

# 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 has allowed us to gain a deep understanding of the needs of our customers. This understanding drives our innovation process and we take pride in continuously bringing innovative solutions to our users

Over the years we have served the needs of around 100,000 people with a laryngectomy in over 70 countries. Our comprehensive Laryngectomy Care portfolio includes a complete range of voice and pulmonary rehabilitation devices. This broad range 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 and educational programs every year

We are proud of our history and accomplishments. We continue to be excited by learning from our users; serving them with the best products, services, and education in Laryngectomy Care.



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# Part one

# What is a total laryngectomy?

Undergoing a total laryngectomy can be overwhelming and lead to some major changes in the way you live. But you're not alone. More than 100,000 people around the world have been through the same thing, and many of them have found ways to help them speak, breathe well and make life easier.

A total laryngectomy is a surgery performed in the advanced stages of cancer. The procedure involves removing your voice box – also called the larynx. The larynx plays several important roles. It houses the vocal folds that make our voice sound. The larynx also helps us to breathe and swallow.

Therefore, 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 having to learn how to speak again.

One of the biggest changes after a total laryngectomy is losing your vocal cords. This means you won't be able to speak as you could before, but there are proven ways to regain the power of your speech.

Another big change is the loss of nasal function and this means you will have to adjust to a different way of breathing. You may not realize it, but your nose does more than just smell. It plays a huge role in keeping your lungs healthy and working well. Without the nose, air is cooler and less moist than it should be, causing your lungs to produce more mucus. Luckily, Heat and Moisture Exchangers (HMEs) have been designed to help your lungs by conditioning the air you breathe in and in this way do what the upper airways used to do.

While a laryngectomy does spell changes in your day-to-day life, it is still possible to be happy and fulfilled. You can continue to be active by going for walks and exercising, or meet friends and do most other things you enjoyed before the procedure.

# Before total laryngectomy

#### Vocal cords

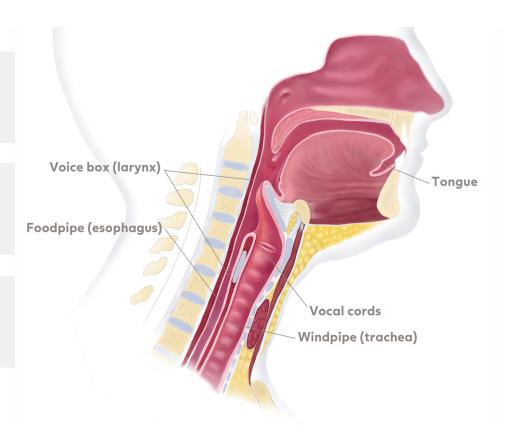
The vocal cords are folds of tissue in the throat that vibrate in the airstream to produce the voice.

#### Foodpipe

The foodpipe is the tube that takes food from the back of the mouth to the stomach.

### Windpipe

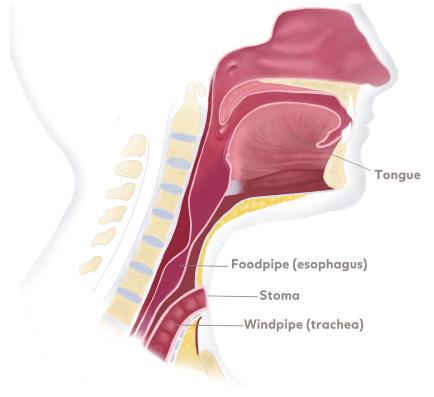
The windpipe is the air passage from the throat to the lungs.



# After total laryngectomy

### Stoma

The stoma is a permanent opening in the neck, connected to the windpipe.





Part two

# A different way of speaking

Your voice is a big part of your identity – it's how you express your thoughts, feelings and ideas. A laryngectomy will change your voice. Without a voice box, you can't speak as you could before. But there are ways to get the power of speech back.

Before a laryngectomy, your voice is produced by vocal cords located within the larynx. These vocal cords are the source of your natural voice. During exhalation, the air passes the vocal cords, which produce sound through a rhythmic opening and closing.

During the laryngectomy your larynx and vocal cords are removed, so the way you speak is obviously going to change. But there are ways to get the power of speech back. Your clinician may have taken you through the options, including esophageal voice, electrolarynx, and using a voice prosthesis. Speaking with a voice prosthesis is the most popular method; it's also the most natural and fluent.

Your voice will sound different than it did before, because it is no longer coming from your vocal cords. With esophageal speech and speaking with a voice prosthesis, your voice source will be located in your foodpipe instead.

