standard therapy regimen.

Electrolarynx / Artificial Larynx: A small, electronic device placed on the neck, cheek or in the mouth that produces sound that can be shaped into speech.

Epiglottis: The flap that covers and protects the airway (trachea/windpipe) while swallowing.

Esophageal Speech: A source of speech that involves swallowing small amounts of air into the esophagus before forcing them back up to make sound that can be formed into words.

Esophagus: The esophagus connects the throat (pharynx) to the stomach. Also known as food pipe.

Heat and Moisture Exchanger (HME): A small cassette with a foam core treated with a salt solution that traps heat and humidity during exhalation and returns it to the lungs during inhalation. Also known as "your new nose" after laryngectomy.

Indwelling Voice Prosthesis: A voice prosthesis that is inserted by a clinician or doctor.

Laryngeal Cancer: Cancer that forms in tissues of the larynx.

Laryngectomee: A person who has undergone a total laryngectomy.

Laryngectomy: See Total Laryngectomy

Larynx: An organ in the throat that sits on top of the trachea (windpipe) and contains vocal cords which vibrate to produce sound for voice. Also known as voice box.

Mucus Plug: Mucus that becomes thick, crusty and difficult to cough out. Mucus plugs make it difficult to breathe and can become dangerous.

Non-Indwelling Voice Prosthesis: A voice prosthesis which a laryngectomee may learn to insert and replace on their own.

Occlude: To block the air (with a finger) from passing through the stoma when speaking with a voice prosthesis.

Pharynx: The muscular tube connecting your mouth and nose to the esophagus. Also known as the throat.

Radiation Therapy: See Radiotherapy.

Radiotherapy: A cancer treatment that uses beams of intense energy to kill cancer cells.

Speech-Language Pathologist (SLP): Experts who treat many types of communication and swallowing problems. Also known as a clinician.

Stoma / Tracheostoma: A permanent opening at the base of the neck through which one breathes after a laryngectomy.

Total Laryngectomy: A surgery often performed in the advanced stages of cancer. The procedure involves removing the larynx and epiglottis.

Trachea: The trachea (windpipe) extends from the bottom of the larynx to the upper part of the lungs.

Tracheoesophageal (TE) Puncture: A surgically-created hole between the trachea (windpipe) and the esophagus (food pipe) for placement of a voice prosthesis.

Voice Prosthesis (VP) or Tracheoesophageal Voice Prosthesis (TEP): A small plastic device with a one-way valve that is placed in the wall between the trachea (windpipe) and esophagus (food pipe). It is sometimes referred to as a TEP. VPs can be Indwelling or Non-Indwelling.



A different way of speaking

A laryngectomy will change the way you communicate. Without a voice box, you cannot speak as you could before, but there are ways to reclaim the power of speech.

Before a laryngectomy, voice is produced by vocal cords located within the larynx (voice box). When you breathe out, air passes through the vocal cords and they vibrate to produce sound. The sound is shaped into words with your lips, tongue and teeth.

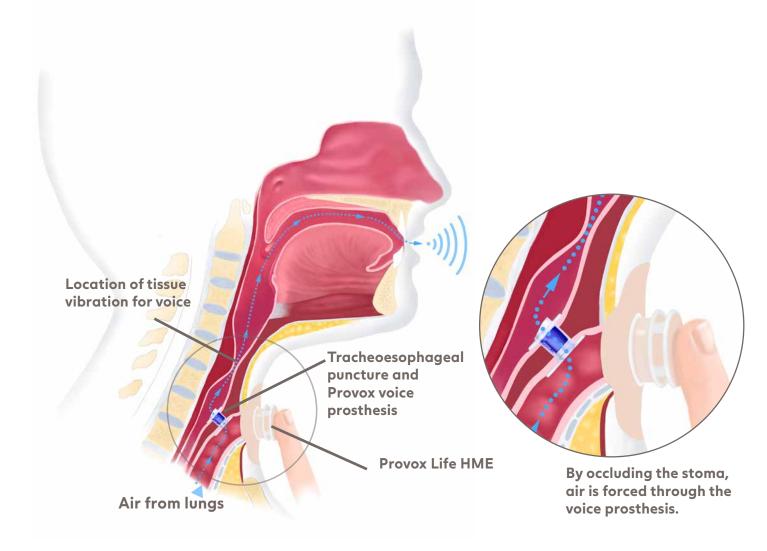
There are different ways to speak without a voice box. The three main options are use of a voice prosthesis, use of an electrolarynx (artificial larynx) and esophageal speech.

Your speech-language pathologist will help train you on your new way of communicating. He or she may give you exercises to make your new speaking style as clear as possible. You may find you will use more than one way to communicate.

The first laryngectomy was performed in 1873 by a surgeon in Vienna, Austria. Restoring speech and voice has been a focus since that time. We have come a long way in the development of new ways to communicate.

Currently, there are three primary ways to communicate. The majority of laryngectomees learn to speak using one or more of the methods on the following pages.

Examples of the three types of communication demonstrated by a laryngectomee are available at **www.atosmedical.us** (www.atosmedical.ca in Canada).



Speaking with a voice prosthesis

A voice prosthesis (VP) is a small plastic device placed in the wall between your trachea (windpipe) and esophagus (food pipe). It is sometimes referred to as a TEP. It can either be placed at the time of your surgery or after you heal. The voice prosthesis has a one-way valve which opens when you speak and stays closed when you swallow. When you cover your stoma to speak, the air is directed from your lungs through the voice prosthesis. It then travels into the esophagus. When air hits the tissue in your esophagus, it will vibrate to create sound. That sound then travels up to the mouth and words are formed, just like before surgery. This is called tracheoesophageal (TE) speech. The voice prosthesis typically needs to be changed every few months by your clinician.

