



LOS ANGELES UNIFIED SCHOOL DISTRICT
Medical Services Division
District Nursing Services Branch

NASOGASTRIC (NG) FEEDING: PUMP METHOD

I. GENERAL GUIDELINES

A. GENERAL INFORMATION

1. To deliver adequate fluid and nutrition directly to the stomach.
2. To administer medication when the oral route must be bypassed.

B. GENERAL INFORMATION

1. The Nasogastric tube (NGT) is a soft, thin tube that goes from the nose into the stomach. It can be used to feed students who are not able to intake nutrition, fluids, or medication orally.
2. Types of NG tubes with ports for different functions.
3. Generally, there are no restrictions on locations where a student may be fed. The setting must be clean. The student's instruction should be minimally impacted by feeding. Always explain the procedure to the student at his or her level of understanding. Encourage participation as much as possible to help the student achieve maximum self-help skills.
4. No NG tube feeding is to be administered while on any District arranged transportation and must be stopped at least 30 minutes prior to departure.
5. NG tube feeding and medication administration must be done while the student is seated. During feeding or medication administration, the student needs to remain stationary and should be able to continue sedentary school activities.
6. A pump may be used for students who cannot tolerate the faster intake of bolus or slow-method drip feeding. Most pumps are portable and can be contained in a feeding tube backpack and/or clamped to the student's wheelchair, or other equipment. It can operate while the student is engaged in classroom activities. Pumps may be time-programmed or may need to be set manually.

C. GUIDELINES

1. Feeding by mouth will be done only if indicated by the health care provider in the authorization or [LAUSD Medical Statement to Request Special Meals](#).
2. A licensed provider administering the service must complete the daily checklist for the first time in the presence of the parent or guardian before accepting the student receiving services.
3. Position student in a sitting or lying position with upper body elevated at least 30 degrees, unless contraindicated. When the student is lying flat there is a greater danger of regurgitation/aspiration
4. Stop feeding immediately if the student regurgitates or vomits, complains of abdominal pain, becomes restless, has difficulty breathing, or abdomen

becomes distended. If this occurs, notify the school nurse and parent immediately.

5. Vented (if ordered) according to procedure. When venting is required, open the Nasogastric tube, attach the barrel of a 60cc syringe until stomach contents can be seen in tube or gas is released.
6. If there is a change in color or breathing difficulties occur, stop feeding immediately and call 911, notify the school nurse, and notify the parent.
7. If NG tube becomes dislodged LAUSD will not replace or adjust the NG tube. All feedings and medication administration will be held. Parent will be notified and be responsible for establishing student's NG tube placement and appropriate position and function.

D. PERSONNEL

1. Licensed Nursing Provider (Licensed Vocational Nurse, Registered Nurse)
2. Credentialed School Nurse
3. School Physician (MD, DO)

E. EQUIPMENT

1. Provided by parent:
 - a. Administration sets (bag with tubing and feeding pump). If the parent is providing a used bag, it must be clean and empty. Parent is responsible for ensuring that formula has been prepared and stored properly.
 - b. NG Tube with visible exit markers and date of placement. NG Tubes must have a date of placement less than 30 days prior to date of service at school. NG Tube will not be replaced at school.
 - c. Container with pH test strips (if ordered) (must not be expired).
 - d. Prescribed formula and bottled water as ordered by healthcare provider. Parent provided formula must be labeled with student name, container contents, and date of preparation. Parent is responsible for ensuring that formula has been prepared and stored properly.
 - e. 60 mL syringe with appropriate connector.
 - f. Container for measuring formula and water.
 - g. Pill crusher and cutter for preparation of medication administration (if ordered).
 - h. Syringe size with precise markings for medication administration (if ordered).
 - i. Plastic medicine cup for medication administration (if ordered).
 - j. Drying Rack (optional)

* Equipment and supplies to be replaced as needed for any malfunction, if they are in poor condition, and/or as per manufacturers guidelines.