Your speech therapist will help you to train your voice and will recommend exercises that will make your new speaking style as clear as possible. It may be a steep learning curve, but you should soon master your new voice.



# Speaking with a voice prosthesis

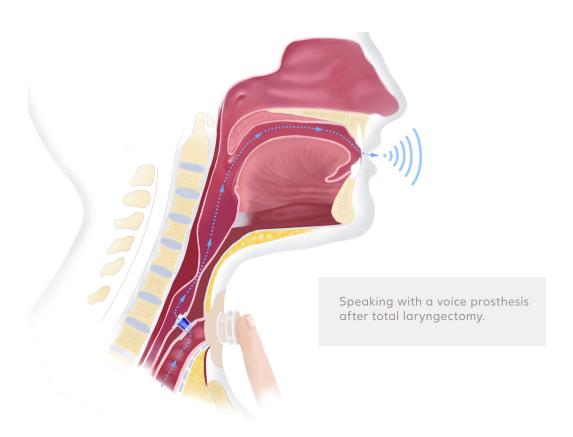
Maybe you've heard a lot about speaking with a voice prosthesis, but why do people think it's the best way to go after a laryngectomy?

A voice prosthesis is a small plastic device that in most cases will be inserted during your laryngectomy, or shortly after. It's placed between your food pipe ('esophagus') and windpipe ('trachea'), with two 'flanges' on either side to keep it in place. Between these flanges there is a smaller tube which contains a one-way valve. This valve opens while you speak, and it closes when you eat or breathe to prevent anything from entering your windpipe that shouldn't – like saliva, food or drink.

Blocking your stoma with a finger will redirect the air you breathe out through your voice prosthesis and into the food pipe. As this air travels through your food pipe, the tissues will vibrate and create a sound. This is what we call 'tracheoesophageal (TE) speech.' These days, tracheoesophageal speech has proven to be the most successful way of speaking again after a laryngectomy.

### Advantages:

- Superior voice quality and clarity
- Relatively quick and easy to learn
- Functional speech can usually be achieved in a matter of weeks



# Speaking with an electrolarynx

Many people rely on the electrolarynx as a back-up to speaking with a voice prosthesis. It produces a different kind of voice, but with the right training and remembering a few important guidelines, you will find a way to make it work for you.

## Advantages:

- A back-up to speaking with a voice prosthesis
- Easy to use but it adds a mechanical tone to your voice

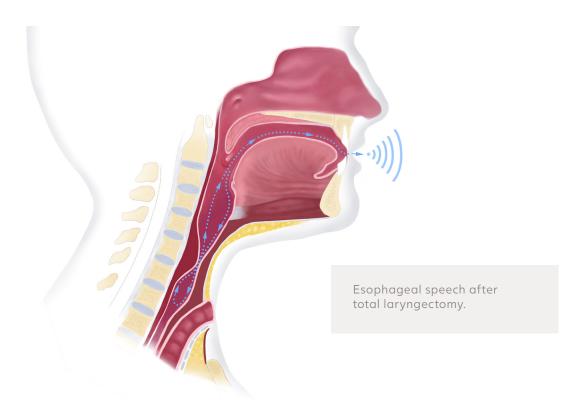
# **Esophageal speech**

Esophageal speech used to be the go-to speaking method after a laryngectomy, before the voice prosthesis was developed. This method of voicing uses the body's natural tissues as the new voice source. You have to swallow small amounts of air before pushing them back up as small "burps". The swallowed air causes the food pipe to vibrate, producing the sounds that are shaped by the lips and tongue to create words.

Esophageal speech is the oldest and also the most difficult to learn. Only 1 in 3 people attempting this technique will be able to do it – and often, their speech is limited to short sentences. You should discuss with your speech pathologist if esophageal speech is a good option for you.

## Advantages:

- Non-surgical method
- Allows for hands-free speech





# Speaking with confidence

To speak with confidence, you need a voice prosthesis that is durable, easy to speak with, easy to maintain, and provides the best possible voice quality. A voice prosthesis you can trust and rely on. Provox offers a complete range of voice prostheses and accessories.

## Provox<sup>®</sup> Vega<sup>™</sup>

Confidence to speak more naturally



Provox Vega is a voice prosthesis used by thousands of people who have undergone a laryngectomy. It is known for being a robust, durable and reliable device, which is easy to maintain.

It is designed with an opening pressure that supports a good seal when swallowing, as well as airflow characteristics that are optimized for speaking. Many users choose the Provox Vega as their preferred voice prosthesis. They say it is closest to the natural way of speaking in terms of fluency and phrasing.

