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CONTINUED

ONLINE CONTINUING EDUCATION FOR THE LIFE OF YOUR CAREER

Optimizing Voice and Breathing After Total Laryngectomy: Guidelines for Stomal Attachment Selection

Meaghan Benjamin MA, CCC-SLP

Moderated by:
Amy Hansen, MA, CCC-SLP, Managing Editor, SpeechPathology.com

CONTINUED

Need assistance or technical support?

- Call 800-242-5183
- Email customerservice@SpeechPathology.com
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How to earn CEUs

- Must be logged in for full time requirement
- Log in to your account and go to Pending Courses
- Must pass 10-question multiple-choice exam with a score of **80%** or higher
  - Within **7 days** for live webinar; within **30 days** of registration for recorded/text/podcast formats
- Two opportunities to pass the exam

CONTINUED Atos Atos Medical Your voice

Optimizing Voice and Breathing After Total Laryngectomy: Guidelines for Stomal Attachment Selection

Meaghan Benjamin MA, CCC-SLP

CONTINUED

Disclosures

The following individuals have financial relationship or relationship affiliations to disclose:

They are employed by the Educational Division of Atos Medical. There are no other nonfinancial relationships to disclose.

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CONTINUED

Learning Objectives

- Identify 3 factors influencing appropriate selection of intraluminal and peristomal devices.
- Identify problems and describe solutions related to achieving an adequate seal.
- Describe the procedure for applying and removing adhesive baseplates and intraluminal attachments.

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Post-Laryngectomy Rehabilitation

- Best practice embodies an interdisciplinary team approach to treating the whole patient
  - Patient Education
  - **Pulmonary Rehabilitation**
  - Voice Rehabilitation
  - Troubleshooting
  - Quality of Life (QOL) Issues

9

Post Laryngectomy Effects on Breathing

Lost functions of the upper airway:

- Heating
- Filtering
- Humidity
- Pulmonary resistance

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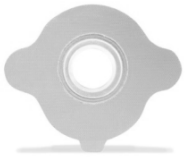
HME Success = Good Stomal Attachment

- **Peristomal Attachments**
  - Attachment to skin around stoma
  - Base plates, valve housings, custom housings, tapes, glues/adhesives



- **Intraluminal Attachments**
  - Attachment within the stoma
  - Provox® LaryButton™, Provox® LaryTube™, Barton-Mayo™ (BM) button

- **Intraluminal + Peristomal Attachments**
  - Provox® LaryTube™ with Blue Ring with baseplate
  - Kapi-Gel™ washer with button/tube

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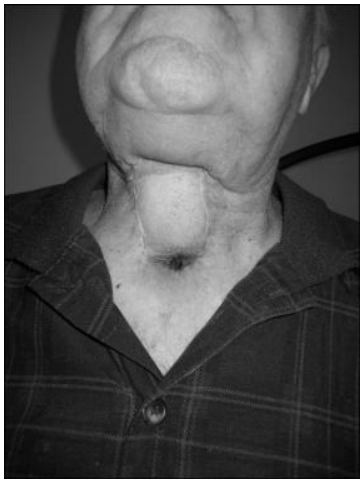
Patient Factors:

Time since surgery
Stomal topography
Skin Irritation or breakdown
Stomal stenosis
Ease of ability to apply
Other Factors



Severe facial edema

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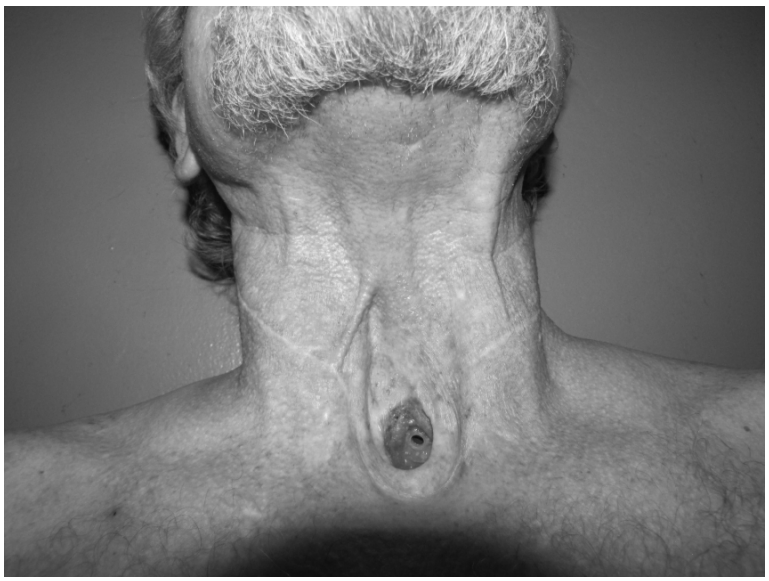