2. Provided by school
 - a. Stethoscope
 - b. Disposable non-latex gloves
 - c. Mild liquid soap for skin cleansing (LAUSD approved soap)
 - d. Plastic bag for waste disposal

e. Liquid detergent for washing equipment (LAUSD approved detergent)

II. PROCEDURE

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
1. Wash hands.	
2. Assemble supplies including stethoscope and arrange on a clean flat surface.	Maintain cleanliness.
3. Check type of formula, expiration date and shake well. Measure the prescribed amount into a container. Parent provided formula must be labeled with student name, container contents, and date of preparation. Parent is responsible for ensuring that formula has been prepared and stored properly.	Formula should be given at room temperature. Refrigerate any unused portion (as recommended by the manufacturer) in a covered container. Label container with student's name, date and time formula was opened.
4. Prepare the administration set: a. Pour formula/fluids into the feeding bag. b. Place the tubing into the pump mechanism and use the prime feature to fill the tubing with formula/fluid. c. Set pump rate and volume.	This prevents air from getting into the stomach when initiating the feeding. Ensure that the volume and rate align with the order prior to starting administration.
5. Position student with upper body elevated at least 30 degrees.	Helps prevent vomiting and/or aspiration of fluid into the lungs.
6. Put on gloves	
7. Inspect nostril and surrounding skin for skin break down; ensure that NG tube is securely attached to cheek	Check for signs of redness, swelling, greenish/yellow drainage, foul odor, or leakage of stomach contents. If any noted, inform the school nurse.
8. Check for Placement ➤ Confirm that the exit marker is in the correct position and same positions from when endorsed by parent to licensed nursing provider	NG tube placement is verified by a tape mark on the tubing at the nares and/or a documented length of tube from nare to cap in order to confirm that the tube placement has not migrated in between feedings. The number on the tube at nare is consistent with the number as

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
<ul style="list-style-type: none"> ➤ Remove end cap ➤ Fill 60 mL syringe with 5 mL of Air ➤ Connect 60 mL syringe to NG tube hub ➤ Unclamp NG tube ➤ Inject air into NG tube while auscultating using a stethoscope on the abdomen in the epigastric region and listen for “whoosh” sound. ➤ Draw back and aspirate 1mL of stomach contents. Note characteristics of aspirate. <p>If pH Testing is ordered, please go to step 9</p> <ul style="list-style-type: none"> ➤ Inject aspirate back into stomach ➤ Clamp NG tube 	<p>endorsed by parent at start of day.</p> <p>Exit marker is used to note the length of tube inside the body which should correlate to the location in the body.</p> <p>If “whoosh” sound can’t be heard, do not proceed with the feeding and notify parent and school nurse.</p> <p>If there is no stomach aspirate or it contains blood (coffee ground appearance), do not proceed with feeding and notify parent and school nurse.</p> <p>Do not manipulate, reposition, or move NG tube for any reason. If the tube is dislodged or not in the correct position, do not proceed with feeding and notify parents and school nurse.</p>
<p>9. pH Test (If ordered)</p> <ul style="list-style-type: none"> ➤ Clamp NG tube ➤ Disconnect 60mL syringe ➤ Place 1 drop of gastric aspirate on pH paper ➤ pH of Aspirate should be between 1 and 5 ➤ Reattach 60mL syringe to NG tube ➤ Unclamp NG tube ➤ Inject aspirate back into stomach ➤ Clamp NG tube 	<p>If the pH of the aspirate is above 5, do not proceed with feeding and notify parent and school nurse.</p>
<p>10. Pre feeding Flush (If Ordered)</p> <ul style="list-style-type: none"> ➤ Gravity <ul style="list-style-type: none"> i. Attach the 60 mL syringe without plunger to NG tube (clamped) ii. Pour ordered amount of water into 60 mL syringe iii. Unclamp NG tube 	<p>The volume of pre-flush is to be determined by healthcare service provider.</p> <p>Water flush is limited to a volume of 60 mL. Volumes over 60 mL must be ordered separately as hydration.</p> <p>If at any time during syringe push method, resistance is felt, stop pushing. Discontinue use of</p>

