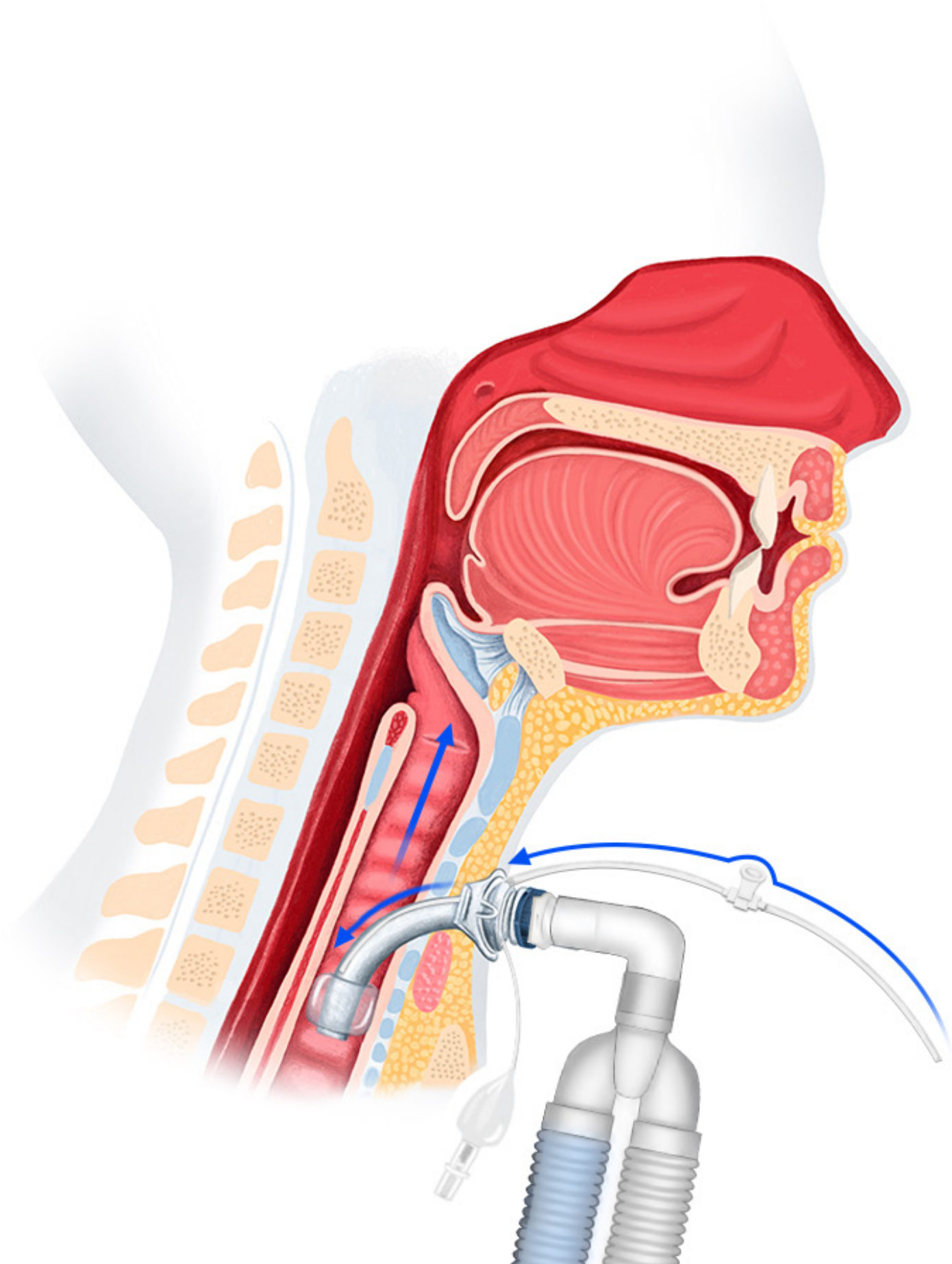
TRACOE

Enhancing Voice and Upper Airway Functions through Above Cuff Vocalization

This illustration shows the airflow pattern with Above Cuff Vocalization.



Above Cuff Vocalization (ACV)

Patients requiring a tracheostomy tube and mechanical ventilation often face significant communication barriers, primarily due to the inflated tracheostomy tube cuff. The cuff blocks airflow through the vocal folds, causing aphonia. The absence of airflow in the upper airway can also lead to sensorimotor dysfunction, which contributes to difficulty with secretion management, coughing, and swallowing.

Patients frequently report that the inability to speak is one of the most distressing aspects of their experience in the intensive care unit, leading to increased anxiety, stress, and depression.[1] Restoring the ability to communicate has been shown to improve patients' outlook, mood, and quality of life.[2-5]

Above Cuff Vocalization (ACV) is a technique designed to restore voice and upper airway functions. It provides external airflow above the cuff and through the vocal folds, enabling voice. Studies have demonstrated that a significant proportion of patients using ACV can achieve audible phonation.[1-3] In addition to improving verbal communication, ACV has been associated with enhanced cough and swallow function, and overall improvements in quality of life.[3,5]

General guidelines for ACV

Healthcare providers should base ACV assessment and treatment decisions on current research, adhere to the tracheostomy tube Instructions for Use (IFU), and establish their own ACV policies and procedures. The following content provides general guidelines for ACV and does not represent specific recommendations from Atos Medical.

