

**Respiratory Care Services
John Dempsey Hospital
Policy and Procedure Manual**

Subject: Nasotracheal Suctioning

Rationale: When an ineffective, inadequate cough and/or inability to adequately mobilize secretions exist, secretions must be suctioned from a patient's airway as needed. Nasotracheal suctioning is an invasive procedure and is accomplished by introducing a sterile control suction catheter into one the patient's nares through the nasopharynx, oropharynx and into the tracheobronchial tree. A vacuum is applied as the catheter is being withdrawn thereby resulting in the removal of mucus and other accumulated (pooled) secretions.

Equipment: Stethoscope
Clean or Sterile examination gloves (as applicable)
Sterile control suction catheter
Vacuum source and connecting tube

- o Recommended vacuum settings: Adult 80-120 mm Hg
Children 80-100 mm Hg
Infants 60-100 mm Hg

Sterile water for rinsing (as needed)

Indications:

1. Inadequate cough and inability to mobilize secretions
2. Unusually thick secretions which are difficult to mobilize and/or expectorate
3. Depressed, bypassed or absent cough reflex (CVA, CNS depression, brainstem injury, pain or muscle weakness)
4. Presence of clinical signs identified (restlessness, agitation, rhonchi on auscultation, audible rhonchi, tactile fremitus, decreased breath sounds, decreased pulse oximetry)
5. Aspiration Precautionary Measure (NTS PRN) - Presence of neuro-muscular disorder, CVA or any other conditions which places patient at risk for aspiration

Hazards / Potential Complications:

1. Hypoxemia
2. Arrhythmias
3. Hypotension
4. Lung collapse – pneumothorax, microatelectasis
5. Mucosal membrane damage
6. Tracheitis
7. Infection

Procedure:

1. Obtain the necessary equipment setup and assemble at patient's bedside
 - Check operation of resuscitation bag at bedside (if applicable)
 - Connect suction device, turn vacuum source on, occlude connecting tube with thumb to verify safe and adequate vacuum level
 - Properly position patient : semi-Fowlers position; assure neck is not hyper extended
2. Explain to patient what you are about to do. Be reassuring.
3. Wash your hands thoroughly. Observe universal precautions.
4. Assess patient's condition.
5. Evaluate the patency of nares and/or presence of inflammation.
Consider placement of a nasal trumpet (Nasopharyngeal Airway) to facilitate repeated NTS while minimizing the likelihood for nasal and nasopharynx trauma
6. Pre-oxygenate patient before beginning suctioning
7. Open sterile suction catheter (or sterile suction kit if available).
DO NOT TOUCH CONTENTS. To prevent infection you want to keep everything as clean as possible. Arrange equipment so it is readily accessible to you.
 - Apply sterile gloves
 - Remove sterile suction catheter with dominant hand. **DO NOT TOUCH ANYTHING ELSE EXCEPT CATHETER WITH THIS HAND TO MAINTAIN STERILE TECHNIQUE.** Lubricate catheter with a water soluble lubricant.
To prevent contaminating the catheter, wrap it around your fingers. (The same catheter may be reintroduced to the trachea if it has not touched anything. However, it must be discarded after each suctioning period)
 - Grasp suction tubing with other gloved hand
8. With suction on and the finger control port open gently advance the catheter through one of the patient's nares. Match the droop of the catheter with the natural curve of the airway. Slowly advance the catheter until a slight resistance is felt, withdraw and gently redirect the catheter through the turbinates. Then continue to advance the catheter on inspiration. This will permit you to slip past the epiglottis and get into the trachea.
(If this does not work, have patient cough or stimulate a cough reflex by "tickling" epiglottis with catheter tip). Continue to advance the catheter to the carina, resistance will be felt again until the cough reflex is stimulated or resistance is met. Withdraw catheter slightly.

9. Now apply suction intermittently while rotating and withdrawing catheter
NOTE: Do not leave suction catheter in the airway for longer than 10-15 seconds. Do not hold suction control port or suction button for more than 5 seconds. Do not jab catheter up and down. Never force the catheter into the airway.
10. Wait a few minutes before suctioning again. Allow patient to rest between suctioning attempts.
 - Assess / evaluate patient (pulse, respiratory rate, patient color, use of accessory muscles; color, amount and consistency of secretions)
 - Auscultate patient's lungs to determine if additional attempts are warranted to clear lungs. Repeat as necessary (or tolerated) until airway seems to be cleared and no secretions can be heard.
11. Discard catheter by wrapping around fingers of dominant hand. Take the glove by cuff and remove it inside out, keep the catheter inside the glove, to minimize contamination. Dispose of your equipment in appropriate trash container and clean up the area
12. Rinse vacuum connecting tube with rinsing solution
13. Turn off vacuum source. Wash hands.
14. Document procedure and results on Respiratory Treatment Sheet or patient's chart.