<u>**NG Tube & Suctioning, Parenteral & Enteral Feedings**</u>

Station Setup

- Salem Sump
- Suction tubing and wall setup
- Feeding Pump
- Feeding Tubing and bags

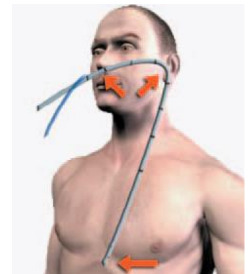
Nasogastric (NG) Salem Sump Tube

Review [**Elsevier Nasogastric or Orogastric Tube Insertion, Flush, Removal**]

Indications:
NG tube is used to remove secretions and air in patients with obstructions of the small bowel or gastric outlet.
May provide symptomatic relief for patients with severe pancreatitis and associated ileus.
May be used to administer medications.
Should not be placed primarily for feedings (Dobhoff is preferred for tube feedings and must be placed by physician).

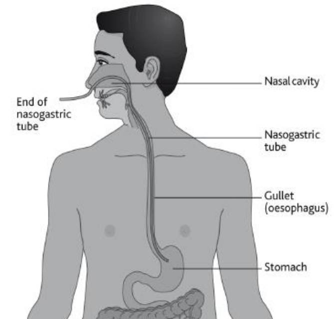
Contraindications:
Maxillofacial Trauma
Esophageal Abnormalities- i.e. esophageal strictures
Altered mental status- may precipitate vomiting
Gastric surgery patients- i.e gastric bypass
Patients who have had nasal or craniofacial surgery
Tracheotomy patients or those with altered head and neck anatomy

Preparation:
May be placed by RN with Physician order
Explain the procedure
Assess the patency and symmetry of the nares- ask the patient to inhale noting which side provides superior flow.
Measure- tip of the nose to earlobe to xiphoid process. Note: distance mark on the tube.



Tube Insertion:
Equipment- gloves face shield, nasogastric tube, lubricant, glass of water and straw, emesis basin, towels or chucks pads, catheter-tip piston syringe, stethoscope, tape, suction unit.
Position the patient upright “sniffing” position (neck flexed and head extended)
Blue pigtail provides an air vent to keep pressure from building in the stomach when the tube is attached to suction
Do not use blue tail for irrigation, if blocked following irrigation clear with 20 ml of air through the vent lumen. Should be kept above the level of the patient’s stomach to prevent stomach contents from leaking.
Coil the tube over fingers to soften the tube and facilitates insertion.

Lubricate the distal end of the tube, slowly pass into the nasal cavity along the floor, and continue to pass the tube slowly into the posterior oropharynx. Have the patient drink water to help pass the tube.
May be best to have 2 nurses or an NSA to help coach the patient.
Aim towards the back of the throat and down.
As the patient swallows, the epiglottis will cover the trachea and prevent inadvertent placement of the tube in the trachea.
If the patient is unable to talk or is in respiratory distress remove the tube immediately.



Confirmation of Tube Placement:
Auscultate over the epigastrium as air is injected into the tube with the piston syringe.
X ray if unsure of placement

Secure the Tube/Suction:
7cm length of 1 inch wide tape. Tear in half vertically about halfway down. Place the wide end to the patient's nose, and wrap the two "tails" around the tube.
Safety pin to gown
Provide oral and nasal hygiene
Intermittent, low suction can be used as ordered.

Documentation:
WALDO- Type of tube inserted, I&O flowsheet- drainage/flushes, label piston syringe, abdominal assessment- bowel sounds
Hygiene- nasal and oral

Trouble Shooting Tips:
Select more patent nostril
Relubricate tube
Stiffen tube by placing in cooled ice water
Have the patient hold ice chips in mouth for a few minutes to numb nasal passage and suppress gag reflex.
Keep blue pigtail at level above the stomach
Insert antireflux valve plug (blue side into blue pigtail lumen)

Complications:
Minor: Sinusitis, epistaxis, and sore throat.
Severe: Esophageal perforation, aspiration, pneumothorax, and rarely, intracranial placement.

Suction Setup

- At change of shift the nurse is required (with oncoming nurse) to check that suction is set up in each of their patients room.
- If the regulator is not working or not present, and if the plastic canister is not in patient's room, the oncoming nurse will report this information to management.

- Charge nurses are required to check the suction set up on crash cart, and test to see if suction is working.
- All suction is to be set up in every room which includes: small and large tubing set and yankaur. All can be unopened, but at bedside for immediate use.