Begin by explaining the procedure to the patient and caregivers. Then, use subglottic suction to remove any secretions that may have accumulated above the cuff. Once the area is clear, connect the subglottic suction channel to a thumb port and oxygen tubing, and then connect the oxygen tubing to a source of compressed air. Introduce airflow at a rate of approximately 1 liter per minute (LPM) and encourage the patient to vocalize by occluding the thumb port. Adjust the flow rate as needed, typically keeping it below 10 LPM. The duration of ACV should be individualized based on the patient's tolerance and the facility's policy, ensuring the procedure remains both effective and comfortable.

During ACV, it is essential to monitor the patient's vital signs and discontinue the procedure if there are significant changes from baseline. Observe the patient's reaction and tolerance closely, and make adjustments to positioning, flow rate, and trial duration as necessary.

Additional safety considerations include:

- Do not initiate ACV if there is bleeding or edema at the stoma, or if less than 48 hours have passed since the tracheotomy.
- If swelling of the neck or face occurs during the ACV trial, stop the procedure immediately and notify the medical doctor (MD).

Additional training on the suitability and application of ACV should be sought either locally or through external resources, such as the Atos Learning Institute, before initiating the procedure.

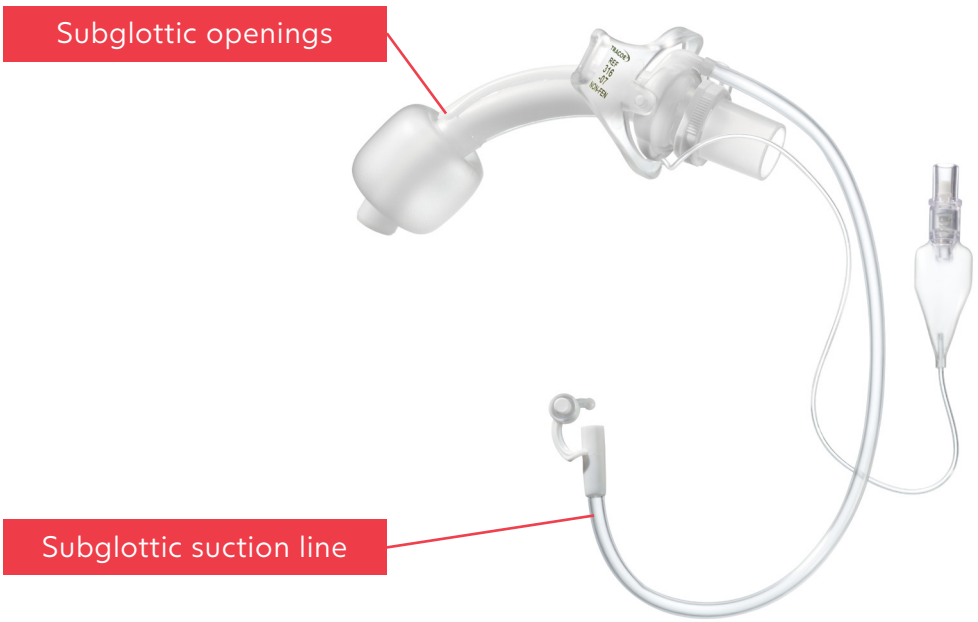
Tracoe Extract Tubes for ACV

The Tracoe Extract tubes are approved for utilizing the subglottic suction channel for Above Cuff Vocalization (ACV).

Tracoe Twist Extract and Tracoe Twist Plus Extract

These tracheostomy tubes feature an innovative design with a flat, subglottic suction channel that can be connected to a suction port to effectively remove secretions that pool above the cuff. This advanced suction channel delivers significantly improved performance compared to the predecessor model, due to its larger flow cross-section and two strategically located suction points. As a result, secretions are suctioned more rapidly and thoroughly, ensuring enhanced efficiency.