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Assessing Stomal Topography

1. Is the stoma deep set?
2. Are the SCMs prominent?
3. Are the clavicular heads prominent?
4. Stomal symmetry? Size? Shape?
5. What is the position of the TEP?
6. Peristomal Terrain?

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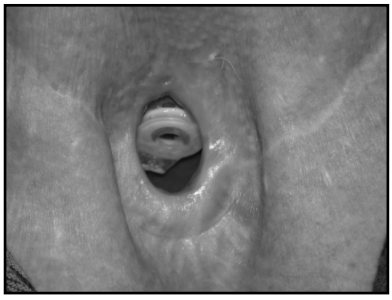
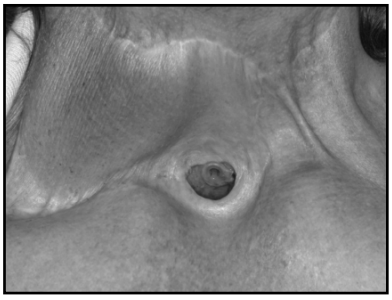

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Skin Considerations

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Patients at Risk for Severe Skin Reactions

Treatment Factors:

- Higher dose, higher risk
- IMRT reduces risk
- Using boost agent/technique
- Concomitant chemo/XRT
- h/o previous XRT, targeted or hormonal tx

Patient Factors:

- High BMI & smoking were highest risks
- Age
- Skin type
- Genes
- Alcohol consumption
- Other comorbities

Showed higher levels of pain & **sleep disturbance**

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CONTINUED

Skin Research and Technology 2005; 11: 102–106
Printed in Denmark · All rights reserved

Skin Research and Technology

Skin irritation due to repetitive application of adhesive tape: the influence of adhesive strength and seasonal variability

Fumio Tokumura[1,2], Kazuo Umekage[1,3], Masashi Sado[1,3], Saburo Otsuka[1,4], Shin Suda[1,5], Masaharu Taniguchi[1,6], Akira Yamori[1,7], Atsushi Nakamura[1,8], Jun Kawai[1] and Keiji Oka[1,9]

[1]The Third Research Group of Japanese Society for Cutaneous Health, Kyoto, Japan, [2]Nichiban Co., Ltd, Hidaka, Japan, [3]Nippon-NSC Ltd, Osaka, Japan, [4]Nitto Denko Co., Osaka, Japan, [5]Nihon Kohden Co., Tokyo, Japan, [6]Kyowa Ltd, Osaka, Japan, [7]Pip Fujimoto Co., Ltd, Osaka, Japan, [8]Kyukyu Pharmaceutical Co., Ltd, Toyama, Japan and [9]Toyo Kagaku Co., Ltd, Gamo, Japan

- Dermal peeling force increases with each subsequent application
- Dermal peeling force worse in winter vs. summer - ? sweating in summer
- Transepidermoid water loss
- Amount of stripped corneocytes correlated with degree of skin irritation
- More deep skin furrows in summer

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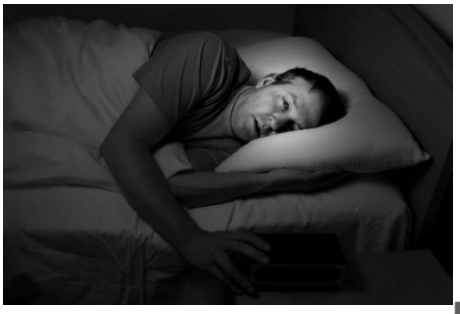
CONTINUED

