

Long-Term Tracheostomy Management



Oxygenation and Ventilation Management

- **Signs of weaning readiness:** Resolving etiology requiring mechanical ventilation, hemodynamic stability, and ability to undergo spontaneous breathing
- **Predictors of successful weaning:**
 - Adequate gas exchange
 - Ability to protect airways
 - Maximal inspiratory pressure
 - Rapid shallow breathing index
 - Vital capacity
- **Options for weaning/liberation:** Pressure support via ventilator, humidified high-flow nasal cannula, and oxygen via tracheostomy collar
- **Strategies for successful weaning:**
 - Protocolized weaning
➔ reduce duration and improve outcomes
 - Early mobilization and rehabilitation
 - Identify and reverse causes for weaning failure



Nonrespiratory Management

- **Downsizing or transitioning to cuffless tubes** to be considered after postoperative day #7 or track maturation—discuss with proceduralist
 - **Improved airflow** in upper airways
 - **Phonation options:**
 - Finger occlusion
 - One-way speaking valve (eg, Passy Muir Valve)
 - In-line speaking valves if ventilator-dependent
 - Speaking tracheostomies (cuff remains inflated)
 - **Dysphagia assessment:**
 - Formal respiratory therapist (RT) and speech-language pathologist (SLP) evaluation once able to perform dry swallowing without difficulty
- **Tracheostomy occlusion/capping:** Capping/spigotting to test ability to breathe through upper airway
- **It takes a village!** Physicians, nurses, RTs, SLPs, physical therapists, and occupational therapists



Decannulation (Removal) Readiness Assessment

- Hemodynamic stability
- Minimal supplemental oxygen needs
- Ability to tolerate facial interface for PAP if indicated for chronic indications
- Reduced secretion suction needs (no more than two times every 8 hours)
- Strong, consistent cough
- Improved swallow
- Tolerance of capping for at least 24 hours
- Evidence highlight: Using suction frequency for assessment + continuous high-flow oxygen achieved shorter time to decannulation in the REDECAP trial

Resources

- Engels. PMID: 19865580
- Singh. PMID: 28649385
- Bonvento. PMID: 29066907
- Whitmore. PMID: 32723731
- REDECAP. PMID: 32905673