



# MIAMI TOWNSHIP FIRE & EMS CLERMONT COUNTY, OHIO *PROCEDURE PROTOCOLS*

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## OROGASTRIC AND NASOGASTRIC TUBES

### Indications

1. To perform gastric decompression on any age patient after endotracheal intubation has been performed and placement verified.
2. To provide a route to administer activated charcoal for patients >15 years and with Glasgow Coma Scale of 15.

### Contraindications

1. Nasogastric tubes are contraindicated in the presence of head trauma, maxillofacial injury, or basilar skull fracture. The orogastric route should be utilized in these circumstances.
2. If the patient has known esophageal varices, the risk of inadvertent esophageal rupture and hemorrhage must be weighed with the benefit. Contact medical command for consult.
3. Esophageal stricture.
4. Penetrating neck trauma.

### Protocol

#### Nasogastric Placement for Awake Patients

1. Position alert patients in an upright or high Fowler's position.
2. Administer lidocaine 1% 20mg/1mL IN (atomized) into nare that will be utilized for nasogastric tube insertion.
3. Estimate the length of the tube needed to reach the stomach by measuring the tube from the nose to the tip of the earlobe and down to the xiphoid process. Mark the length with tape.
4. Instill phenylephrine HCL 0.25% or oxymetazoline 0.05%, two or three drops or sprays into both external nares. Early installation allows adequate time to effect vasoconstriction of the nasal mucosa.



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5. Administer benzocaine spray to the posterior pharynx. Benzocaine spray should be applied for approximately ONE second or less.
6. Lubricate the salem sump tube with 2% lidocaine jelly or 2% viscous lidocaine.
7. Insert the tube through the selected naris aiming down and back toward the posterior pharynx with the patient's head flexed forward and their chin toward the chest.
  - A. Pediatric sizes: refer to Broslow tape (we will carry 8F, 12F, 14F)
  - B. Adult size: 18F
8. When the tube reaches the nasopharynx, resistance may be felt. Apply gentle pressure downward to advance the tube. Try to rotate the tube to see whether it will advance. **DO NOT FORCE** the tube, and if resistance is still met remove the tube and attempt the other nare.
9. Advance the tube while instructing the patient to swallow until the predetermined depth marked on the tube is reached.
10. If the patient continually coughs and gags;
  - A. Check the posterior pharynx to see if the tube has coiled and if so, withdraw the tube.
  - B. Consider one additional dose of benzocaine to the posterior pharynx and reattempt insertion.

## **Nasogastric Placement for Sedated Intubated Patients**

1. Orogastric tube placement is preferred once orotracheal intubation has been performed. However if nasotracheal intubation has been performed, the patient may tolerate nasogastric tube placement better depending on their level of sedation.
2. Nasogastric tube placement can also be performed on an intubated patient if attempts at orogastric placement are unsuccessful.
3. Topical anesthetics as outlined in the nasogastric placement for awake patients may not be necessary if the patient has been given paralytics or benzodiazepines.
4. Measurement and insertion techniques are the same for both awake and sedated patients.



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## **Orogastric Placement**

1. Orogastric tube placement should only be used for endotracheally intubated patients once ETT placement has been verified.
2. Estimate the length of tube needed to reach the stomach by measuring the tube from the corner of the mouth to the earlobe and down to the xiphoid process. Mark the length with tape.
3. Lubricate the salem sump tube with 2% lidocaine jelly or water soluble lubricant.
4. Insert the tube through the oropharynx until the marked depth is reached.
  - A. Pediatric sizes: refer to Broslow tape (we will carry 8F, 12F, 14F)
  - B. Adult size: 18F
5. If the tube coils in the posterior pharynx direct laryngoscopy can be utilized to place the tube in the esophagus.

## **Verification of Placement for Naso/Orogastric tubes**

1. Verify tube placement by two or more of the following methods.
  - A. Attach capnometer to tube with a BVM adapter from an ETT. ETCO<sub>2</sub> should register zero.
  - B. Using a 60cc catheter tip syringe instill 30cc of air into tube and auscultate over epigastrium (left upper quadrant) for air sounds.
  - C. Aspirate for gastric contents and assess for cloudy, green, tan, brown, bloody, or off-white color contents consistent with gastric contents.
2. Secure tube with tape or commercially prepared adhesive.



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## **Gastric Decompression**

1. Once the placement of the salem sump tube has been verified begin gastric decompression in one of the following manners:
  - A. Attach the tube to portable suction.
  - B. Attach the tube to continual low suction, approximately 150 mm Hg using the onboard suction.
2. The blue air vent must remain patent to ensure proper sump function and to prevent damage to gastric lining during continuous suction.
3. If suction is not readily available connect the 60 cc syringe to the tube while keeping the air vent patent. This will allow the sump function of the tube to work until suction can be applied and also prevents gastric contents from leaking from tube.

## **Instillation of Activated Charcoal via Naso/Orogastric tubes**

1. Verify salem sump tube placement by 2 or more of the procedures outlined in the protocol just prior to instillation of charcoal.
2. Shake activated charcoal vigorously and dilute into sodium chloride or sterile water for a 1:1 solution to facilitate administration.
3. Use 60cc catheter tip syringe to withdraw the charcoal/saline mixture and inject contents into the naso/orogastric tube.

## **Salem Sump tube**