Sequelae of Skin Conditions

- Chronic Pain
- Loss of work
- Withdrawal from normal activities
- Decreased quality of life
- **Loss of sleep**



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Road Map to Situational Use: One Size does not fit all

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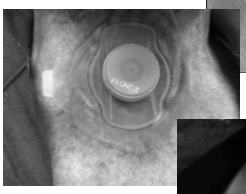
Provox® Adhesive Base Plates



Five different types

- FlexiDerm™
- XtraBase™
- Stabilibase™
- OptiDerm™
- OptiDerm Stabilibase ™

Two different shapes

- Oval / round and “plus” size options (except for XtraBase & Stabilibase)

Life: dependent on the patient

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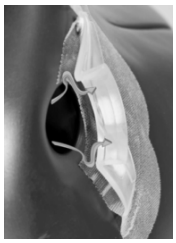
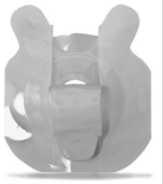
Provox® STABILIBASE

- **Firm base**
  - Vertical stabilizing bars
    - **Support during speech**
  - Flexible sides
    - **Easy applying**
- **Conical design**
  - Deep set stomas
- **3 piece peel-off liner**
- **Larger area Flexiderm type adhesive**
  - Longer device life?
- **Fits a variety of stoma shapes**
  - Fits flat stomas
  - Fits deep stomas





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Skin Preparation and Base Plate Application

Skin Barrier

Base Plate Application

Courtesy of Saint Louis University Cancer Center – Dennis Fuller

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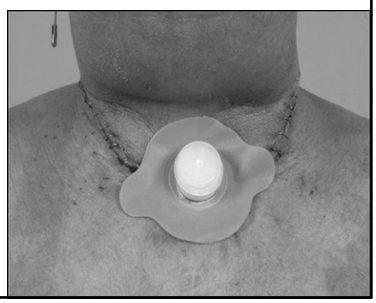
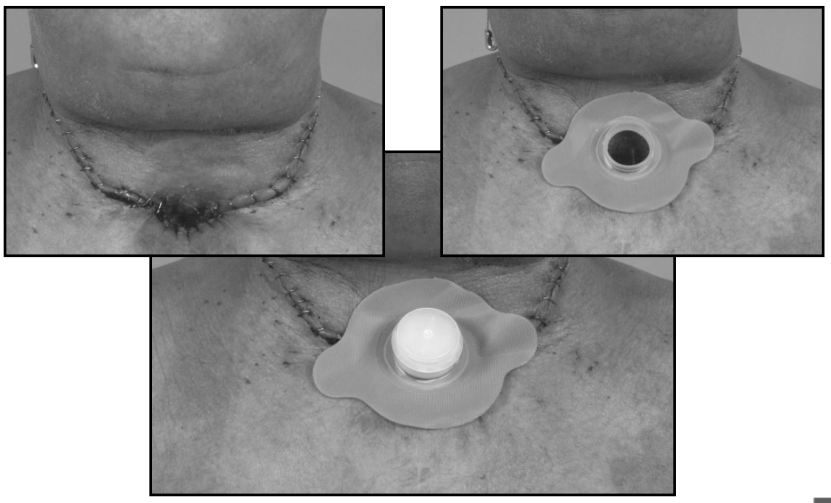
What is a Hydrocolloid?

- For moist wounds to retain moisture
- Doesn't typically require frequent changing
- Creates non-breathable environment under the dressing
- Artificial blister
- Designed to stick to healthy skin as it should adhere to skin around the damaged skin/wound
- Intention is to promote healing of uninfected wounds (pressure ulcers, burns)
- Impermeable to bacteria
- Problems:
  - lifting on the edges
  - may trap microbes
  - Allergic reactions
- Provox ® Optiderm™ is a hydrocolloid



Provox® Optiderm™ Immediately Post-OP



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What is a Hydrogel?

