Pediatric Tube Feeding Considerations

Tube feedings provide nutrition), medications, and water by means of a:

- *Nasogastric* (NG) tube (a tube that goes through the nose to the stomach).
- *Nasoduodenal* (ND) tube (a tube that goes through the nose to the first part of the small intestine).
- *Gastrostomy* tube (GT) (a tube surgically placed through the skin into the stomach).
- *Jejunostomy* tube (JT) (a tube surgically placed through the skin into part of the small intestine).

These methods of feeding are most often used for children who have a medical condition that interferes with the way they would otherwise eat. Such illnesses include: failure to thrive, stomach or intestinal problems, or difficulty in sucking or swallowing, in some cases, children who require these feeding methods can regain the ability to eat by mouth again.

RISKS AND BENEFITS:

Advantages of tube feeding may include:

- Providing adequate nourishment.
- Prolonging life.
- Enhancing comfort and quality of life.

Disadvantages may include:

- Risk of aspiration pneumonia (pneumonia caused by breathing food or liquid into the lungs).
- Diarrhea.
- The need for restraints.
- Fluid and electrolyte imbalances.
- Risk of infection.

NG TUBE INSERTION & POSITION

Mostly likely, your caregiver has already placed the NG during your child's stay in the hospital. If you are to take your child home with an NG in place, you should be taught while you are in the hospital, how and when to check the position and how to change the tube. **Checking the position should be performed prior to every feeding to ensure the tube is not in the lungs or the throat.** Checking NG tube position as well as insertion can be performed at home as followed:

To **check the position** of the NG Tube:

1. WASH HANDS THOUROUGHLY WITH ANTI-BACTERIAL SOAP. This will help prevent infection.
2. Gather all needed equipment:
   - Stethoscope.
   - 5-ml syringe.
3. Have the child lay back (or swaddle him or her).
4. Open the clamp on the tube.
5. Connect the 5ml syringe of air to the end of the tube. Place the circular portion of the stethoscope over the stomach to listen and insert 5 ml air into the tube. A "swoosh" or gurgling sound should be heard over the stomach as the air is injected in, which means the tube is in the correct position.
6. Pull back on the syringe to remove the 5ml or air you just injected (and possibly some stomach contents), and remove the syringe from the tube.
7. Wash the syringe out with soap and water and let it air dry.
8. Wash your hands, prepare feeding as prescribed (see bolus or continuous feeds, below).
9. **IF YOU DO NOT HEAR A "SWOOSH" OR GURGLING SOUNDS IN THE STOMACH WHEN YOU CHECK THE POSITION OF THE TUBE, DO NOT USE THE TUBE TO FEED YOUR CHILD.** Advance the tube, or insert a new tube as instructed by your caregiver. If you have not received instruction on this, or if you continue to have difficulty, call your caregiver immediately.

To perform **NG Tube Insertion:**

1. WASH HANDS THOUROUGHLY WITH ANTI-BACTERIAL SOAP. This will help prevent infection.
2. Gather all needed equipment:
   - Sterile water.
   - New feeding tube.
   - Stylet (if needed).
   - Stethoscope.
   - Tape.
   - 5-ml syringe.
3. Have the child lay back (or swaddle him or her). Have an extra person there for assistance.
4. Measure the tube from the tip of the nose, to the earlobe, then to the middle of the belly between the bottom of the breast bone and the belly button. Use a piece of tape to mark the measurement on the tube. This mark is how far you will insert the tube into the stomach.
5. Pull up 5ml air into the syringe. Place it aside.
6. Place the tip of the tube in sterile water if needed to help pass the tube.
7. Place the infant or child on their left side to help pass the tube.
8. Insert the tip of the tube into the opposite nostril that the tube was previously in. This will help in preventing breakdown on one side of the nose. However, if your caregiver has stated that you should only use one nostril, follow his or her direction.
9. Insert until you reach the tape you placed previously. If your child has trouble breathing, has wheezing, turns blue or pale, or you see the tube coming out of the nose or mouth, stop and remove the tube.
10. Connect the 5ml syringe of air to the end of the tube. Place the circular portion of the stethoscope over the stomach to listen and insert 5 ml air into the tube. A "swoosh" or gurgling sound should be heard over the stomach as the air is injected in, which means the tube is in the correct position. If there is a stylet in the tube, remove it.
11. Pull back on the syringe to remove the 5ml or air you just injected(and possibly some stomach contents), and remove the syringe from the tube.
12. Secure the tube to the side of the face using a piece of tape.
13. Wash the syringe out with soap and water and let it air dry.
14. Wash your hands, prepare feeding as prescribed.
15. **IF YOU DO NOT HEAR A "SWOOSH" OR GURGLING SOUNDS IN THE STOMACH WHEN YOU CHECK THE POSITION OF THE TUBE, DO NOT USE THE TUBE TO FEED YOUR CHILD**. Advance the tube, or insert a new tube as instructed by your caregiver. If you have not received instruction on this, or if you continue to have difficulty, call your caregiver immediately.