Advantages:*

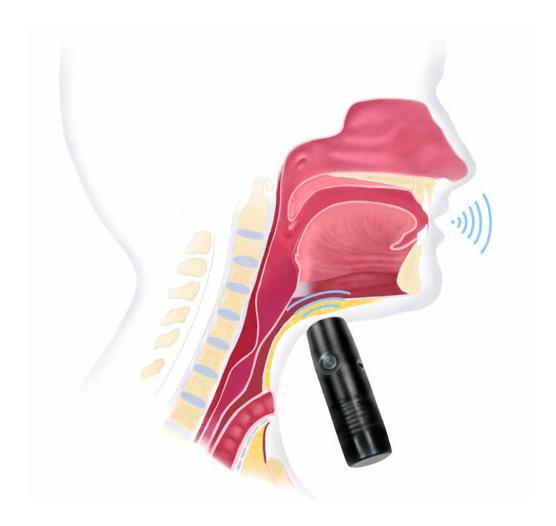
- Good voice quality and clarity
- Relatively quick and easy to learn
- Functional speech can usually be achieved in a matter of weeks
- Provox® FreeHands Flexivoice™ can give most users the ability to speak hands-free with a VP*

Tracheoesophageal puncture

A surgicallycreated hole between the trachea (windpipe) and the esophagus (food pipe) for placement of a voice prosthesis

Occlude

To block the air (with your finger) from passing through your stoma when speaking with a voice prosthesis.



Speaking with an electrolarynx

An artificial larynx or electrolarynx (EL) is an electronic device that produces sound that can be shaped into speech. It can be placed on your neck, cheek or with an oral adaptor in your mouth. When the sound moves into your mouth, you shape it into words using your lips, tongue and teeth. Many people can begin using an EL right after surgery. Some people use an EL as their primary way of communicating. Others use a voice prosthesis and an EL as a back-up device or to be heard over a crowd. There are different devices that allow for pitch and tone variation which can help your speech sound more natural. Your speech-language pathologist can work with you to find the right device for you.

Advantages:

- Relatively easy-to-use
- Can be used to communicate right after surgery while you are still healing or while learning to speak with a voice prosthesis
- Can be a primary or back-up method of communicating



Esophageal speech

Esophageal speech uses the esophagus as the source of sound for speech. It involves swallowing small amounts of air into your esophagus before forcing them back up. The swallowed air causes the tissue in the esophagus to vibrate and create sound. The sound is then shaped into words with the lips, tongue and teeth.

Esophageal speech was more common before the voice prosthesis was developed. It is the oldest communication method used after laryngectomy, but it can be challenging to learn. Only one in three people attempting esophageal speech are successful. Since you need to swallow air, you may have to speak in short sentences. You should discuss with your speechlanguage pathologist if esophageal speech would be a good option for you.

Advantages:

- Doesn't require a device
- Allows for hands-free speech



Speaking with confidence

Having a voice prosthesis that you can rely on to provide good voice quality can give you confidence to speak. Provox offers a range of voice prostheses that are durable, easy to speak with and are easy to maintain. Most VPs are indwelling, meaning they are inserted by a clinician.

Provox® Vega™*

Provox Vega is a voice prosthesis used by thousands of people around the world. It is known for being a robust, durable and reliable device which is easy to maintain. It is optimized for easy, clear speech with a low speaking effort. Most users chose Provox Vega as their preferred voice prosthesis. They say it is closest to the natural way of speaking.



Provox®2

Provox2 is a robust and reliable voice prosthesis. It has low airflow resistance and is easy to maintain. Provox2 is only available in the United States.



Provox® ActiValve®

Provox ActiValve is designed for users who experience short device life from frequent leakage through the voice prosthesis. The blue fluoroplastic material of the valve is more resistant to the bacteria and fungus that can make it leak quickly. The prosthesis also closes with magnets which helps keep the valve flap closed when breathing or swallowing.