- High water content
- Delivers moisture to the wound/skin
- Hydrophyllic polymers that are soluble in water and swells with water/fluid
- Designed to provide moisture and wick away moisture from wound
- High glycerin component
- Cool, comfortable and soothing
- Good for the following types of wounds:

Dry or dehydrated wounds
Partial or full-thickness lesions
Abrasions or severe scrapes
Minor burns
Wounds with granulated tissue development
Radiation skin damage

Tips:

Clean skin with mild soap and water
Avoid using alcohol as it breaks down the matrix

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Provox® Luna

- Comfortable
- Soothing to the skin
- Superior lung humidification
- No prep – apply to clean, dry skin

reddot award 2018
winner

HME optimized for humidification

Hydrogel baseplate →

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CONTINUED

Reasons include

discomfort,

skin irritation, and

lack of knowledge regarding the importance of compliant HME use

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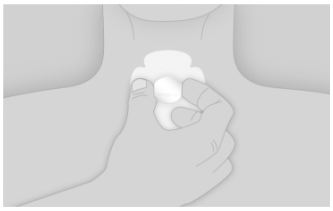
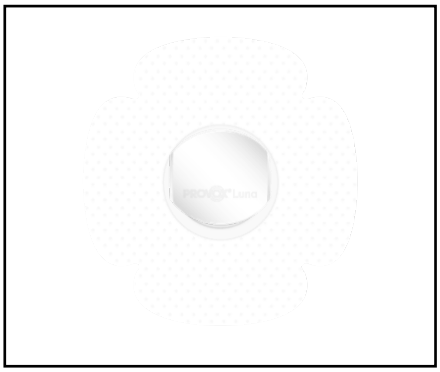
CONTINUED

THIS IS PROVOX LUNA





Designed to help patients …

- Sleep comfortably
- Soothe their skin
- Improve their lung health

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Luna Basics

- A system to be used together
- Placed on clean, dry skin (Do not use prep/barrier/glue)
- Hydrogel soothes and calms irritated skin
- Soft and smooth for night-time comfort
- Made of hydrogel to soothe and cool the skin
- Superior humidification compared to other HMEs
- Low breathing resistance for easy night-time breathing
- Side openings to prevent occlusion while sleeping

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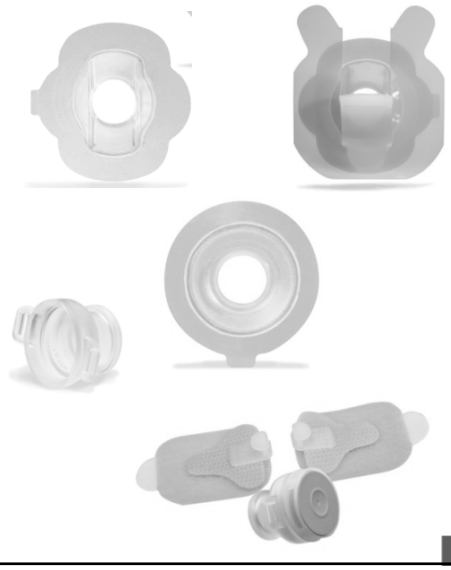
Typical Attachments of Choice for Hard to Fit Stomas & To Use With Provox FreeHands Flexivoice System:

- Provox StabiliBase
- Provox StabiliBase OptiDerm (not optimal adhesion)
- PVC Valve Housing
- Provox XtraBase
- Provox LaryButton



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Troubleshooting Accessories

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Tracho-Foam® and Provox ® Adhesive

Application

Choose Standard/Large disc smaller diameter than the Provox adhesive baseplate

Peel backing from Provox baseplate, place on flat surface with adhesive side up

Peel paper backing away from one side of disc, do not touch adhesive

Apply adhesive side of disc to adhesive side of baseplate

Line up inner rings with one another, press disc and baseplate together, removing air bubbles or wrinkles

FIGURE 1

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Skin Cleaned and Prepped

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Tracho-Foam® and Provox® XtraBase®

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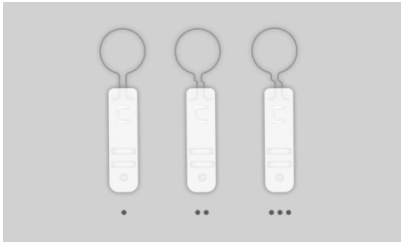
Provox Freehands Support