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
<ul style="list-style-type: none"> iv. Allow water to flow in via gravity v. Clamp NG tube ➤ Syringe Push <ul style="list-style-type: none"> i. Fill a 60 mL syringe with the ordered amount of water ii. Attach 60 mL syringe to the NG tube iii. Unclamp NG tube iv. Gently push water slowly and evenly at the rate ordered by healthcare provider. v. Clamp NG tube 	<p>NG tube, notify parent and school nurse.</p>
<ul style="list-style-type: none"> 11. Feeding: <ul style="list-style-type: none"> a. Attach the feeding administration bag to NG tube and unclamp. b. Press the run button on pump to start feeding. 	
<ul style="list-style-type: none"> 12. Monitor the student until the feeding is completed. <ul style="list-style-type: none"> ➤ If restlessness, difficulty in breathing, change in skin color, or abdominal distention occurs, stop the feeding immediately and notify the school nurse. 	<p>Check the flow periodically. If the pump alarms (sounds), adjust if needed.</p>
<ul style="list-style-type: none"> 13. When feeding is completed, clamp the NG tube 	
<ul style="list-style-type: none"> 14. Post feeding Flush (if ordered) <ul style="list-style-type: none"> 1) Gravity <ul style="list-style-type: none"> i. Disconnect pump tubing from NG tube ii. Attach the 60 mL syringe without plunger to NG tube (clamped) iii. Pour ordered amount of water into syringe iv. Unclamp NG tube v. Allow water to flow in via gravity vi. Clamp NG tube 2) Syringe Push <ul style="list-style-type: none"> i. Disconnect pump tubing from NG tube 	

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
<ul style="list-style-type: none"> ii. Fill a syringe with the ordered amount of water iii. Attach 60 mL syringe to the NG tube iv. Unclamp NG tube v. Gently push water slowly and evenly as ordered by healthcare provider. vi. Clamp NG tube <p>3) Pump</p> <ul style="list-style-type: none"> i. Leave pump connected to NG tube ii. Measure water in measuring container iii. Pour water into pump bag iv. Run pump with water v. When finished, clamp NG tube vi. Disconnect pump tubing from NG tube 	
<p>15. Inspect nostril and surrounding skin for skin break down, ensure that NG tube is securely attached to cheek</p>	<p>Check for signs of redness, swelling, greenish/yellow drainage, foul odor, or leakage of stomach contents. If any noted, inform the school nurse and parent.</p>
<p>16. Confirm that the exit marker is in the correct position and same positions from when endorsed by parent to licensed nursing provider</p>	
<p>17. Student is to remain upright for at least 30 minutes after feeding.</p>	<p>Helps prevent vomiting and/or aspiration if student regurgitates. Do not allow the student to lie flat. Ambulatory students may resume school activities when tolerated.</p>
<p>18. Rinse feeding bag (water only) and wash syringe with liquid detergent. Rinse, air dry, and store in a clean area.</p>	<p>Parent is responsible for ensuring that equipment provided is in good condition and usable according to manufacturer's instructions.</p> <p>Supplies being sent home should be placed in a plastic baggie that can be closed.</p>
<p>19. Discard disposable equipment and waste material.</p>	<p>Universal Precautions require that all waste material be double bagged.</p>
<p>20. Remove gloves and wash hands.</p>	
<p>21. Document electronically:</p> <ul style="list-style-type: none"> a. Start and end time of feeding procedure b. Physical location of procedure c. Verification of NG tube placement (Marker, "Whoosh", Residual, and if 	<p>All documentation must be completed as soon as safe and possible (Real time documentation is preferred).</p>