Provox® XtraSeal™

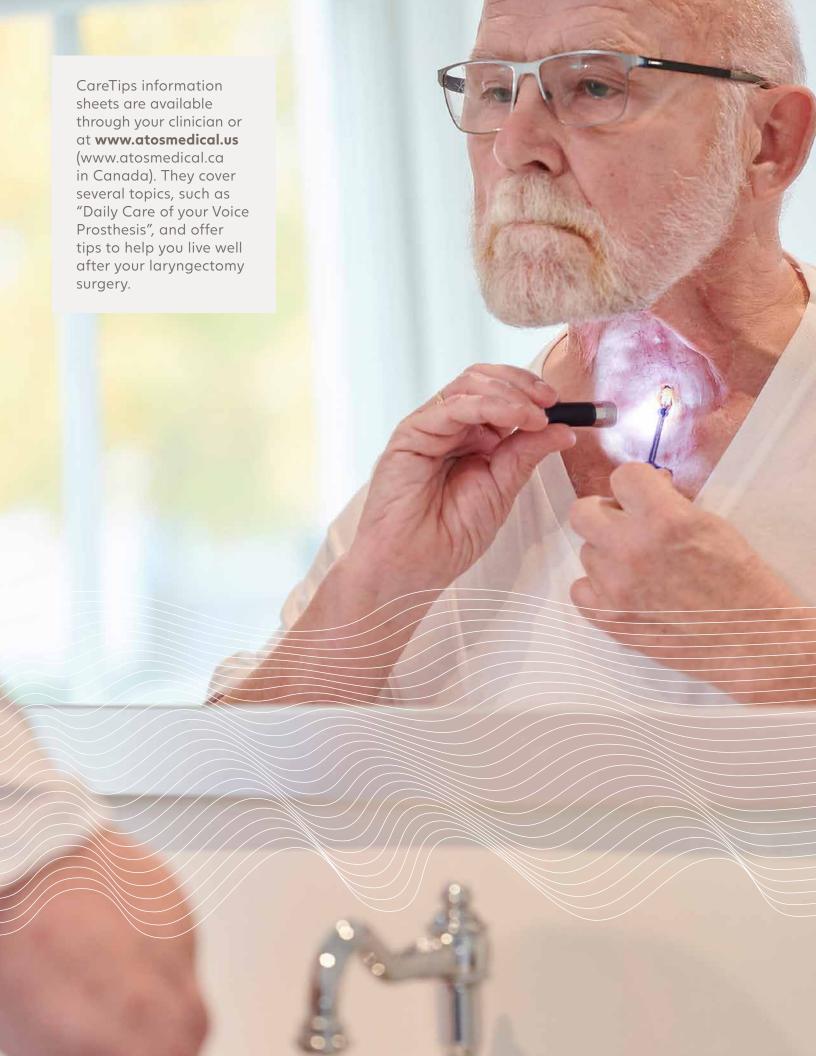
Provox Vega XtraSeal combines the benefits of Provox Vega with a solution to manage leakage around the voice prosthesis. It is designed for users that experience leakage around the voice prosthesis due to enlarged punctures. It is a Provox Vega prosthesis with a thin, concave large esophageal flange. The flange is very flexible so it conforms to the tissue in the esophagus to help prevent leakage.



Provox® NiD™ Non-Indwelling

Provox NiD is a prosthesis which a laryngectomee may learn to insert and replace on their own. It is not for everyone and your clinician must determine you are a candidate. It may be a good solution for those who cannot travel to have their VP replaced regularly by a clinician.





Taking care of your VP

Having a good maintenance routine for your voice prosthesis is crucial. Just as you would brush your teeth, you should brush and flush your voice prosthesis at least twice a day. This will help keep your voice prosthesis clear of debris that can cause leakage.

The back of your voice prosthesis is in your esophagus where food, liquids and saliva are swallowed. Since part of your voice prosthesis is in your esophagus, bacteria from your mouth and throat can stick on it when you swallow. Over time, these bacteria will make your voice prosthesis leak. When it leaks, it will make you cough.

You can check for leakage by taking a sip of a colored liquid, such as coffee. Cleaning your voice prosthesis can help prevent leakage. To help improve performance and extend the life of your VP, we recommend cleaning your voice prosthesis in the morning, in the evening and after every meal, using Provox Brush and Provox Flush.

Provox® Brush

Provox Brush is for cleaning your voice prosthesis, similar to how you use a toothbrush to clean your teeth or dentures. The brush tip and flexible shaft allow you to remove debris from your prosthesis. Remember to replace your Provox Brush once a month, or earlier if the bristles look worn or discolored.

Provox® Flush

Provox Flush is for flushing your voice prosthesis after brushing, similar to how you would rinse out your mouth after brushing your teeth. When learning to use the Provox Flush, it is best to start with air until you feel comfortable enough to use water.

Provox® Plug and Provox® Vega™ Plug

Provox Vega Plug and Provox Plug are designed to help temporarily stop leakage through the center of the voice prosthesis until you can have it changed. Use the end of the Provox Brush (opposite the bristles) to place the Plug into the prosthesis. You cannot talk when the Plug is in place so only use it when you are eating and drinking. Remove the Plug at the end of your meal and you can talk again.







Provox® Vega™ Plug (shown here) is for use with Provox® Vega™ and Provox® Vega™ XtraSeal™. Provox® Plug is available for Provox®2 and Provox® ActiValve®.

Breathing



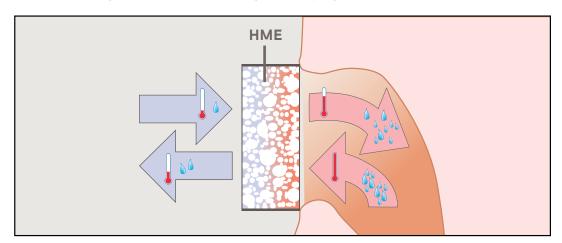
Coughing with an HME

If you feel like you are going to cough, remove your HME and cover your stoma with a lint-free tissue or handkerchief. Just as you used to cover your mouth before your surgery, this protects both you and those around you. Sometimes, there is not enough time to remove your HME before you cough. In that case, remove the HME when you finish coughing and wipe the back with the tissue/handkerchief. If mucus gets in your HME, use a new one. NEVER WASH OR RINSE OUT YOUR HME! Rinsing will wash the salt solution off and reduce the function of the HME.

Breathing before and after a laryngectomy

Before surgery, you breathe through your nose and your mouth. Your nose, mouth and throat make up your upper airway. The upper airway (primarily the nose) conditions the air you breathe by warming, humidifying and filtering it. Your lungs need the air to be clean and conditioned to work properly.

After your laryngectomy, you no longer breathe through your nose and your mouth. As a result, the air is not heated, filtered or moisturized before it reaches the lungs. This can affect how well you breathe and how your lungs function. It can also result in more mucus production, coughing or mucus plugs. Luckily, heat and moisture exchangers (HMEs) are a solution. An HME is designed to help your lungs by warming and humidifying the air. It functions like your nose did before your surgery.



As you exhale, heat and moisture from your breath is captured in the HME. The heat and moisture is added back to the air you inhale before it passes to your lungs.