ND TUBE INSERTION & POSITION:

- Most often ND tubes are placed under visual guidance while your child is in the hospital. An X-ray confirms placement of this tube. It is necessary to check placement before every feeding; do this by:
  - Attaching a 10ml syringe to end of tube and pull back to check for stomach contents/ bile. Ask your caregiver when you may want to not feed your child depending on the amount/ type of contents withdrawn from the stomach.
- You should be on the lookout for suspected problems with the ND tube if:
  - The tube is difficult to flush or put feedings through. Do not attempt to force the fluid through. Call your caregiver.
- A ND tube should never be replaced at home because of the risk of putting a hole in (*perforation*) the intestine. If your child's ND tube falls out, do not attempt to replace it. Call your caregiver.

GT/ JT INSERTION & POSITION:

- GT or JT tubes are placed surgically. There are instances in which the GT may need to be changed. Your caregiver will let you know when this needs to occur.

- To check placement prior to feeding, attach a 30ml syringe to the end of the tube and attempt to withdraw stomach contents. Ask your caregiver when you may want to not feed your child depending on the amount withdrawn from the stomach.
- Clean the area around the GT or JT with warm water.
- If the GT or JT has formula leaking from the insertion site, or it falls out, call your caregiver.

Administration of feedings (Bolus Feeding**):**

1. WASH HANDS THOUROUGHLY WITH ANTI-BACTERIAL SOAP. This will help prevent infection.
2. Measure the formula as prescribed by your child's caregiver. Warming the formula helps to prevent stomach upset/ gas. Warm by placing container in warmed water. NEVER microwave the formula.
3. Check tube placement as directed in the above steps for NG, ND, GT, and JT tubes.
4. While clamping the tube, attach a large syringe (60ml usually) to the feeding tube, and pour the formula into the syringe. Keep the syringe no more than 6 inches above the stomach during the feeding to prevent the formula from going in too fast.
5. Let your child sit upright or raise the head of the bed during the feeding and for about 30 minutes afterwards.
6. Unclamp the tube and let the formula go into the stomach at a rate determined by the caregiver.
7. Add more formula as prescribed by your child's caregiver.
8. After the feeding has finished, slowly flush the tube with 5-10ml of warm sterile water.
9. Clamp your child's tube.
10. If prescribed, remove the tube by removing the tape from the face, and quickly remove the tube from the nose steady and quickly.
11. Burp your child.

Continuous Feedings- requires feeding pump and appropriate feeding bag.

1. WASH HANDS THOUROUGHLY WITH ANTI-BACTERIAL SOAP. This will help prevent infection.
2. Measure the formula (4 hours worth for continuous feeds) as prescribed by your child's caregiver. Warming the formula helps to prevent stomach upset/ gas. Warm by placing container in warmed water. NEVER microwave the formula.
3. Check tube placement or insert tube as directed in the above steps for NG tubes. For GT or JT tubes, unclamp the tube.
4. While DISCONNECTED from your child's tube, place 4 hours worth of formula in feeding pump bag and run through the tubing until it reaches the end of the tubing.
5. Turn on the pump, program the pump according to your child's caregiver's instructions and ensure the pump is running by observing flow out of the tube.
6. Pause the pump and connect the tubing to your child's tube.
7. Let your child sit upright or raise the head of the bed during the feeding and for about 30 minutes afterwards.
8. After the feeding has finished, slowly flush the tube with 5ml of warm sterile water.
9. Clamp your child's tube.
10. If prescribed, remove the tube by removing the tape from the face, and quickly remove the tube from the nose steady and quickly.
11. Burp your child. If your child has a GT or JT, you may need to "vent" the tube by leaving the tube open to air. Your child's caregiver can teach you this technique.

CALL YOUR CAREGIVER IF:

- Fever 100.4 °F (38° C) or higher.
- Vomiting, diarrhea, or constipation.
- Prolonged fussiness.
- Pain.
- Bloated/ distended abdomen.
- Redness, swelling, leakage, sores, or pus develops in the skin around the tube site.
- If the GT or JT falls out.

SEEK MEDICAL ATTENTION IMMEDIATELY IF:

- Your child has trouble breathing.
- You see blood around the tube, in your child's stool, or in contents of the stomach.
- Your child coughs, chokes, or vomits while feeding.
- Your child has a bloated or rigid abdomen (belly feels hard when gently pressed).

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