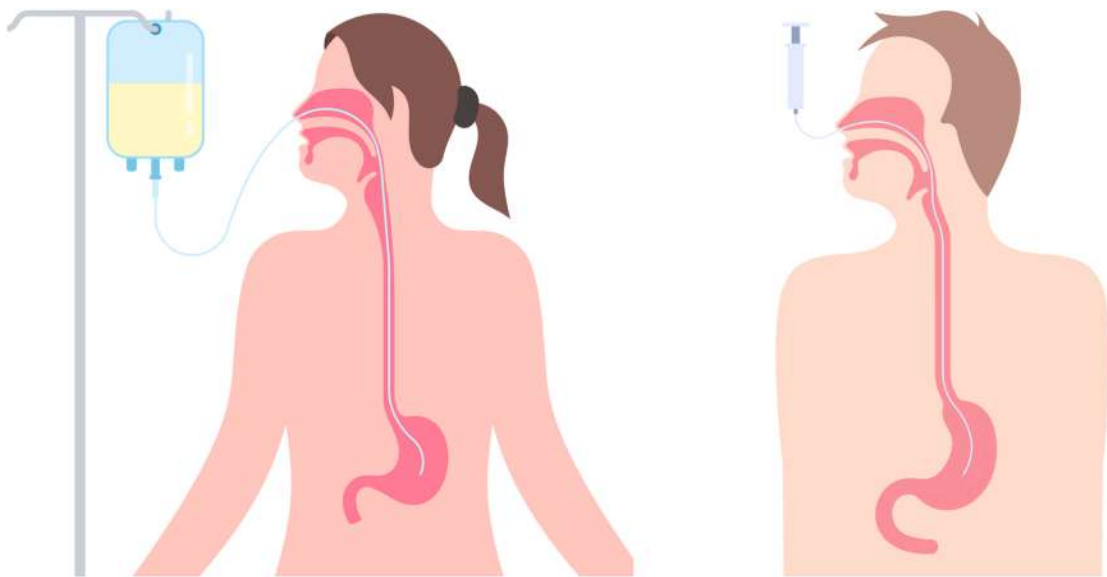


Nasogastric Tube Feeding

What is Nasogastric Tube Feeding?

Feeding liquid food and medication through a special tube when you are unable to swallow food through your mouth. The tube is inserted through the nose, down the back of the throat and into the stomach.



Care of patient with Nasogastric Tube

It is important to take good care of the nasogastric tube so that it works properly. Here are some points to help you:

- Wash your hands with soap and water before and after handling the nasogastric tube.
- Maintain good oral hygiene.
- Ensure that the tube has not slipped out and is firmly secured on the nose and cheek.
- Take good care of the skin around the nostrils so that it does not get sore and irritated.
- Try to prevent children from touching or pulling on the tube.
- Adhere to the appointment date and time for change of nasogastric tube.



What Are The Different Types of Feed?

You may discuss with the dietitian on the type and frequency of feeding for your loved one.

- Pre-prepared liquid formula: ready to feed.
- Powdered formula: Powdered form must be mixed with water before feeding. Requires time for preparation.



Items to Prepare for Feeding:

To prepare feeding, get the following items ready:

- Nutritional formula
- Cooled boiled water
- 50mls syringe
- Measuring jug + spoon
- Bowl (for warming up milk feeds) - Optional
- Cup (for aspirate)
- pH indicator strips
- Alcohol swabs or wet wipes - Optional
- Micropore tape or Plaster
- Measuring tape
- Feeding schedule chart
- Tube details chart



STOP feeding immediately if you observe the following conditions:

- Coughing
- Difficulty in Breathing
- Restlessness
- Abdominal Pain
- Vomiting
- Diarrhoea



Preparation of Feeds:

1. Wash and dry your hands.



2. Check the expiry date of fluid feeds.



3. Wipe the top of can/packet to remove dust.



4. Invert the can/packet of liquid feeds to mix the content:

- For powder form, mix well with water until no lumps are present.
- If powder is difficult to dissolve, try mixing powder with a small amount of water first into a paste before pouring remaining water in (refer to mixing instruction on the can of the feeding formula).



5. Measure the amount of feeds with a measuring jug.



6. For feeds stored in fridge, warm feeds in a bowl of warm water for no longer than 15 minutes. Check the temperature of the milk against your inner wrist before feeding.