An HME is placed directly over your stoma. It is held in place by a stomal attachment, such as an adhesive baseplate or a laryngectomy tube or button. The HME gives the air that you breathe heat and moisture. It also adds slight resistance for breathing to help your lungs function well.

How does an HME work? The HME has a foam core that is treated with a special salt solution. As you exhale, heat and moisture from your breath is captured in the HME. The heat and moisture is added back to the air you inhale before it passes to your lungs. The HME keeps the temperature and condition of the air traveling within your airway consistent so the lungs can function well. HMEs also help keep larger particles out of your lungs, such as insects or crumbs from eating. It is important to use an HME 24 hours a day, 7 days a week. Most people who consistently use an HME day and night experience fewer problems with coughing and mucus production.*

There are different types of HMEs specially designed to work better in different situations. On the next pages, you will find a quick overview of the different situations where you might use them.

Lungs are vital organs. They are responsible for ventilation, providing oxygen to your body from the air you breathe in and releasing carbon dioxide to the air you breathe out.

Relaxing







Taking it easy means different things to different people. Your idea of relaxing may be reading, putting your feet up with a cup of coffee or watching TV.

Home HME can help in all of these situations. This HME has the highest humidification of the daytime HMEs with comfortable breathing making Home HME a good choice for your at-home activities that don't require deep breathing. Providing high humidification with comfortable breathing throughout the day, Home HME is designed to optimize lung health when you are taking it easy.

On the go







People are active in different ways. For some, being active means going for a walk outdoors in the fresh air. It could also mean you are socializing, shopping or at work.

Go HME provides lower breathing resistance helping to make it easier to breathe when you are out and about or engaging in daily activities. This HME has a low profile and a smooth rounded shape for a more discreet look. Go HME provides good humidification helping you maintain good lung health while also making it easier to breath when you are out and about.



Rest comfortably at night





What you wear when you go to sleep is usually soft and comfortable. When it comes to your stoma, your products should also be as comfortable as possible. Nothing should get in the way of a good night's sleep as that can help you have a better day. So, before you go to bed, consider switching to Provox Life Night HME.

Night HME helps reduce coughing and mucus production* for more restful nights. This HME offers excellent humidification for improved lung health in a soft, comfortable design.



A change of tempo



Provox Life™ Energy HME

You may be at the stage in your recovery when you are ready to try, or get back to, a more active lifestyle. Whether it is cycling, running or going to the gym, Provox Life Energy is designed for physical activity.

Energy HME has low breathing resistance and good humidification, which is perfect for when you are physically active. It has a sporty look, and openings in the top help prevent the HME from accidentally occluding when breathing heavily.

Protect your airway





Provox Life™ Protect HME

Please note that the Provox Life Protect filtration capacity may vary depending on the size, shape and speed of airborne particles. Since there are other pathways for pathogens to enter your body, Provox Life Protect cannot guarantee total protection.



Since you breathe through your stoma, it is important to protect yourself when you inhale, as well as protect the people around you when you exhale. This is especially important during cold, flu and allergy seasons or when in crowded places. Perhaps you're traveling on buses or planes, picking up children from school, browsing in crowded shops or you might have an appointment at a healthcare facility. We've created a special product for these situations.

Protect HME not only heats and humidifies the air with comfortable breathing resistance, it is also a highly effective bacteria, virus, dust and pollen filter (HMEF).*

Speaking hands-free





Provox Life™ FreeHands HME

Provox®
FreeHands
FlexiVoice™
(sold separately)



Speaking hands-free is a desire shared by many people after laryngectomy. It can allow you to do everyday things like talking hands-free while cooking or driving. With your hands free to make gestures or talk while doing daily activities, many have said that speaking hands-free feels more like life before surgery.

Provox Life FreeHands HME offers good humidification and breathability. FreeHands HME is compatible with Provox FreeHands FlexiVoice which offers both the freedom to speak hands-free and with finger occlusion.



Supporting hands-free speech

For some people, the stoma moves when speaking which can affect voice quality. Provox FreeHands Support is designed to reduce stoma movement and allow more people to try hands-free speech.

$\mathbf{Provox}^{\scriptscriptstyle{\textcircled{\$}}}$ FreeHands Support $^{\scriptscriptstyle{\intercal}}$

Provox FreeHands Support is a special device that provides support to the stoma when speaking hands free. It fits over your adhesive to keep it in place. In some cases, stomal movement can lead to loosening of the adhesive. It can also make your voice softer. External support to the stoma and Provox FreeHands Support Adhesive may help reduce this from happening.



Provox® FreeHands Support™



Provox® FreeHands Support™ Adhesive



Provox® Life™ Adhesives

An adhesive is the most common and often most comfortable way to attach an HME to your stoma. There are different types of adhesives for different skin types and stoma contours, providing you with a personalized solution.

Learning to use an adhesive

Applying adhesives may take some practice. As you are learning to use an adhesive, you may need to replace them a little more often to maintain a good seal. Once you get the hang of it, your seal may last longer. The goal should be to have one adhesive attached with a good seal for the whole day – morning to evening. Establishing daytime and nighttime routines may help.

A good seal can lead to a stronger voice

Some people may have a flat stoma and use an electrolarynx. Others may have a deep stoma and use a voice prosthesis. Some people live in a warm climate where they sweat a lot. Others may live in a cold climate and have dry skin. Some people speak a lot throughout the day or speak hands-free and need a stronger adhesive. The reality is that everyone has different needs. As a result, we have delveloped a wide variety of adhesives to accommodate these needs.