Discrete ring and transparent base

Supports the adhesive and prevents the stoma from moving

Flat/Medium/Deep

Reusable

Fixation adhesive

Attaches the base to the chest

Disposable

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The benefits

- Reduces stoma movement
- Improves voice quality
- Gives more people the freedom to speak hands-free

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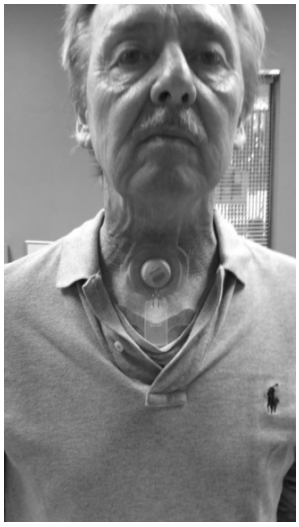
Freehands Support System with Stabilibase Adhesive Baseplate



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Which Baseplate?

- Take a guess
- Soft disposable (flat peristomal area)
- Hard disposable (recessed peristomal area)
- Non-disposable baseplate/foam disc
  - Spread area around the stoma
  - Attach the baseplate by maximizing surface contact
  - Smooth out/no air bubbles

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Fitting a Peristomal Attachment

- Clean peristomal skin with mild soap and/or cleaning towel & dry thoroughly
- Apply Skin Barrier & wait 2 minutes to dry
- Apply external adhesive (if indicated) & wait 4 minutes to dry
- Align inner ring with the bottom lip of stoma
- Attach the base plate/housing so it is in contact with the skin as much as possible
- Smooth out wrinkles/bubbles
- Wait 20-30 min prior to talking
- If unable to wear for 8+hrs → re-assess
- SUCCESS = PATIENCE + PERSISTENCE

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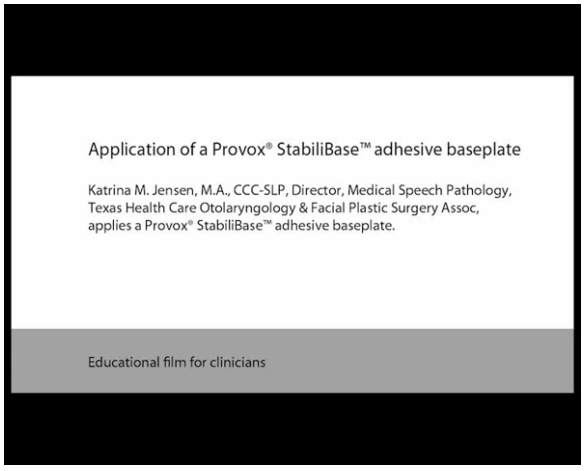
Example of Stabilibase Baseplate Placement



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Tips for Maintaining a Good Adhesive Seal

- Clean the area around the stoma
- Dry area around the stoma with a lint free towel
- Improve the stickiness of adhesive: warming the baseplate or using a scant layer of additional glue
- Protect the skin with application of Skin Barrier wipe
- Provide additional stickiness by using a Skin Tac wipe
- If needed, apply extra glue to skin and let dry 3-10 minutes
- **Line up the inner ring of baseplate with the bottom lip of stoma**
- Apply base plate; avoid creases and bubbles
- **Massage or warm baseplate for 1 minute**
- **Try not to voice for 20 - 30 minutes**
- Lower speaking pressure when possible
- If develop skin irritation from baseplate, make sure to use the Luna baseplate at night

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Adhesive/Baseplate Removal and Impact on Skin

Problem: Skin stripping when removing baseplate stripping the top layer (epidermis) of skin every time use it.

Solution: Critical to remove the baseplate correctly

3. Removing the adhesive.

Proper skin care is important for your long term success in wearing an adhesive baseplate. It is especially important if you have sensitive skin. The following tips may be helpful:

- Remove the adhesive carefully.
  - For the Provox OptiDerm™ Adhesive, use Provox Adhesive Remover at the edge and then under the adhesive while peeling the adhesive from the skin.
  - For Provox FlexiDerm™, XtraBase® or StabiliBase Adhesives, apply Provox Adhesive Remover on top of the adhesive (the adhesive is porous) and then under the adhesive when peeling the adhesive from the skin.
- Some patients with very sensitive skin can get skin irritation from the use of skin protection products or adhesive removal wipes. If that is the case, discontinue the use of these products and consult your clinician or a dermatologist.

