NASOPHARYNGEAL AND ORAL SUCTIONING

THEORY
The purpose of both nasopharyngeal and oral suctioning is to maintain a patient nasopharyngeal airway of a critically ill child, while also promoting his or her oxygenation and ventilation. The procedure itself is intended to remove secretions found to be present in the nose or mouth, which can be accomplished through a suctioning system.

PATIENT SELECTION

Indications:
• Presence of secretions in the nose or mouth
• Suspected secretions with increased work of breathing
• Coarse upper airway noises on auscultation of the lungs
• Patients who require assistance to expectorate secretions because of an inadequate cough or an inability to swallow secretions

Contraindications:
• Presence of any nasal, facial, or basilar skull fractures
• Use caution performing the procedure in patients that are receiving anti-coagulant therapy or have a bleeding disorder or thrombocytopenia (platelet count < 50,000)

EQUIPMENT
• Soft and/or rigid suction catheter
• Suction source with a receptacle
• Lubricant
• Clean gloves
• Mask with a shield
• Personal protective equipment

PROCEDURE

Nasopharyngeal Suctioning
1. Prepare the patient and choose your equipment.
   • Elevate the head of the bed to 30 degrees.
   • Explain the procedure to the patient and/or parent.
   • Choose an appropriately-sized soft suction catheter, one that can easily fit into the patient’s nare. Catheter size should be 1/3 the size of the patient’s nasal passage. A size 5-6 French may be appropriate for an infant, and larger catheter (8, 10, 12 French) should be used for larger patients.
2. Wash hands and put on clean gloves. Wash your hands with an alcohol-based hand sanitizer or soap and water, and put on clean or sterile gloves.
3. Check your suction and connect the suction catheter to suction tubing.
   Ensure the pressure is about 75 mm Hg to avoid trauma to the delicate nasal mucosa. Attach the catheter and make sure to keep catheter tip clean prior to suctioning.
4. Lubricate catheter with a water-based lubricating jelly. This will prevent trauma to the patient’s nose.
5. Measure the catheter. To assure that the catheter will be inserted to the appropriate depth, measure from nose to ear (Figure 1).
6. Hold child’s head and insert catheter. Insert catheter into the nose without applying any suction to the measured depth (Figures 2 & 3).
7. Apply suction and remove catheter. Continuously apply suction as you remove the catheter. Limit the suctioning period to 3-6 seconds.
8. Note the color, consistency, and odor of any secretions.
9. Give patient a 30 second rest period before suctioning again. Make sure the patient’s vital signs have returned to baseline before suctioning again.

Troubleshooting
• If the patient did not cough while suctioning, consider suctioning the other
nare or advancing catheter to a slightly greater depth.

**Oral Suctioning**
This procedure may be performed after nasopharyngeal suctioning or by itself.

1. **Prepare the patient and choose your equipment.**
   - Elevate the head of the bed to 30 degrees.
   - Explain the procedure to the patient and/or parent.
   - Choose an appropriately-sized suction catheter. A soft suction catheter is appropriate for infants, while a soft or a rigid catheter can be used for larger patients.

2. **Wash hands and put on clean gloves.** Wash your hands with an alcohol-based hand sanitizer or soap and water, and put on clean or sterile gloves.

3. **Check your suction and connect the suction catheter to suction tubing.** Ensure the pressure is about 75 mm Hg to avoid trauma to the delicate nasal mucosa. Attach the catheter and make sure to keep catheter tip clean prior to suctioning.

4. **Insert catheter into the mouth.** Insert the catheter on each side of the patient's mouth and over the tongue, to reach secretions pooled in the posterior oropharynx (Figure 4).

5. **Apply suction and remove catheter.** Continuously apply suction as you remove the catheter.

6. **Note the color, consistency, and odor of any secretions.**

7. **Give patient a 30 second rest period before suctioning again.** Repeat on the other side of the mouth and over the tongue, giving a rest between each pass. Ensure the patient's vital signs have returned to baseline before suctioning again.

   *Note: If your patient has a strong gag reflex or has just been fed, be careful not to suction too far into the posterior oropharynx as this may result in vomiting.

**COMPLICATIONS**
- Laryngo- or bronchospasm
- Decreased oxygen saturation
- Trauma or edema to the oral or nasal mucosa
- Excessive coughing
- Vomiting and risk for aspiration
- Patient pain or discomfort

**ASSESSMENT AND MONITORING**
- Monitor vital signs, including oxygen saturation
- Auscultate lung sounds
- Assess patient's comfort with procedure

   *Note: It is advised that you assess and monitor these clinical features before, during and after the procedure.

**DOCUMENTATION**
- Indication for procedure
- Date and time of procedure
- Characteristics of secretions (amount, color, consistency, odor)
- Vital signs before, during and after procedure
- Resolution or persistence of the reason for suctioning
- Patient's comfort during procedure
- Adverse reactions

**REFERENCES**