Provox® Life™ clover-shaped adhesives are designed from high-performance materials to suit different skin types and stoma contours, providing you with a personalized solution. All Provox Life adhesives are compatible with all Provox Life HMEs. Explore the options for adhesives that are designed for daytime situations below.

Provox® Life™ Standard Adhesive is an adhesive for everyday use. It is soft, flexible and has a low-profile to provide a strong seal and secure fit around your stoma. Available in Round, Oval and Plus.

Provox® Life™ Sensitive Adhesive is a gentle, everyday adhesive that is made from hydrocolloid material that can be a good option if you have sensitive skin. This comfortable, low-profile adhesive forms a good seal and provides a secure fit. Available in Round, Oval and Plus.

Provox® Life™ Stability Adhesive is a firm everyday adhesive with stabilizing bars that provide additional support for deep stomas — ideal for those who speak frequently with finger occlusion or speak hands-free.



Provox Life Standard and Provox Life Sensitive are available in Round, Oval and Plus. (Illustration is to scale but is not actual size. Color for illustration purposes only.)





Establishing your daytime routine

Starting your morning routine with a new adhesive and HME can help you maintain a good seal and improve lung health throughout the day. The following can help you to establish a daily routine, enabling you to use an HME day and night, while taking care of your skin.



REMOVE First remove the HME, by holding the adhesive with one hand and lifting the HME up by one edge, like you are opening a door. Then, moisten the Provox® Life™ Night Adhesive with water and gently pull away the loosened adhesive. If you are NOT using Night Adhesive, you can use Provox® Adhesive Remover to loosen any other Provox Life adhesive.



CLEAN Clean the skin around your stoma using a Provox® Cleaning Towel or soap and water to remove any oil and adhesive residues. This primes the skin surface for the adhesive. Remember to let your skin dry afterwards.



PREPARE Prepare the skin by applying Provox® Skin Barrier on the clean, dry skin around your stoma.* Allow the Skin Barrier to dry for 1-2 minutes. This leaves a protective layer on your skin that makes the adhesive stick better. If needed, you can apply Skin Tac™ or Provox® Silicone Glue* at this time and allow to dry (4 minutes). Remove the backing from the adhesive.



4 APPLY Align the bottom ring of the adhesive with the lower lip of the stoma. Apply the adhesive by smoothing the adhesive onto the skin starting from the center and moving outwards. Massage it into the skin and into crevasses and deeper areas around your stoma. Attach your HME to the adhesive coupling – listen for the audible click to ensure it is secure.

TIP: Warm the adhesive by rubbing it between your hands for one to two minutes before you remove the adhesive backing. This will help to activate the glue on the adhesive.

TIP: Allow the adhesive to set for at least five minutes prior to speaking with a voice prosthesis. If you can, wait 20-30 minutes.

*IMPORTANT: If you are using Provox Night Adhesive during the day (or anytime), DO NOT use any skin barrier, cream or alcohol wipe immediately prior to applying Night. Products that leave residue on the skin (e.g. oily soap, skin cream, etc.) may prevent the adhesive from sticking properly.

You know that it is important to use an HME day and night, seven days a week. But what if your skin becomes irritated and you are tempted to take a break from your daytime adhesive? There is one more Provox Life adhesive option that is designed especially to soothe your skin and offer nighttime comfort.

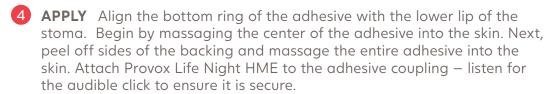
Provox Life™ Night Adhesive allows your skin to rest while you sleep. A skin-friendly, hydrogel adhesive that soothes and cools the skin, Night is compatible with all Provox Life HMEs.



Establishing your nighttime routine

At the end of the day, starting your nighttime routine with a new Night Adhesive can help maintain a good seal and soothe your skin. The following can help you to establish a evening routine enabling you to use an HME day and night while taking care of your skin. Changing to a new Night HME with excellent humidification before you go to sleep can help reduce coughing and mucus production for a more restful night.

- 1 REMOVE First, remove the HME by holding the adhesive with one hand and lifting the HME up by one edge, like opening a door. Then, use Provox Adhesive Remover by soaking the top of the adhesive to loosen it. Avoid getting Adhesive Remover in your stoma. Apply Adhesive Remover underneath the edge of adhesive, and use the wipe to slowly and gently push the adhesive off your skin.
- **CLEAN** Clean the skin around your stoma using Provox Cleaning Towel or soap and water to remove any oil and adhesive residues. This primes the surface for the adhesive.
- **PREPARE** It is important to prepare your skin by letting your skin dry completely before applying the adhesive. **DO NOT** use any skin barrier cream, wipe or alcohol immediately prior to applying Provox Life Night. Next, remove the center strip of the backing from the adhesive.















Provox® Life™ LaryTube™ is available in Standard, Standard with Ring, Fenestrated and Fenestrated with Ring.

Provox® Life™ LaryTube™ and LaryButton™

For some people, the stoma may shrink or need more support. To prevent this, there are tube and button options available to attach your HME. The Provox Life LaryTube and Provox Life LaryButton are two options for attachments that go inside the stoma. Your clinician will help you determine if you need to use one of these attachments and which would work best for you. Always follow your clinician's advice regarding if you need to wear a tube or button at night.

Provox Life LaryTube

Provox Life LaryTube is a soft silicone tube (or cannula) that maintains the opening of your stoma and allows you to wear an HME. It is an option for immediately after your total laryngectomy surgery and may be used long-term for those needing added stomal support. Please consult with your clinician.

Standard and Fenestrated tubes can be secured with Provox TubeHolder, Provox LaryClip or Freevent Neckband, while the LaryTube with Ring is designed to be secured with a Provox Life adhesive.