Review Elsevier Suctioning: Oropharyngeal

Top Nutrition-Related Need to Knows

Nutrition Manuals on the UCM Intranet contain most diet handouts you will need until an RD is able to speak to the patient:

- Adult Nutrition Manual
- Pediatric Nutrition Manual

Nurses complete the Nutrition Screen in the RN Needs Assessment. If patient has any risk factors, enter an RN nutrition referral/consult in Epic by indicating "per protocol".

- Tube feedings or parenteral nutrition
- Unintentional weight loss > 10 pounds
- Appears cachectic or malnourished
- Reduced oral intake > 7 days
- Difficulty chewing/swallowing
- NPO/clear liquids >4 days
- Pressure ulcer stage II or greater
- No nutrition risk factors present

Document I/O

- Accurate intake of IVF/IV meds, tube feeds and oral fluid intake
- Accurate measure of urine, stool, ostomy, and drain (NGT, GT, JP, etc.) output
- Daily weights
- Calorie Counts

Enteral Nutrition

Review Elsevier Feeding Tube: Enteral Nutrition via Nasoenteric, Gastrostomy,or Jejunostomy Tube

Where to find TF formulas:

- Tube feeding formulas are par-stocked on each nursing unit by Supply Chain staff
- Restocked daily
- If TF formula not available, put order in Oracle or you can call/page at 2-1888 / 2900 for immediate assistance 24/7

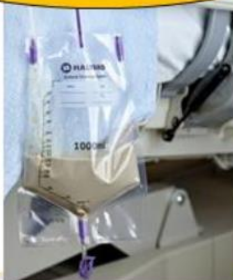
EnFit supplies

EnFit general tips

Secure locking system – DON'T OVERTURN. To connect, make a quick ¼ turn and tug to confirm connection

Extension set should be primed to end of tubing, and never allowed to drip

To drain through the new enteral devices, utilize the Enteral drainage bags in the GI section of the supply rooms



Invert feeding tubes when connecting and disconnecting feeding sets and syringes

Using the Medela Dual Cap for Med Administration
Pharmacy will send medication (PO) syringes to floor. To give a medication enterally:
1. Place the Dual Cap on the end of the PO syringe
2. Remove white cap from end of of dual cap
3. Connect Dual Cap to ENFit Enteral Connection
4. Administer the medication
5. If dose is less than 0.3 ml's, remove medication syringe and with new syringe, flush with 0.3ml of air to clear the medication from the Dual Cap

6. One dual cap may be used for multiple medications. If giving a critical med (i.e. Digoxin) use separate dual cap for these drugs or give this type of medication first and follow with remaining medications.
7. When medication administration is completed, discard the Dual Cap and syringe per protocol

Holding TF for medications

- Ie, Dilantin, Nexium, Coumadin, Cipro, Synthroid, Sinemet
- Refer to MAR, pharmacy or RD notes for specific times to hold feeds

Gastric Residual Volume (GRV)
Continuous feeds:

- Please do NOT hold tube feeds for GRV <250mL *unless* accompanied by verbal complaints of intolerance or abdominal distension
  - If >250 mL, do not advance feeding rate & recheck after 4 hours
    - If continues >250 mL, decrease rate by half & notify RD & MD for initiation of promotility agent
    - If <250 mL, continue feeds at stable rate

Gravity/Bolus feeds:

- Do not hold for GRV less than the amount infused on previous feeding (including volume of water flushes)

Flushing Enteral Tubes
Tube Patency:

- J-tubes & Dobhoff tubes (DHT) must be flushed every 4 hrs with 30-60 mL water
- G-tubes, large-bore NG tubes & OG tubes can be flushed every 8 hrs
- Gravity/Bolus feeds: minimum 60 mL pre/post each feeding
- Flush before & after ANY medication given through tube
- Recommended no meds per J-tube, NJ tubes or DHT unless absolutely necessary (especially avoid crushed K-Dur, Flomax or Nexium)
- If tube clogs, order Clog Zapper from Materials Management
- Do not use soda or juice

Parenteral Nutrition

- Do not hang Peripheral PN (PPN) without lipids
- Do not infuse central formula through a peripheral line

- For use of PN, all access is considered peripheral unless the catheter tip is in SVC – only then can a central formula be used
- All non-standard PN bags are hung at 10 pm
- Labs should be drawn peripherally on PN patients and should NOT be drawn from central line while PN is infusing
- Have a designated lumen for PN/lipids only
- Once PN infusion has started, do NOT disconnect until infusion complete
- Cannot disconnect and then reconnect PN
- If need to disconnect, reduce to half rate x 1 hr and then discard remainder (cannot re-hang)
- If PN stopped abruptly, hang D10W at same rate
- TPN must be filtered with a 0.2 micron filter and Intralipids must be filtered with a 1.2 micron filter (Y into the TPN below the filter – see Pump Guide for tubing set up). To prime filter ensure filter is in upright position.