Use a Provox Adhesive Remover wipe on top of a FlexiDerm adhesive to help with removal.

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CONTINUED

Intraluminal Attachments

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CONTINUED

Provox® LaryButton™

Soft, silicone material
- Easy to fold & insert
- Comfortable for pt

Available in 4 diameters & 2 lengths

Ideal stoma:
- Symmetric, round
- Contiguous stomal lip
- TEP position 7-15mm from tracheocutaneous juncture (TCJ)

Retains all Provox® HMEs and hands-free valves

Maintains stomal patency

Can use w/ or w/o Provox ® TubeHolder™ or ® LaryClips™

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Barton-Mayo™ Tracheostoma Button

- Silicone material
  - More rigid than LaryButton™
  - Fold in ½ to insert
  - Retained only by retention flange
- Available in 4 diameters & 3 lengths
- Must have the perfect stoma
  - Symmetric, round
  - Contiguous stomal lip
  - TEP position 7-15mm from TCJ
- Retains HMEs and hands-free devices

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Provox®LaryTube™

Standard

Maintains tracheostomal patency

Houses HME

Allows for customized fenestration to allow TE speech

Fenestrated

Used in combination with voice prosthesis

Blue Ring

Worn with adhesive base plate

Supports stomal seal with Provox® FreeHands™ HME

Used in acute post-op phase to avoid ties

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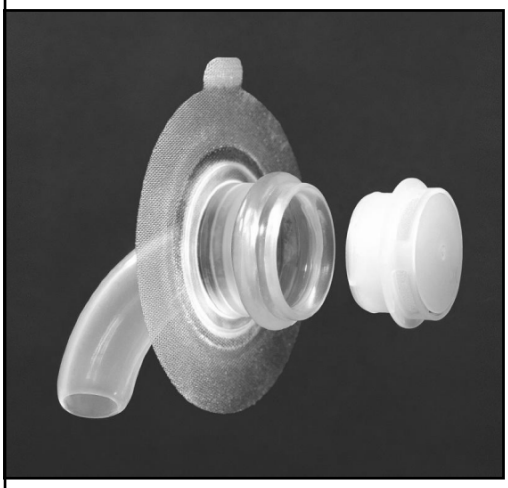
Provox® Blue Ring LaryTube™ w/ Base Plate



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Tube vs. Button?

Button

- Ideal stoma
  - symmetric, round
  - contiguous stomal lip
  - TEP position 7-15mm TCJ
- Stomal stenosis
- Pt. tolerant of something in the stoma

Tube

- Tracheal & stomal stenosis
- Flap reconstruction
- Redundant tissue around stoma
- Shallow tracheal lumen

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Fitting Tube/Button

- Measure the diameter of the stoma
  - LaryTube™ /LaryButton™ sizing kit
- Determine appropriate length
  - Position of TEP
  - Redundancy
  - Presence & location of tracheal stenosis
  - Most common LaryTube length = 36mm
  - Most common LaryButton length = 8mm

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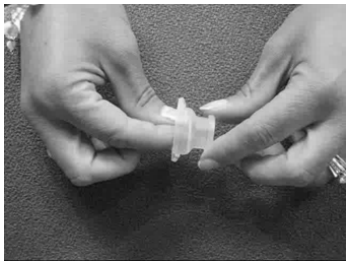
Fitting Tube/Button

Insertion

Put Surgilube®/K-Y® Jelly around stomal lip

Fold LaryButton in ½ like a "taco"

Place into the stoma and let it open up



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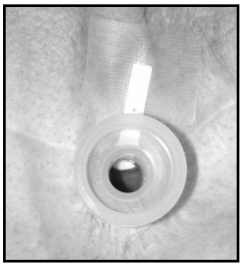
Possible Button Sizing Issues



- Fitting Assessment
  - Position of TEP?
  - Adequate blood flow to stoma?
  - Air exchange?
  - Comfort?
  - Pistoning?
  - Dislodgement?
  - Need for LaryClips™?
  - Insertion strap intact?