Voice prosthesis users should be cautious when inserting Provox LaryTube to avoid catching the voice prosthesis with the end of the LaryTube as this may cause accidental dislodgement.

Provox Life LaryButton

Provox Life LaryButton is a soft, silicone button that maintains the opening of your stoma and allows you to wear an HME. Provox Life LaryButton can be self-retaining in the stoma, meaning that it can stay in position due to the rounded lip. Some people choose to wear with Provox TubeHolder, Provox LaryClip or Freevent Neckband to help with retention and avoid accidental dislodgement with coughing.



Contact your clinician if you experience irritation from your LaryTube or LaryButton. You may need a different size.

Establishing your routine with Provox Life LaryTube or LaryButton

If you do wear a LaryTube or LaryButton during the day and/or at night, you can still have a nighttime routine. Changing from your daytime HME to a new Night HME can help reduce coughing and mucus production for a more restful night. Clean and disinfect your LaryTube or LaryButton at least once a day according to the IFU.

Provox TubeHolder

Designed exclusively for use with Provox Life LaryTube and Provox Life LaryButton to help with retention, Provox TubeHolder has integrated clip connectors that allow for optimal fit with less stress on the wings of the tube or button.



Provox® TubeHolder

Provox LaryClip

An alternative to Provox TubeHolder, Provox LaryClip is a two-piece system designed to discreetly attach Provox Life LaryTube and Provox Life LaryButton to help with retention.



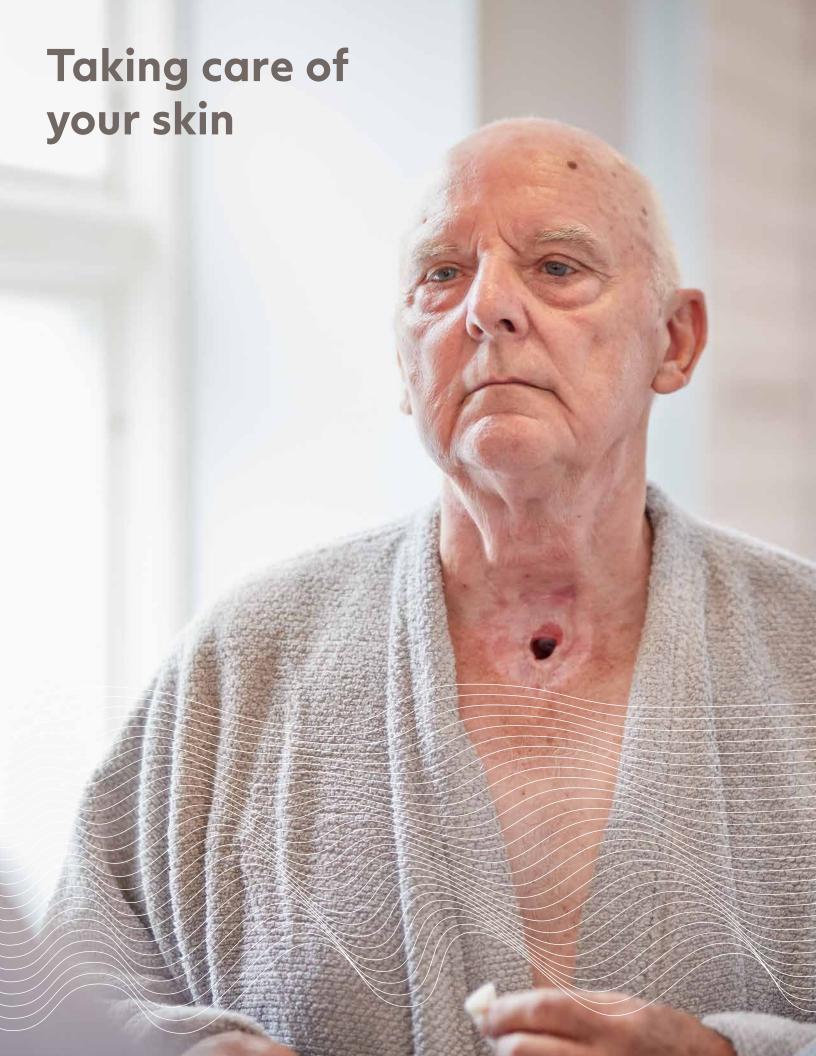
Provox® LaryClip™

Freevent Neckband

Freevent Neckband is a high-quality, two-piece design with VELCRO® brand fastening for secure tube positioning. It is made of soft foam with rounded edges to maximize comfort. It attaches to the wings of Provox Life LaryTube and Provox Life LaryButton with VELCRO® fasteners.



Freevent™ Neckband



The importance of healthy skin

Our skin is the largest organ in our bodies. It helps to regulate our body temperature and protects our internal organs. After a laryngectomy, the skin around your neck and chest is exposed in a new way. This can cause the skin around your stoma to become sensitive. It is important to protect and take care of your skin. Developing good habits for prepping your skin and removing the adhesive may help prevent skin irritation. It may also allow the adhesive to stick better to your skin.

Provox® Adhesive Remover

When it comes to removing your daytime adhesive, Provox Adhesive Remover may be helpful. Make sure to soak the top of your adhesive with Provox Adhesive Remover, then use the remover to wipe along the edge of your adhesive and gently remove it. Avoid getting adhesive remover in the stoma. Do not forcefully pull the adhesive off as this may hurt your skin.



Provox® Cleaning Towel

The skin around the stoma should be cleaned after taking off an adhesive and before applying a new adhesive. You can use a mild soap and water or a Provox Cleaning Towel. This towel helps to remove any oil, dirt or residue from the old adhesive.



