UCSF Health

NEONATAL PEDIATRIC NURSING PROCEDURE

NASOGASTRIC & NASOENTERIC FEEDING TUBES – CARE & MAINTENANCE

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Critical Points

1. Only oral syringes and enteral feeding systems manufactured specifically for feeding tubes are used with nasogastric and nasoenteric feeding tubes.
2. Only use sterile or bottled water for flushing tubes. Tap water should not be used.
3. Trace feeding tube from patient source to feed end when making initial connection and anytime making a new connection.
4. Do not modify or adapt feeding devices to avoid compromising safety features.
5. Color coded enteral tubes/connectors are purple and orange..
6. Examine labels before administration of enteral solutions to ensure accurate administration.
7. The standards for enteral feeding small bore connectors as recommended by the FDA and Joint Commission to prevent tubing misconnections and wrong route delivery of fluids, nutrition formula, and medication, are observed. ENFit® connections are used. See Appendix C: ENFit® Transitional Adaptors for connections, drawing up liquid medications, and cleaning the ends of an ENFit feeding tube.
8. Clog Zapper is a natural enzyme that assist with dissolving a clog in a NG/NJ feeding tube if clog is organic material such as a feeding. If the clog is due to medication(s), clog zapper will not dissolve it, so replace tube and ensure adequate flushing as per flush recommendations. Clog Zapper is not to be used on any altered tube, i.e., feeding tube inserted in J tube arm of a G-Tube. Clog Zapper should not be used with force and if tube visually bulges stop intervention as it may lead to dissection of the tube.
9. Tube replacement is generally recommended every 30 days. Tubes may be used for a longer period and should be reviewed each week after 30 days of dwell by the primary provider team and unit CNS/APN. Document review/plan of use as comment in LDA.
10. Report damaged or dissected tube(s) & save product and package if possible.

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Procedure

FLUSHING

1. Routine flushing of a feeding tube maintains the tube function and may be limited based on below.
2. Indications for flushing feeding tubes depends on patient location and age and include the following:
    a. For all patients in ICN and all patients < 1 month of age
        i. After medication administration
    b. For all patients outside of ICN > 1 month of age:
        i. Before and after medication administration
        ii. After bolus feeding
        iii. After obtaining gastric sample for pH
        iv. After checking residual gastric volumes
3. Perform hand hygiene and don clean gloves.
4. Obtain a 5-10 mL oral syringe and sterile water.
5. Flush volumes should always be limited to the smallest volume necessary to clear the tube. This is particularly important for patients who are fluid restricted.
    a. Draw up 1-6 mL sterile water depending on size and length of tube. See Appendix A for minimum flush volumes.
6. Flush NG tube.
7. Document flush volume used after each administration in the medical record.

MEDICATION ADMINISTRATION

1. In general, do not mix medications together or add medications to formula or breast milk.
2. Liquid medications should be administered when available and appropriate. IV medications may be needed when liquid medications are not available or appropriate. Consult a pediatric pharmacist for any questions.
3. Pause feeding pump while giving the medication(s).
4. Flush tube with recommended amount of sterile water prior to and following administration of the medication. (**EXCEPTION: ICN** – flush after medication administration only).
5. When giving more than one medication at a time, flush prior to first medication, between each medication, and following the final medication administered.
6. Resume pump feedings.

CHANGING ADMINISTRATION SETS IN OPEN SYSTEMS

1. For syringe pump feedings, change syringe and tubing every 4 hours.
2. For feeding pump feedings, change bag and pump tubing every 4 hours for breast milk and every 24 hours for formula.
3. When feeding pump feeding systems are used for bolus feedings, they can be disconnected after each feeding, capped between feedings, and changed every 24 hours.

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HANG TIME FOR OPEN SYSTEMS

1. Do not warm feedings delivered by NG/OGs. Allow breast milk to come to room temperature before using for a NG/OG feed but do not warm.
2. All breast milk and formula (with or without additives, reconstituted or not) should hang no longer than 4 hours.
3. Ensure formula has emptied from the feeding bag before adding new formula at 4 hours.