Parenteral Nutrition (PN) Do's and Don'ts

DO:

- Verify catheter tip location in superior vena cava/right atrium for central formulas
- Start infusing all pediatric and "PN adult" solutions at 10 pm daily.
- Check the solution label against the medical order.
- Double check the solution with second RN and document on MAR.
- Use 0.22 micron tubing filter for PN solutions.
- Use 1.2 micron filter for fat emulsions.
- Replace administration set for PN solutions every 24 hours.
- Replace administration set used for IV fat emulsion separately with each new container or every 24 hours, whichever comes first.
- Draw all blood specimens peripherally!
- Consult with providers to enter orders to draw labs peripherally.
- Assess vital signs and temp at least every 4 hours. Notify providers of chills or fever after initiating the PN. This is the ideal time to obtain blood cultures.
- Assess central line insertion sites at least every 4 hours for redness or discharge.
- Assess for swelling/redness in face, neck, chest, shoulder (may be clot formation)
- Obtain strict I&Os, daily weight unless otherwise ordered.
- Evaluate electrolytes and call primary service for repletion order if necessary.

DON'T:

- Do NOT piggyback other medications into the CPN line!
- Do NOT interrupt infusions!
- Do NOT infuse any other solution/medications, except lipids, concurrently through the same lumen as the PN!
- Do NOT infuse IVPB electrolyte replacements through the same lumen with the PN.
- Do NOT stop or disconnect infusions for ambulation, showers, diagnostic testing or other reasons!

- Do NOT use central lines for blood sampling when parenteral nutrition or fluid and electrolyte solutions are infusing. This poses a significant risk for central line related blood stream infections and contamination of the blood sample.

Review Elsevier Central Parenteral Nutrition
Review Elsevier Peripheral Parenteral Nutrition

TPN Administration

1) Lipids must be piggybacked into the TPN below the filter. Do not infuse lipids alone.
2) Do not discontinue, stop, or hold TPN without an order. If the TPN is interrupted and cannot be reconnected within 30 minutes:
    - Notify the provider and get an order for D10 and infuse it at the same rate as the parenteral nutrition was infusing.
    - Blood glucose is monitored 30 minutes after the TPN has been interrupted and every 30 minutes until the IV fluid is restarted or as per medical order.
3) TPN must be infused alone (with the exception of lipids); no other IV fluids or piggybacks should be infused in the same line as TPN
4) Patients must be weighed daily
5) Strict I & O's
6) If patients are receiving TPN at home and are being admitted for a potential line infection, the line should not be used until the results of the blood cultures are known.

Lab Draws with TPN

Do not draw labs from the catheter lumen in which TPN is infusing. Draw the labs from another lumen of the central venous catheter or, preferably, from a peripheral stick.

1) Turn off and clamp TPN tubing for several minutes.
2) Turn off and clamp all IV fluids/infusions that are infusing through other lumens of the central venous catheter.
3) Scrub the needleless injector cap of non-TPN lumen for 5 seconds with chlorascrub swab and **let dry**.
4) Flush line with 20mL NS.
5) Remove NS syringe; scrub the needleless injector cap for 5 seconds with chlorascrub swab and **let dry**.
6) Attach the luer lock blue access device to the needleless injector cap.
7) Attach red top tube in the blue access device and fill tube with blood. There must be at least a 5mL discard. Set off to the side for discard.
8) Draw labs using appropriate lab tubes.
9) Remove the blue access device and scrub the needleless injector cap for 5 seconds with chlorascrub swab and **let dry**.
10) Flush with NS (10mL if connecting back to fluids; 20mL if not connecting to fluids).
11) If reattaching other IV fluids, scrub the needleless injector cap for 5 seconds with chlorascrub swab and **let dry** and connect IV fluids.
12) Unclamp IV tubing/s and restart TPN and any other IV fluids that were previously infusing.

If the lab results are out of line with previous labs, question whether the labs were obtained incorrectly before treating the abnormalities. Redraw the labs after contacting the provider.

Resources:
Insertion Maintenance and Removal of Oro/Nasogastric GJ Tubes Protocol
PC125D Parenteral Nutrition Policy