Provox® Skin Barrier

Provox Skin Barrier helps to protect your skin when using an adhesive. It leaves a thin, protective layer on the skin as a barrier between the skin and the adhesive baseplate. It also helps the adhesive baseplate stick to the skin. Use Provox Skin Barrier after cleaning the skin, but before putting on the adhesive. Always remember to massage and warm the adhesive in your hands before you apply it to improve the stickiness. **NOTE: It is very important NOT to use skin barrier when using Provox Life Night Adhesive.**





Meet Joakim

Joakim is 58 years old. After receiving his cancer diagnosis the day before New Year's Eve 2019, Joakim underwent surgery in mid-January 2020 at Lund University Hospital in Sweden. Today, he is back to his former work – restoring, fixing and tuning upright and grand pianos.

What was your biggest concern after surgery?

"It was really just a trivial thing, but my biggest concern was not being able to swim and bathe. I live close to the beach, and love to bathe. Even though it's not as easy as before, I still get into the water – and love it. I am of course cautious of water conditions, and I keep a good distance between the stoma and the water – but still, I go in. Another concern was not being able to smell again – but I am trying to work on that, and will start by trying different techniques that can help me.

If you have a partner, they may be just as concerned as you are. But you are still the same person after surgery, despite the changes. My partner, Pia, has gotten used to it - after all, I am still me. It was a challenge initially to get used to my new voice, but it gets easier over time."

What advice would you give to laryngectomized people who are struggling with their rehabilitation?

"I had a good recovery after the surgery, but my biggest tip is to not overdo things, but take it at a nice and steady pace. I think the risk of a backlash is higher if you go at it way too hard. However, I do think it is good to start getting up out of the hospital bed as soon as possible; I started by doing some "gymnastics" with my arms and legs in bed the day after surgery and got out of bed for walks as soon as I could. Within a few days, I was walking an hour a day at the hospital."

What advice would you give to someone who is hesitant to use HMEs and adhesives?

"Well, the biggest concern is that without it, you cough a lot of mucus which of course has a negative effect on life. I wouldn't want to be without mine, that's for sure. With the new range of HMEs, I managed to halve the number of times I have coughing episodes, which is a blessing. I also use Protect HME when gardening, and after a while out in the garden, I can tell you that the filter is anything but clean. So, that protection I wouldn't want to be without. I can only recommend the use of HMEs.

Changing and applying adhesives can be tough on my skin, but the Night adhesive makes all the difference, and I wake with refreshed skin."

How does Atos Medical support you?

"I'm receiving a lot of help and support from Atos, and my contact person has been a massive support. I've also been in contact with others within the company who spoke about product development, which is very interesting. I've received a lot of tips that help me during the day, and I have to say it is a great complement to what the healthcare offers."

Have you changed any habits after your operation?

"Well, no, not really. I bathe just as much – but in a different way. I would say it is possible to live the same life, just with some small adjustments."

- ⁶⁶ The patients that go on to live a normal life don't use the laryngectomy as an excuse just get out there! Do not be scared of new or old things. I encourage them to try things, and it's okay if it doesn't work out the first time. We can troubleshoot together. Don't change who you are because you had cancer treatment. It doesn't define you. ⁹⁹
 - Desireé, MA, CCC-SLP at University of Cincinnati Medical Center



How can I regain my sense of smell and taste after a laryngectomy?

Smell and taste are a key part of our daily lives. They help us experience food and make eating enjoyable. Since you no longer breathe through your nose, your sense of smell and taste may be different after surgery. You can learn ways to help improve smell and taste during your rehabilitation.

The "polite yawn" is a technique used to help you smell after laryngectomy. It is easy to learn and can be done without drawing much attention during a meal. Keep your lips closed and slowly lower and raise your jaw. Your jaw movement helps to pull air into your nose. When air passes through the nose, it helps to activate smell receptors.

Taste and smell are closely linked. Some taste will be restored naturally when completing the polite yawning technique. Chewing more thoroughly may also improve taste, as it moves more air into the nose. When the food is hot, the steam may travel to your nose and help you smell and taste.

To watch these techniques in action, a video is available on the Atos Medical YouTube page. "Olfaction regained—using the polite yawning technique" is available with the kind permission of the Netherlands Cancer Institute.

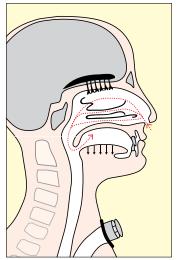
Swallowing Changes

After a laryngectomy, your airway and your esophagus (food pipe) are no longer connected. In some ways, this is good, as food and liquid cannot go down the wrong pipe. You may, however, notice some changes in your swallowing.

Here are some tips and tricks to help you eat and drink:

- 1. Take your time when eating and drinking
- 2. Take small bites and sips
- 3. Chew your food well before swallowing
- 4. Alternate bites of food with sips of liquid

If you have difficulty swallowing after your laryngectomy, talk to your clinician. There are speech-language pathologists who specialize in swallowing disorders that may be able to help.







Caring for yourself emotionally and physically

It is common for cancer patients to experience depression and/or anxiety. Your thyroid gland helps to regulate nearly every cell and organ in your body. Issues with your thyroid are common after a laryngectomy and can cause a variety of symptoms including depression, sleepiness and fatigue.

For some people, all or part of the thyroid is removed during surgery. For others, it may have been damaged from radiation. Symptoms can develop slowly over time. It is important to follow up with your doctor regularly and discuss any symptoms you may have. Annual blood work may be necessary to look for issues with your thyroid function.