### Provox® ActiValve®

Extended device lifetime



Provox ActiValve is primarily designed for users who experience leakage in their voice prostheses early. The blue fluoroplastic material of the valve will extend the device life, as candida cannot grow into it. And the prosthesis is closed with magnets which prevents it from opening inadvertently when breathing or swallowing.

### Provox® XtraSeal™

Confidence to eat and drink without leakage



Provox Vega XtraSeal combines the benefits of the 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. Essentially, it is a Provox Vega with an additional, enlarged esophageal flange, which is thin, concave and very flexible, so it conforms to the tissue around the puncture. The benefit is that users can speak, eat and drink while the leakage is managed.



# Taking care of your voice prosthesis

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 backside of your voice prosthesis is located in your foodpipe where food, drinks and saliva are swallowed.

Your throat is also full of biofilm, e.g. bacteria and yeast, that will stick to your voice prosthesis. Over time, this biofilm will make your voice prosthesis leak. By cleaning it every day, you will slow down this process and your voice prosthesis will last longer.

We recommend cleaning your voice prosthesis in the morning, in the evening and after every meal, using Provox Brush and Provox Flush.

#### Provox® Brush

For cleaning of the voice prosthesis



How to use the brush

- Moisten the bristles of Provox Brush and then insert all the way through the voice prosthesis.
- Gently move the brush back and forth while rotating the brush.
- Remember to replace your brush once a month, or earlier if the bristles look worn and overused.

# Provox® Flush

For flushing after brushing



How to use the flush

- Use Provox Flush with drinking water or air.
- If you're planning to use drinking water, squeeze the ball to fill it up with liquid.
- Insert the tip into your voice prosthesis, while making sure it is properly sealed.
- · Gently squeeze the air or water into your prosthesis.

## Provox® Vega™ Plug

A first-aid to temporarily stop leakage through the voice prosthesis.





# Part three A different way of breathing

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.

Before surgery, you would breathe through your nose, mouth and throat – or what's known as the 'upper airways'. These upper airways (in particular the nose) condition the air you breathe by warming up, humidifying and filtering it because your windpipe and lungs (lower airways) need conditioned air to work properly. Since a laryngectomy will disconnect your upper airways from your lower airways; it will affect your lung function.

After your laryngectomy, you will breathe through a stoma in your neck. This means the air you breathe in won't be conditioned properly by the time it makes it to your windpipe and lungs. This sort of 'unconditioned air' will be cold and too dry for your lungs, and may potentially lead to more mucus, coughing and a higher risk of airway infections. Luckily, Heat and Moisture Exchangers (HMEs) have been designed to help your lungs by warming up and humidifying the air you breathe in and in this way mimic what the upper airways used to do.



# Provox Life™ HMEs

Your nose, mouth and throat work hard to warm up and humidify the air you breathe. After a laryngectomy, Heat and Moisture Exchangers will do this for you.

An HME sits over your stoma and you breathe through it. It warms up the air and makes it more moist. It does this by 'catching' the heat and humidity of the air as you breathe out, then passes it on to the air when you breathe in. In other words, an HME 'conditions' the air you breathe by keeping it at a good humidity level and temperature for your lungs to function properly.

Many people find that wearing an HME all the time can help them live a better life and go back to doing many of the things they did before their surgery. This is because an HME helps them produce less mucus, cough less, feel less irritation in their windpipe, and breathe more easily.

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.

# 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.



## Provox Life™ Home HME

Home HME can help in all these situations, and is designed to improve your lung health when you are taking it easy. This HME provides high humidification with comfortable breathing throughout the day.

# 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 be when you're out socializing, shopping or at work.

### Provox Life™ Go HME

Go HME helps make it easier to breathe when you are out and about or engaged in your daily activities.

# Rest assured 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 a good night's sleep will help you have a better day. So, before you go to bed, we recommend switching to Provox Life™ Night HME.

# **Provox Life™ Night HME**

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

# A change of tempo





You may be at the stage where you are ready to try something new or reconnect to different activities in life. Whether it is cycling, running or going to the gym, Provox Life<sup>TM</sup> Energy is ideal for physical activity.

# **Provox Life™ Energy HME**

Energy HME has low breathing resistance and good humidification, which is perfect for when you are physically active.

# Protect your airways



Since you breathe through your neck stoma, it is important to protect your airways upon inhalation, as well as protect the people around you during exhalation. When you're out and about, you may find yourself in busy and crowded places. Perhaps you're travelling on buses or trains, picking up children from school, or browsing in crowded shops. We've created a special product for these situations.