Tracoe Twist Plus Extract



Tracoe Vario/Vario XL Extract

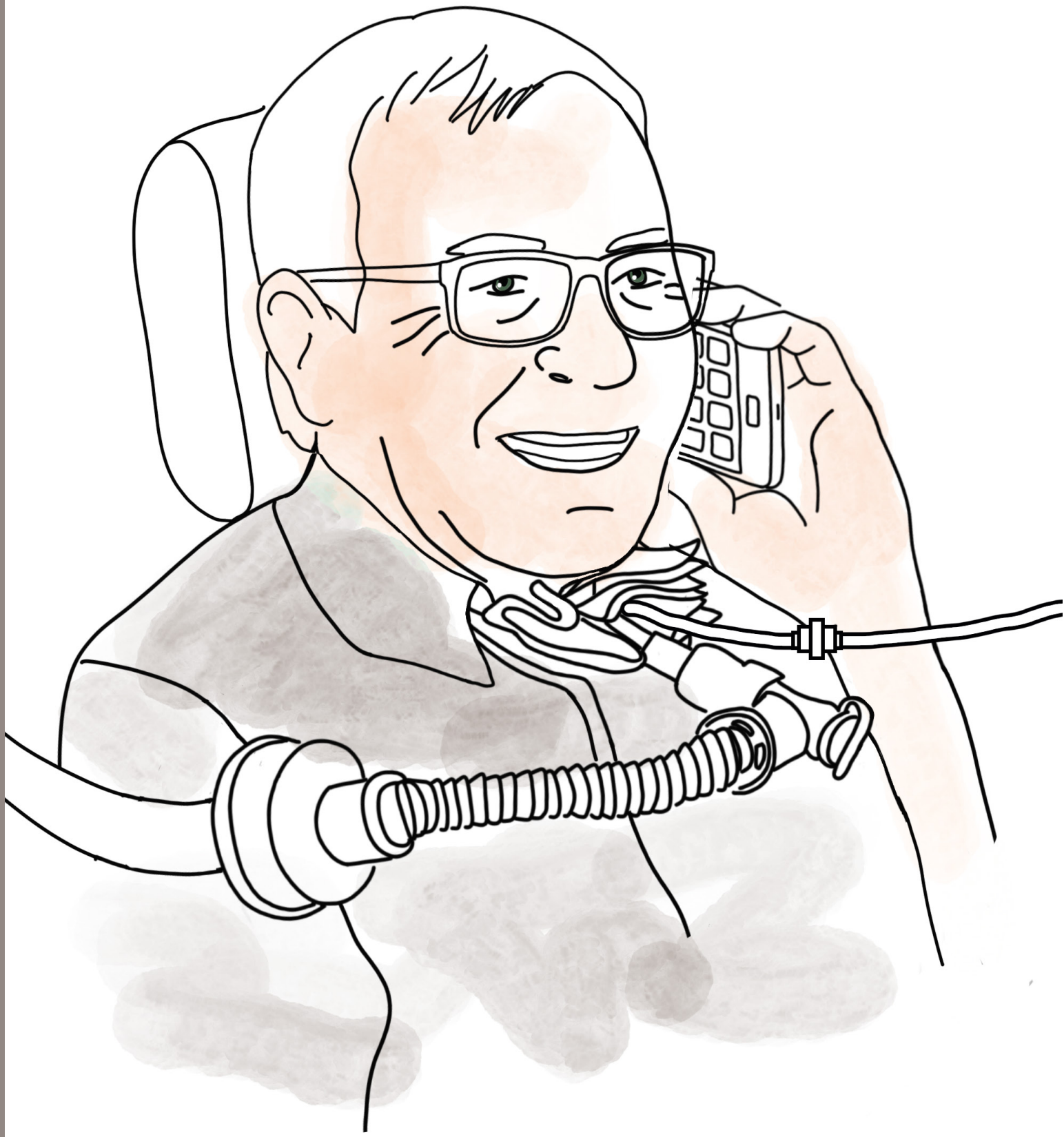
Tracoe Vario tubes are single lumen tracheostomy tubes with an adjustable neck flange. Using a practical push-button mechanism, the neck flange can be adjusted individually for each patient. The flexible wings on the flange can also be independently adapted. The clear plastic subglottic suction line embedded in the tube wall opens at the lowest possible point above the cuff. The Vario Extract tubes are available in both extra-long and standard lengths.

The Impact of Subglottic Suction Tubes

To achieve ACV, a tracheostomy tube with a subglottic suction channel is required. The subglottic suction channel can be used to remove secretions above the cuff, reducing the risk of bacterially contaminated secretions entering the lower respiratory tract. There is growing evidence which supports the increased use of subglottic suction tracheostomy tubes as the primary insertion tube in acute settings to reduce ventilator associated pneumonia (VAP) [6-8] and decrease mortality.[6] When a subglottic suction tracheostomy tube is in place, it provides an opportunity to address both medical and communication needs.

Summary of ACVs Benefits:

- Continued, uninterrupted ventilation
- Improved communication[1-3]
- Translaryngeal airflow for improved cough[3,9]
- Improvement in quality of life[2,5]
- Improvement of swallow function
  - ◊ Increased swallow frequency[2]
  - ◊ Increased laryngeal sensation potentially leading to improved secretion management[2,9]
  - ◊ Generation of subglottic pressure during ACV may lead to more successful swallow[9]



Studies have demonstrated the safety of ACV and benefits such as improved communication, cough, swallow, and quality of life.[1-3,5]

Ordering Information

REF #	Product	Size (Diameter)
REF 306	Tracoe Twist Extract	07-09
REF 316	Tracoe Twist Plus Extract	07-10
REF 470	Tracoe Vario Extract	07-10
REF 471	Tracoe Vario XL Extract	07-10

To order, specify: REF + Size (Diameter), e.g. REF 316-08

References

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For Instructions For Use, please visit www.atosmedical.us

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