7. Cover the opening of can/packet of liquid feeds with a clean bag if there are remaining feeds.



8. Keep any remaining feeds in the fridge and consume within 24 hours.

Label the can/packet of milk with the opening date & time.



Note:

- Unopened liquid milk feeds can be kept in room temperature.
- Remaining liquid feeds are to be thrown away if left at room temperature for one hour.
- DO NOT serve nutritional formula straight out from the refrigerator.
- DO NOT heat up nutritional formula in microwave or stove.
- DO NOT mix feeding formula with other food, drinks or medication nor give any other fluids through the feeding tube other than the prescribed nutritional formula. (Unless specified by doctor, dietitian or pharmacist).

Preparation of care recipient:



- A. Inform him/her that it is feeding time.
- B. Raise him/her to an upright position:
Support his/her back with a few pillows,
or lean against the wall or bed frame.



- C. Before feeding, perform suction if required. This is to remove any excess mucous or sputum & prevent retching (feeling of wanting to vomit).



- D. Perform oral hygiene.
 - If he/she is able to brush their teeth, allow them to do so twice a day.
 - If he/she is unable to brush their teeth, use a toothette to clean the gums, teeth and tongue at least 3 times a day. Dip the toothette with sodium bicarbonate or oral gargle solution.
 - Keep lip moist - use lip balm if necessary.

Check for readiness to feed:



- A. Check that the tube is taped to the nose.
- B. Check that the marking tape on the tube is located outside the nostril.
- C. Change the tape on the nose daily and if it is loose or dirty.

Note:

Do ask the nurse to show you before changing the tape/ the micropore tape should be replaced once a day, when cleaning your loved one's face. Using a warm cloth, gently loosen the micropore tape. Remove the tape from the face and from the tube. Reattach a new micropore tape.



- D. Open the mouth to check that the tube is not coiled in the mouth.
- E. Use a measuring tape to measure the external tube length (from the tip of the nostril to the bottom of feeding port).
- F. Perform this check daily before the first feeding or when marking is changed.

Withdraw contents from the tube:



1. Wash and dry your hands.



2. Bend the tube.



3. Remove the feeding port cap. While kinking the tube, remove the spigot and clean the opening of the tube with an alcohol swab/ wet wipe.
(Optional to use alcohol swab for cleaning).



4. Connect the syringe (with plunger) to the tube and release the bend.



5. Pull the plunger to withdraw fluid from stomach.



6. Bend the tube again.



7. Remove the syringe from tube.



8. Place the feeding port cap back.

Note:

- Withdraw until resistance is felt when pulling back the plunger.
- Collect all the fluid in a container or disposable cup.
- Aspirate must be more than 10ml.
- Note the colour and nature of the fluid (colour should be colourless or yellow green with some mucus strands. Semi-digested milk curds can be seen as well).

Check that fluid aspirated is from the stomach using a pH indicator strip.



1. Wash and dry your hands.



2. Remove one strip of pH indicator from the box.



3. Hold on to the white part of the pH indicator strip. Do not touch the coloured portion.



4. Dip the pH indicator strip into the fluid content or squirt the fluid onto the pH indicator strip.



5. Ensure that the four colour zone of the pH strip comes in contact with the stomach content. Read the result only when the colour no longer changes.



6. Match the colour changes against the colour chart on the pH indicator box.



7. You can only feed if the pH is ≤ 5 OR 5.5 (for pH strips with 0.5 gradation intervals).

Note:

1. A pH of 6 can feed only if he/she is taking medications that will affect the result or as informed by the nurse.
2. Consult your community nurse provider if pH is 6 and above.

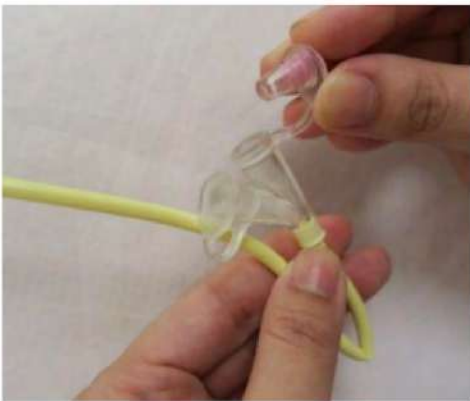
Perform Tube Feeding:



1. Wash and dry your hands.



2. Bend the tube.



3. Remove the feeding port cap.



4. Connect the syringe (without the plunger) to tubing.



5. Hold syringe at the level of the forehead to control the flow of feeds.



6. Bend the tube while filling the syringe to prevent air entry.



7. Release the bend slowly and allow the feeds to flow into the tube. Always keep syringe at the level of the forehead.



8. Repeat step 5 to 7 till all the feeds are given.

9. Once empty, flush the tube with water at the end of feeding to prevent tube blockage.



10. Bend the tube before removing the syringe to prevent backflow of fluid.



11. Place the feeding port cap back to prevent backflow of fluid.



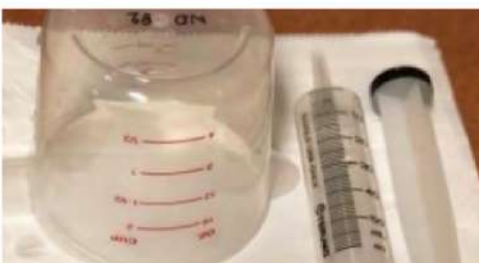
12. Keep him/her seated or propped up at least 30° or more during and after feeding for an appropriate period of time unless contraindicated.

This is to prevent backflow of stomach content. If you notice vomiting and a bloated abdomen, STOP feeding.



13. Wash the syringe and measuring jug. Syringes should be washed with water (do not boil) and thoroughly dried after each use.

They should be changed every 2-3 days, and more frequently if there are visible marks in the syringe.



14. Dry & keep items clean till the next feeding.

Giving medication through the feeding tube:

- Medications serving time varies according to the type of medication.
- Follow the instructions given by the pharmacist.
- Medications must be in liquid form.
- Flush the feeding tube with 20ml of water before and after feeding. This is to prevent the drug from interacting with the feeds and to ensure medications are not left on the tube.



Prepare medications for feeding:

Liquids (e.g. syrup, mixture or suspension):

- To make it easier to flow through the tube. Top up with 10 to 30 ml of water in the medication cup to make the medication thinner.



Tablets:

- Crush the tablet in the mortar and grind into a fine powder with no obvious clumps.
- Mix well with water to form a suspension.



Hard Gelatin Capsules:

- Separate the two halves of the capsule and empty the contents into the mortar.
- Grind the contents to a fine powder with no obvious clumps and mix well with water to form a suspension.



Soft Gelatin Capsules:

- Dissolve the whole capsule in a glass of warm water.



Troubleshooting:

If Nil or less than 1ml of aspirate:

- Inject 10-20ml of air and place patient on the left lateral position for up to 30 minutes unless contraindicated.
- Recheck for aspirate. If nil aspirate, contact your healthcare provider.

What to do when there is no aspiration or tube is blocked before feeding?



1. Kink the tube before disconnecting the syringe.



2. Place the feeding cap back.



3. Turn him/her towards left side.



4. Fill the syringe with 20ml of air by pulling the plunger backwards.



5. Bend tube, remove the feeding port cap and connect the syringe and unbend the tube.



6. Push in 20ml of air and then pull the plunger to try and unblock the tube.



7. If no aspiration, bend the tube and remove the syringe. Place the feeding port cap back.



8. Keep him/her on the left side for 30 minutes. Repeat Step 4 to 6.

If still no aspirate, do not feed. Inform the community nurse provider.

What to Do When the Tube is Blocked During Feeding?



1. Bend the tube.



2. Pour the remaining feeds or medication from syringe to a cup.



3. Bend the tube before removing the syringe.



4. Place the feeding port cap back.



5. Attach plunger to syringe.



6. Pull plunger to remove/aspirate the blockage into the syringe.



7. Soften the aspirate with warm water and try to feed again.



8. If you are still unable to remove the blockage, inform the community nurse provider.

Complications to take note of:

Signs of Aspiration

- Coughing
- Difficulty in breathing
- Restlessness
- Drooling
- Gurgling
- Chest discomfort
- Unexplained fever



Signs of Dehydration

- Decreased urine production
- Dark yellow and strong smelling urine
- Constipation
- Confusion (unless baseline behaviour)



Weight loss

- More than 5% weight loss in one month
- Weigh (before first feeding of the day) weekly or at least monthly)



Please contact your Community Health Team or healthcare provider if any of the symptoms above persists.

Consumables required may be purchased at hospital's outpatient pharmacy or other selected retail pharmacy.

Contributed by Nursing

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