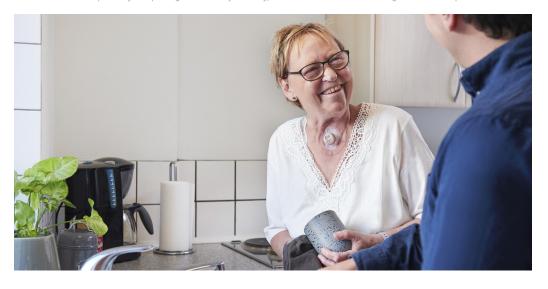


## **Provox Life™ Protect HME**

Protect HME not only heats and humidifies the air, it also effectively filters bacteria, viruses, dust and pollen.

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, our Provox Life Protect cannot guarantee total protection.

# Speaking hands-free



Speaking hands-free is a desire shared by everyone who has gone through a laryngectomy. With your hands free to make gestures, talking to people will feel more familiar. And when doing everyday things like cooking and being with other people, it is nice to talk without having to occlude your stoma with your finger. Many have said that speaking hands-free feels more like life before the surgery.



## Provox Life™ FreeHands HME

FreeHands HME is compatible with FreeHands FlexiVoice, which offers both the freedom to speak hands-free and with finger occlusion.

# **Accessories**



## **Provox Life™ Shower**

Provox Life<sup>™</sup> Shower keeps water out of your stoma when you shower, while allowing you to breathe as usual. Make sure the adhesive has a good seal and then attach it just like an HME.

You can now enjoy a shower without having to worry about water entering your stoma. Note, however, Provox Life $^{\text{TM}}$  Shower is made specifically to protect you during showering, it is not intended for swimming.



# Provox® Adhesive Strip™

When showering, use the Provox Life™ Shower and protect the Provox Life™ Night Adhesive with Provox® Adhesive Strip™.



# **Provox Life™ Adhesives**

An adhesive is the most common and comfortable way to attach an HME in front of your stoma. Simply apply the adhesive around the stoma, following the instructions carefully, and attach an HME to it.

There are different types of adhesive depending on what you're doing and how sensitive your skin is. Just like an HME, you will find that adhesives can take some time getting used to.

# Adhesives take a bit of practice

As you're learning how to use adhesives, you might need to replace them a little more often at the start. For example, if you are producing more mucus, this can make it difficult to keep the adhesive stuck in place.

You should aim to have the same adhesive attached for a whole day - morning to night. It's important that the adhesive fits the stoma. So first, determine the best fit by positioning the adhesive while the liner is still on.

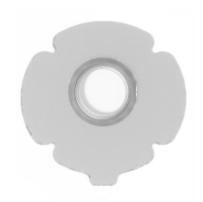
## Adhesives work better if they're kept clean

It's important to keep your stoma and the adhesive free of mucus. If you get mucus stuck between your adhesive and skin, it can stop the adhesive from sticking well.

If you need to cough, carefully remove the HME, cough into a tissue, and then clean your stoma and adhesive. Pay attention to the lower part of your stoma: if there's mucus between your skin and your adhesive, it will cause leakage. On the next page, you will find an overview of the different adhesives.

# Provox Life™ Standard Adhesive

Standard is an adhesive for everyday use that provides a strong seal around your stoma. It is a soft, flexible and low-profile adhesive that provides a secure fit.



## **Provox Life™ Sensitive Adhesive**

Sensitive is a gentle everyday adhesive for sensitive skin. A comfortable and low-profile adhesive that forms a good seal and provides a secure fit.



# **Provox Life™ Stability Adhesive**

Stability is a firm everyday adhesive that provides solidity, especially if a stoma is deep. It is ideal for those who speak frequently or speak hands-free.



## **Provox Life™ Night Adhesive**

Night Adhesive allows your skin to recover while you sleep. A skin-friendly hydrogel adhesive that soothes and cools the skin.



# Provox Life™ LaryTube™

Maybe your clinician has recommended you to use Provox Life™ LaryTube to attach an HME instead of an adhesive.

# Provox Life™ LaryTube

Provox Life<sup>™</sup> LaryTube is a flexible silicone tube (or 'cannula') that keeps the HME in front of your stoma, while making sure your stoma maintains its size and shape.

Make sure the end of the Provox Life™ LaryTube does not 'hook' onto your prosthesis during insertion or removal and cause it to move. You should call your doctor right away if you experience any sort of irritation from the tube, or if you feel a tightness in your throat; this could mean the tube has become too large or too small, and you may need a different size.







# Taking care of your skin

Your neck tissue is very delicate and can be damaged as you have to change your adhesives regularly. This is why you should make sure to do it as carefully as possible. It's very important to get into good habits when it comes to looking after the skin around your stoma. If you do, it is less likely your skin will become irritated or damaged – and the adhesives will stick longer.