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
<p>ordered pH)</p> <ul style="list-style-type: none"> d. Route (NGT) and mode (Pump) e. Type, amount and rate of feeding f. Amount of water flush given (if applicable) and mode (Gravity, Syringe Push, Pump) g. Student's response to procedure and further action taken if needed h. Medication(s), if given (Refer to Medication Administration) 	<p>If electronic documentation is unavailable document on paper (district protocol log) and upload to electronic student record as soon as available.</p> <p>Medication administration steps are explained in a section below</p>

For Venting (If ordered):	
<ul style="list-style-type: none"> 1. Connect the (clamped) NG tube to syringe barrel with no plunger 2. Unclamp NG tube to release gas 3. When gas release stops, clamp extension until ready to administer feeding. 	<p>This allows the release of gas and stomach contents.</p> <p>Venting prevents abdominal distention and discomfort.</p>

For Medication Administration (If ordered)	
<ul style="list-style-type: none"> 1. Medication Preparation <ul style="list-style-type: none"> a. Liquid <ul style="list-style-type: none"> i. Verify concentration ii. Pour into clean cup if not able to draw directly from bottle iii. Measure using an appropriately sized syringe with markings to allow for precise measurements b. Tablet / Capsule <ul style="list-style-type: none"> i. Crush tablet with parent supplied crusher or open capsule ii. Pour powder from crusher or capsule into medicine cup and mix with prescribed amount of water iii. Draw up medication water mixture into syringe 	<p>Observe 8 Rights</p> <p>Use the appropriate port and syringe. Flush medication port with 10 mL water before and after administering each medication. Check to ensure that tablet can be crushed</p> <p>"Eight Rights" of Medication Administration</p> <ul style="list-style-type: none"> 1. Right Student–Properly identifies the student. 2. Right Time–Administer at the prescribed time. * 3. Right Medicine–Administer the correct medication. 4. Right Dose–Administer the right amount of medication. 5. Right Route–Use the prescribed method of administration. 6. Right reason 7. Right response /outcome 8. Right Documentation. <p>Ensure all medication is drawn up into syringe</p>
<ul style="list-style-type: none"> 2. Medication Administration Method <ul style="list-style-type: none"> a. Check NG tube placement b. Gravity 	<p>Volume of the pre-flush is to be determined by the healthcare service provider.</p>

<ul style="list-style-type: none"> i. Attach the 60 mL syringe without plunger to NG tube (clamped) ii. Pour medication into 60 mL syringe iii. Unclamp NG tube iv. Allow medication to flow in via gravity v. Flush with 10 mL water after and between each medication vi. Clamp NG tube ➤ Syringe Push <ul style="list-style-type: none"> i. Fill a syringe with the ordered amount of medication ii. Attach syringe with medication to the NG tube iii. Unclamp NG tube iv. Gently push the medication slowly and evenly at the ordered rate by healthcare provider v. Clamp NG tube vi. Connect flush with 10 mL water to NG tube vii. Unclamp NG tube viii. Flush with 10 mL water after and between each medication ➤ Clamp NG tube and remove syringe 	<p>Water flush is limited to a volume of 60 mL. Volumes over 60 mL must be ordered separately as hydration.</p> <p>If at any time during syringe push method, resistance is felt, stop pushing, discontinue use of NG tube, notify parent and school nurse.</p>
<p>3. Clean Supplies</p> <ul style="list-style-type: none"> a. Wash syringe, crusher, and medicine cup with liquid detergent. Rinse, air dry, and store in a clean area. 	
<p>4. Document electronically:</p> <ul style="list-style-type: none"> a. Start and end time of medication administration b. Physical location of procedure c. Verification of NG tube placement (Marker, "Whoosh", Residual, pH) d. Medication name, dosage e. Route (NGT) and mode (Gravity, Syringe Push) f. Observed Eight Rights of Medication Administration g. Student's response to medication and further action taken if needed 	

APPROVED:

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Date



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