If you are feeling depressed or anxious, be sure to seek help from your medical team. There is support out there, and you are not alone!

Resources

Below are just some of the resources that are available for those who have had a laryngectomy and their caregivers. This is not an all-inclusive list. Your clinician may be able to help you find voice clubs and other resources in your area.

American Head and Neck Society

www.ahns.info

American Society of Clinical Oncology (ASCO) - Cancer.Net

www.cancer.net/cancer-types/head-and-neck-cancer

Atos Medical

www.atosmedical.us (or www.atosmedical.ca in Canada)

Dr. Itzhak Brook (Blog/Order info for The Laryngectomee Guide Book)

dribrook.blogspot.com

Head and Neck Cancer Alliance

www.headandneck.org

International Association of Laryngectomees (IAL)

www.theial.com

MD Anderson Cancer Center (MDCC)

www.mdanderson.org

National Cancer Institute (NCI)

www.cancer.gov/types/head-and-neck

Oral Cancer Foundation

www.oralcancerfoundation.ora

Support for People with Oral, Head & Neck Cancer (SPOHNC)

www.spohnc.org

WebWhispers

www.webwhispers.org







Is it possible to swim or take a shower?

After a laryngectomy, swimming and boating can be risky. If you fall into the water, there is no way to prevent water from entering your stoma. This can cause you to drown or become injured. It is safest to avoid these activities.

It is possible, however, for you to shower safely. Provox Life Shower attaches to all Provox Life attachments. Using this shower accessory can help prevent water from entering your airway. If you wear a Provox Life LaryTube or Provox Life LaryButton, you can only wear Shower if your tube/button has a tight fit. You can now enjoy a shower without having to worry about water entering your stoma. Note, Provox Life Shower is made specifically to protect you during showering, it is not intended for swimming. Talk to your clinician if you have any questions.



Provox® Adhesive Strip™

If you use Provox Life Night Adhesive, be sure to use Provox Adhesive Strip to reinforce the edge of the adhesive while you shower. This helps to prevent it from loosening.



Going out

After you have had time to recover from your surgery, it is important to go outside and enjoy life! When going out, it may help to carry backup products with you such as extra adhesives, wipes and HMEs. A mirror and a small flashlight are also useful. If you have a voice prosthesis, you should carry a Provox Brush with you. If you received Provox® Life™ Coming Home® through your clinician, it includes a small detachable bag where you can put these types of supplies when you go out.

When you are away from home, you may want to use a Provox Life Protect HME to help protect yourself from dust, pollen, bacteria and viruses. Consider using Protect HME when you travel on buses, trains or airplanes.

If you are planning to travel farther from home, Atos has resources available to help you get ready. A free CareTip, "Things to Do to Prepare for Traveling," is available on our website. Whether you are traveling domestically or internationally, contact us for help identifying a clinician in the area(s) you plan to visit. Atos is represented in many countries around the world and may be able to assist you in locating healthcare professionals throughout your travel.

Visit **www.atosmedical.us** (www.atosmedical.ca in Canada) for more resources for laryngectomees and caregivers.



Moving on

Your recovery is unique to you, but you are not alone on this journey. Atos is here with you every step of the way! Those who have had a total laryngectomy but who do not have other serious medical problems can expect to live long, healthy, productive lives.

When you gain confidence using your VP, you will probably be thinking about speaking hands-free. We are happy to take this exciting step with you! When you are used to wearing HMEs and your skin has healed enough to handle the best attachment, you should be able to speak well. Together with your clinician, you can decide when you want to try Provox FreeHands FlexiVoice, which allows many people to enjoy speaking hands-free with the benefits of an HME.

Moving on is not only about trying new products, it is also about getting on with your life. It is not always an easy thing to do, but we hope you will let us help you along the way. We would love to share what we have learned from the many people who have settled into their daily lives and live well. Please feel free to reach out to our friendly, knowledgeable and supportive team at **+1.800.217.0025** or **info.us@atosmedical.com**.

We are here to help you!



Are there others like me?

More than 12,000 people are diagnosed in the US with laryngeal cancer (cancer of the voice box) each year. While not every person has a laryngectomy, there are several hundred-thousand individuals who have had a laryngectomy living around the world! In many areas, you can find laryngectomy support groups or "voice clubs". These groups are a great resource to help you connect with others and learn to live well after laryngectomy. Many groups hold regular meetings where you can share your thoughts and experiences.

The laryngectomy community is a small, but passionate group of individuals who have undergone a laryngectomy along with their caregivers, families and healthcare providers. Atos is committed to supporting this community and to providing ways to connect for educational opportunities, to exchange valuable advice and share experiences.

Atos offers a variety of events designed to provide support, tips/techniques, important resources, product information and an opportunity to socialize with peers – virtually or in-person. Connecting with others can be a beneficial tool in your continuing recovery and ability to live your life to the fullest.

Visit **www.atosmedical.us** (or **www.atsomedical.ca** in Canada) and click on the COMMUNITY tab to find out about upcoming events. You could also call us and connect with the events team.



At Atos Medical, we are committed to giving a voice to people who breathe through a stoma, with design solutions and technologies built on decades of experience and a deep understanding of our users.

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Please feel free to contact us. We are always here to help.

Going through a total laryngectomy is a life-changing event, but it can be possible to enjoy life again! The weeks after coming home from the hospital can be an overwhelming time. Your clinician and healthcare providers will always be your greatest resource for information about your health. Atos is dedicated to supporting you after your laryngectomy. You can contact us anytime to learn about our products, get help understanding insurance and reimbursement, locate a support group in your area or find a clinician when you travel.

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