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Provox LaryButton™ with LaryClip™

Courtesy of Saint Louis University Cancer Center - Dennis Fuller

Vocal and Pulmonary Rehabilitation After Total Laryngectomy

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Peristomal vs. Intraluminal Attachment: How do I Choose?

- Factors to Consider:
  - Stomal Shape
    - Symmetry?
    - Contiguous stomal lip?
    - Position of TEP?
  - Peristomal Topography
    - Prominent sternocleidomastoid (SCMs)?
    - Prominent clavicular heads?
    - Deep set stoma vs smooth peristomal skin?
    - Skin sensitivity?
    - Lymphedema?
    - Presence of flap?
    - Neck size & shape?

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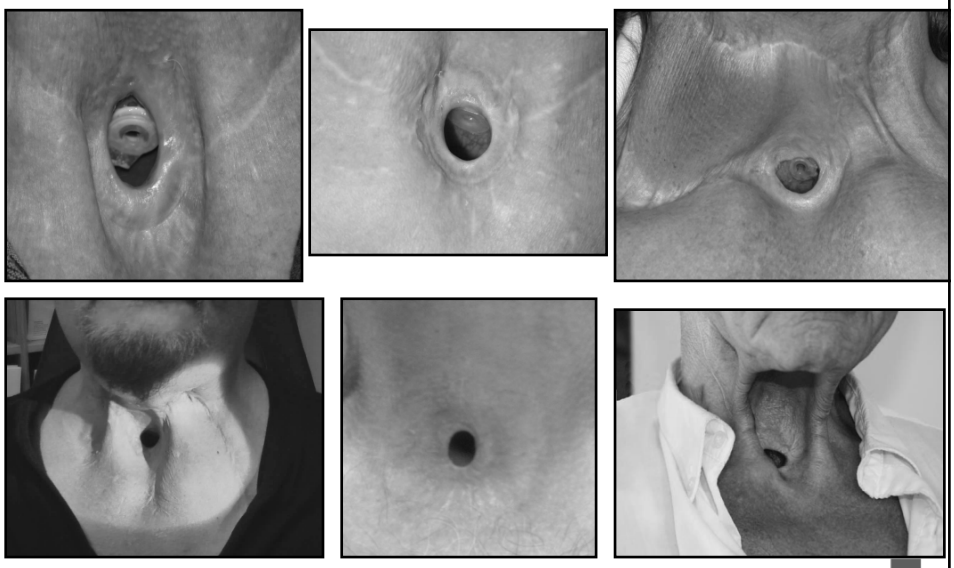
Intraluminal or Peristomal Attachment?



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Situations and Combinations are Endless

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Sutures	▪ Optiderm ▪ Larytube ▪ Larybutton ▪ Combo
Undergoing Radiation	▪ Larytube ▪ Larybutton ▪ Hydrogel ▪ Combo
Skin Irritation	▪ Optiderm ▪ Hydrogel ▪ Larytube ▪ Larybutton ▪ Combo

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Stomal stenosis	▪ Larytube ▪ Larybutton ▪ Blue ring with baseplate
Deep Set Stoma	▪ Stabilibase ▪ Xtrabase ▪ Flexiderm with Trachofoam
Flexivoice	▪ Baseplate ▪ Larybutton ▪ Baseplate + Freehand Support
Sensitive skin & Flexivoice user	▪ Stabilibase by day ▪ Hydrogel/Luna at night ▪ Larybutton with clips

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Determining Best Set-up

- Maintain a seal for 8 hours
- Complexity
- Comfort
- Ease of breathing/resistance
- Cost

It takes time and troubleshooting to find the best combination.

Success requires commitment from both you and your patient.

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In Summary

- Physiologic changes occur in the lungs as a result of neck breathing.
- Respiratory Changes have a significant impact on QOL.
- The introduction of an HME can improve respiratory status and pulmonary function while reducing mucus in neck breathers.
- Cost savings may be substantial.

https://www.youtube.com/watch?v=HEai28IcWVk

With permission from Alan Pummell

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