I. DEFINITION

It is a procedure wherein a liquid formula or osteorized feeding is introduced directly into the stomach through a nasogastric tube by gravity or drip (pump) method.

II. PURPOSE

To ensure maintenance of adequate nutrition.

III. EQUIPMENT / MATERIALS

- Feeding formula
- Oral / enteral or catheter tip syringe (10, 20 or 50 ml)
- Feeding tray
- Stethoscope
- Calibrated glass / sterilized bottle
- Container for warming the feeding
- Glass with at least 30 ml of water for flushing (for adult) / 5 – 10 ml of water for flushing (for pediatrics)
- Towel / napkin
- Enteral feeding pump (optional)
- Clean gloves

IV. NURSING PROCEDURE

<table>
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<th>NURSING ACTION</th>
<th>RATIONALE</th>
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<tr>
<td>A. PREPARATORY PHASE</td>
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1. Check doctor’s order. Verify the type, amount, consistency and frequency of tube feeding. To ensure patient's safety

2. Coordinate and send request slip to the Nutrition and Dietetics Division regarding the prescribed enteral feeding / formula.
3. Explain the procedure to the patient and family. To allay anxiety and gain cooperation of the patient / family

4. Do hand hygiene. To prevent transfer / spread of microorganisms

5. Assemble needed materials. To facilitate ease in the performance of the procedure

6. Check the date of preparation and expiration of the feeding formula. To ensure patient's safety and prevent gastro-intestinal problems

7. Provide privacy.

8. Place the patient on a semi – fowler's position (30 – 45 degree angle). To prevent gastric reflux or aspiration

9. Do hand hygiene. To prevent transfer / spread of microorganisms

10. Assess patient's condition.

11. Don clean gloves.

12. Check tube placement by doing the following:
   - Note for the NGT level and compare with the baseline marking. To allow monitoring for displacement of the tube
   - Aspirate 2 ml of stomach content. To encourage gastric motility and obtain aspirate
     If no aspirate was obtained, position patient on the left side. Introduce air 1 – 5 ml for pedia and 10 -20 ml for
adult, using oral /enteral syringe.

- After introduction of air, wait for 15 minutes and try to aspirate again.
- If with aspirate, check visual characteristic of the aspirate.

**NOTE:** Test aspirate using pH indicator paper for initial and subsequent insertions.

- visual characteristics of feeding tube aspirate

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<th>Gastric</th>
<th>Intestinal</th>
<th>Respiratory</th>
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<tbody>
<tr>
<td>May be grassy green with sediment, brown (if blood is present and has been acted on by gastric acid)</td>
<td>Generally more transparent than gastric aspirates and may appear bile stained, ranging in colour from light to dark golden yellow or brownish-green</td>
<td>Tracheo – broncheal secretion may consist of off white to tan sediment</td>
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<tr>
<td>May also appear clear and colourless (often with shreds of off-white to tan mucus or sediment)</td>
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- If all the criteria were met, proceed to feeding.
- If no aspirate was obtained, refer to fellow / attending physician.

13. Warm the desired amount of feeding to be given, if necessary.

**B. PERFORMANCE PHASE**

1. Attach oral / enteral syringe to nasogastric tube while clamping or pinching the tube. To prevent entry of air which could distend the stomach

2. Pour desired amount of formula into the oral / enteral syringe then release clamp / pinch.
3. Elevate oral / enteral syringe 6 – 12 inches above the patient's head.
   Rate of feeding depends on the height of the syringe (principle of gravity)

4. Pour the remaining feeding formula until consumed and follow through with the prepared medications, if any. (Refer to SOP on Administration of Medications through NGT).

5. Flush NGT with at least 30 ml of warm water for adult and 5 – 10 ml for pediatric before and after feeding.
   To maintain patency of the tube

6. Clamp the tube while removing / disconnecting the oral / enteral syringe.
   To prevent draining back of feeding solution into the tube and air from entering the stomach

7. Cover end of the tubing properly.

8. Maintain patient on semi-fowler's position for 1 hour after feeding.

C. FOLLOW – UP PHASE

1. Reassess patient's condition, note for any untoward manifestations and refer accordingly.

2. Clean the materials used for feeding and keep them dry.

3. Remove clean gloves and dispose these based on Waste Management protocol.
4. Do hand hygiene. To prevent transfer / spread of microorganisms

5. Record feedings as well as amount of flushing in the intake and output sheet. To determine fluid imbalance

6. Document patient’s tolerance to feeding. For legal purposes

V. NURSING CONSIDERATIONS

1. If patient is intubated and needs suctioning, do chest clapping / tapping and suctioning one hour before feeding.

2. In case residual volume is consistently the same for three feedings, refer for volume adjustment.

3. Always check the tube placement before and after each NGT feeding.

4. Aspirate obtained may not be returned.

5. Radiological confirmation of tube positioning is recommended under the following conditions:
   - Aspirate pH 5-6 and visual characteristics not indicative of gastric or intestinal aspirate
   - Aspirate pH >6
   - No aspirate despite instituting other measures
References:

1. Nursing Management of Nasogastric Tube Feeding in Adult Patients (MOH Nursing Practice Guidelines 2010) Singapore
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Confiming Feeding Tube Placement: Old Habits Die Hard
3. www.dbh.nhs.uk
Nasogastric Tube Management and Care
4. http://pen.sagepub.com/content
5. Proceedings of the Nutrition Society (2008), 67 (OCE), E117
Best Practice with regard to Confirmation of Nasogastric Tube Placement