PREVENTING ACCIDENTAL DISLODGEMENT

1. See procedure **Nasogastric Enteral Feeding Tubes: Insertion, Verification of Placement and Removal (Neonatal/Pediatric)** for method of securement.
    a. Ensure adequate tube securement to cheek at all times.
    b. Consider AMT Bridle securement device (see Nasal Bridal (General) nursing procedure).

UNCLOGGING

1. Notify provider if tube is clogged.
2. Use Clog Zapper to unclog feeding tubes. This system works by loosening, breaking down, and dislodging tube feeding clogs.
    a. Does not require a provider order.
    b. Obtain from Materiel Services. See Clog Zapper instructions Appendix B: Clog Zapper
    c. Is safe for all ages and approved by the Food and Drug Administration.

CLEANING

1. Clean the internal threads of the ENFit connector tube or extension twice daily and as needed prior to connecting to feeding bag or feeding extension tube set. See Appendix D for cleaning instructions and connecting tips.

References

Level of Evidence (FAME*)	Level*	Reference
	E2	Bankhead, R., Boullata, J., Brantley, S., Corkins, M., Guenter, P., Krenitsky, J., Lyman, B., Metheny, N. A., Mueller, C., Robbins, S., Wessel, J., & A.S.P.E.N. Board of Directors (2009). Enteral nutrition practice recommendations. *JPEN. Journal of parenteral and enteral nutrition*, *33*(2), 122–167. https://doi.org/10.1177/0148607108330314
	E4	The CLOG ZAPPER unclogs feeding tubes. http://www.corpakmedsystems.com/accessory-product-page/the-clog-zapper/

* FAME Scale details: See nursing policy *Policy, Procedure, & Competency Development, Review, & Approval*

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Procedure History

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Appendix A: Flush Volumes Listed by the Manufacturer for Corflo and NeoMed Feeding Tubes

Flush volumes listed by the manufacturer of Corflo and NeoMed feeding tubes:

Corflo	5 FR	6 FR	8 FR	10 FR
15”	0.36 mL	0.56 mL	1.14 mL	
22”	0.52 mL	0.83 mL	1.68 mL	
36”	0.85 mL	1.35 mL	2.75 mL	4.63 mL
43 ”			3.28 mL	5.53 mL

NEOCONNECT by NeoMed	5 FR	6.5 FR	8 FR
40 cm	0.4 mL		
60 cm	0.5 mL	0.8 mL	1.3 mL
90 cm		1.2 mL	1.9 mL

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Appendix B: Clog Zapper Directions

Clog Zapper is a natural enzyme that assist with dissolving a clog in a NG/NJ feeding tube if clog is organic material such as a feeding. If the clog is due to medication(s), clog zapper will not dissolve it, so replace tube and ensure adequate flushing as per flush recommendations. Clog Zapper is not to be used on any altered tube, i.e., Feeding tube inserted in J tube arm of a G-Tube. Clog Zapper should not be used with force and if tube visually bulges stop intervention as it may lead to dissection of the tube.

Only use sterile or bottled water when directions say “water”. Instructions are included in the clog zapper package.

Instructional video: Clog Zapper Video

Example: use directions in package

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Appendix C: ENFit® Transitional Adaptors Available from Materiel Services

PMM	Transitional Adapters and Cleaning Brush
104004	ENFit® Syringe to Med-Port in Standard Y-Port 
360806	Oral and Luer Lock/ Slip Tip Syringes to ENFit® Feed Set 
801079	Standard Feed Bag to ENFit® Feed Set Standard 
112266	Standard Catheter Tip Syringe to ENFit® Feed Set 
201843	Enfit Syringe to Standard Med or Y-Port use EnFit Stepped to draw up liquid medication 
66595	Single-Use brush for cleaning of the internal threads of the ENFit end 

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Appendix D: Cleaning and Connecting Instructions

- Due to the complex design of the ENFit Connector, cleaning and removal of nutritional formula may be more difficult and risk of contamination could increase. Conventional cleaning methods (cottons balls, cotton swabs, wipes) may be ineffective.
- Do NOT over tighten the ENFit cap as it can get stuck and make it difficult to open
- Leave a little air bubble at the tip if the feeding syringe to prevent spillage of milk/formula into the moat

- The EnClean Brush removes formula, cleans the internal threads of the ENFit Connector, clean the moat daily and as needed