### **Provox® Adhesive Remover**

When it comes to removing your daytime adhesive, Provox Adhesive Remover is always helpful. Make sure to soak the top of your adhesive, then use the remover to wipe along the edge of your adhesive and gently remove it.



# **Provox® Cleaning Towel**

After taking off the adhesive, you should clean the skin around your stoma with soap and water, or a Provox Cleaning Towel. The aim is to remove any oil- and sticky adhesive residues.



### Provox® Skin Barrier

If your skin is sensitive, Provox Skin Barrier can help. It leaves a protective layer on the skin. Use it after cleaning the skin, but before putting on the daytime adhesive. Always remember to massage the adhesive before you apply it to improve the stickiness. Do not use skin barrier when using the Provox Life™ Night Adhesive.



# Part four

# Getting back to life

There is no doubt that your cancer diagnosis, the treatment you have gone through and the total laryngectomy has had a significant impact on your life. Now it is time to look ahead and get back to living life. Thousands of people with a laryngectomy are living witnesses that a fulfilling life is waiting for you if you embrace it.

"The patients that go on to live a normal life don't use their laryngectomy as an excuse. Just get out there! Do not be scared of new or old things. I encourage them to try things and its 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." - Desireé, US, M.A. CCC-SLP at University of Cincinnati Medical Center

### **Meet Joakim**

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

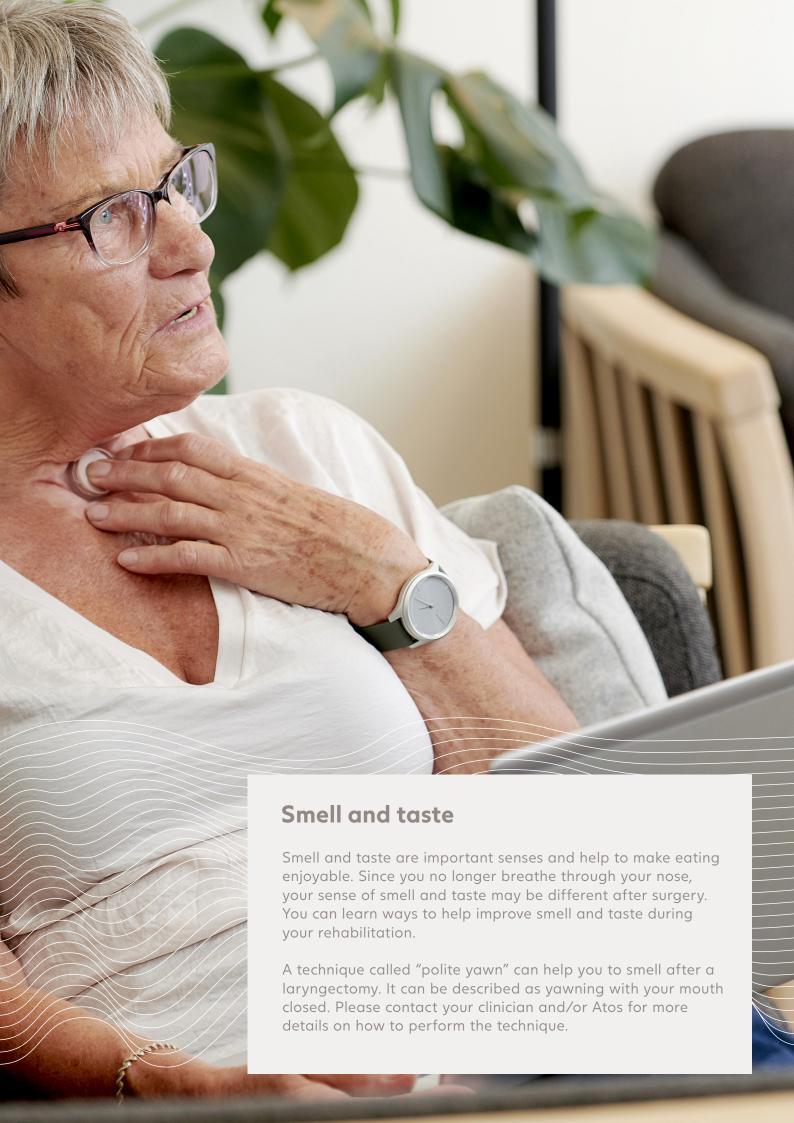
## How does Atos Medical support you?

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.





# Contact

Below you will find all our global addresses and contact information. Find your country and reach out to us. We are here to help you.



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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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