Clinical study:

Does Provox Life[™] have a positive effect on pulmonary symptoms?

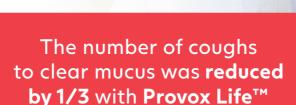




- Researchers looked at what happened when patients used the Provox Life[™] range, compared to when they used their usual products from the previous Provox[®] range.
- The researcher looked at:
 - What impact coughing and mucus had on patients' everyday life, and how many times per day the patients needed to cough to clear mucus.
 - How many hours per day patients were wearing a Heat and Moisture exchanger, or 'HME'
 - · HME removal due to shortness of breath
 - Skin irritation



The study showed that Provox Life™ significantly reduced coughing to clear mucus



- With Provox Life, coughing and mucus has less of an impact on daily life, and people reported less need to cough to clear mucus.
- In fact, the number of coughs to clear mucus per day reduced by over a third when using Provox Life.



Why is this important to me as a laryngectomized patient?

The results of the study clearly show that by wearing better performing HMEs patients were impacted less by coughing and mucus.

The study showed that Provox Life™ products help patients decrease the use of sleep medication



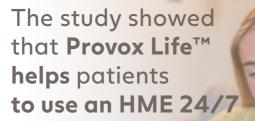
An overall **reduction of 50%** of sleep medication use at night was recorded

- With Provox Life[™] the impact of coughing and mucus on daily life is significantly reduced.
- As well as a reduction in the need to cough to clear mucus.
- The study showed that when using Provox Life™ products there was a significant reduction in the number of nights that patients used sleeping medication.



Why is this important to me as a laryngectomized patient?

The results of the study show that by using Provox Life™ products, patients had less need to use sleep medication at night.



After switching to Provox Life™ patients used their **Adhesives & HMEs** for more than 20 hours

- The researchers looked at how many hours per day patients were wearing a Heat and Moisture exchanger, or 'HME'.
- Wearing an HME day and night is important because there is a link between 24/7 HME use and good lung health.
- Researchers found that when using Provox Life™, patients were able to use an HME for more hours per day and get closer to the ideal of wearing an HME 24 hours per day.

Why is this important to me as a laryngectomized patient?

The results of the study show that wearing an HME 24/7 positively impacts lung health and Provox Life™ products help patients to wear HMEs for more hours of the day.

The study showed an **increase** in patients **using a nighttime HME with Provox Life™**



- The researchers looked at how many hours per day patients were wearing a Heat and Moisture exchanger, or 'HME'.
- Researchers saw an increase in patients wearing a nighttime solution HME which offers a higher humidification compared to the other HMEs in the range.



Why is this important to me as a laryngectomized patient?

24/7 HME use has a positive impact on lung health and with Provox Life™, more patients used a nighttime HME, which offers higher humidification, closer to nose breathing.

Patients reported less shortness of breath meaning less need to remove their HME to catch breath



Less **shortness of breath** with Provox Life™

- The researchers looked at how often patients needed to remove their HME to catch their breath.
- They found that when using Provox Life[™] products, patients reported less shortness of breath and less need to remove their HME to catch their breath.



Why is this important to me as a laryngectomized patient?

Shortness of breath can stop people from wearing an HME. Provox Life $^{\text{TM}}$ has been specially designed to give excellent humidification while being easy to breathe through, and the findings from the study help to confirm this.

Patients
experienced less
skin irritation when
using Provox Life™

39% reduction in average number of days with **skin irritation**

- The researchers investigated how many days patients experience skin irritation, as this can be a key problem when wearing adhesives.
- They found that the number of days with skin irritation reduced by over a third when using Provox Life™ products, compared to their usual products.



Why is this important to me as a laryngectomized patient?

Skin irritation often stops people from wearing an HME, which is vital for good lung health and Provox Life $^{\text{TM}}$ products are shown to reduce skin irritation.



- The researchers asked patients which range they preferred using; Provox Life[™] or their usual Provox[®] range.
- 75% of patients that took part in the study preferred Provox Life™ HMEs
- Patients reported that this was because the adhesives suited their skin better, and because the HMEs were easier to breathe through.

In summary, the study demonstrated the importance of using better performing HMEs to further compensate for the loss of humidification in laryngectomized people.



- Provox Life[™] improved lung health in people who already used HMEs frequently.
- Improvements are linked to 24/7 use of higher performing Provox Life™ HMEs.
- 24/7 HME use is enabled by less shortness of breath and reduced skin irritation which can be reasons to remove the HME.

"A little bit of stubbornness goes a long way"



"It was my birthday on May 20th in 2014 when I was told that I would be operated on a few days later. I was told that I would lose my voice, and I instantly replied, 'no thanks'. I always used to talk a lot. Fortunately, I brought my sons with me, who convinced me that life is worth living even if I would not get my old voice back.

The surgery changed my life considerably. Before, I travelled a lot. Now I don't travel that much anymore. I also can't go swimming which bothers me since I live close to the sea. I walk into the water, but I can't swim. If I go too far, I get a scolding from my neighbours who keep an eye on me.

I decline invitations to big parties. I find it frustrating to be in crowded, noisy areas and no one can hear me. It's the same with restaurants. First of all, I can't taste 100% but also because I can't talk while eating. So, I'd rather just drink a beer.

Despite this, I chose to make the most of life. My beloved husband passed away in 2008 but my friends are still there for me, and I am still my grandchildrens' grandmother. I also get a lot of help. Sometimes I wonder what the products were like 25 years ago. There were also people then who were operated on. We are privileged today to be able to get hands-free products, for example.

Recently I have tested the new Provox Life products, and I have been very impressed, especially with the Home and Go HMEs. I found it so easy to breathe with Home that sometimes I forgot to change it. I used the Go HME when walking, and I could not notice any resistance, which was nice.

For others going through this, my advice is to take it easy, because you get better and better, day by day. You will find that you can do much more than you think you can. You can tackle major changes in your life. A little stubbornness goes a long way."

The testimonials relate to how one individual has experienced the use of Provox® Life™ products and not every person will get the same results. Atos Medical AB does not suggest, imply or make any claims other than those detailed in the product manual. The person in this testimonial did not participate in the clinical study.