

DEPARTMENT OF NURSING

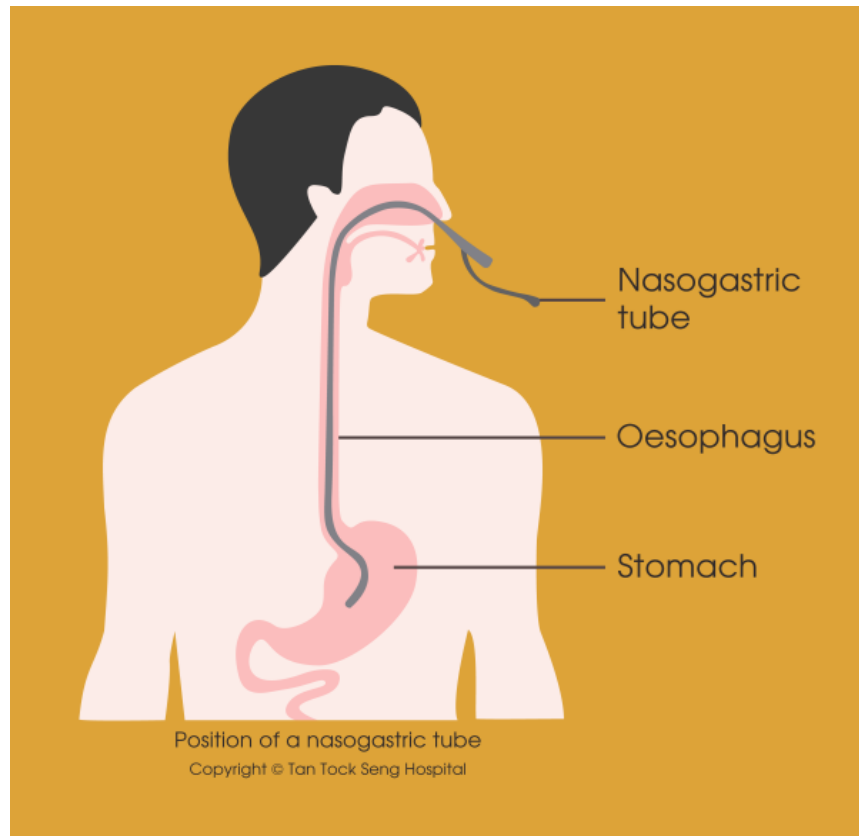
CAREGIVER INFORMATION BOOKLET: NASOGASTRIC TUBE FEEDING



1. WHAT IS NASOGASTRIC TUBE FEEDING?

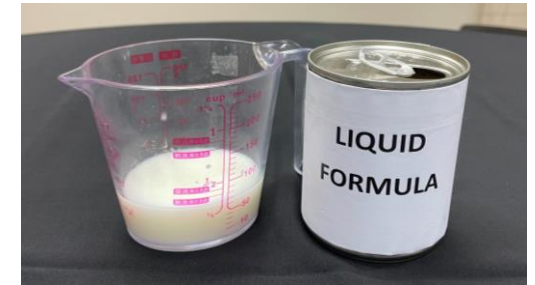
Nasogastric tube is used to feed individuals who are unable to consume food or take medications by mouth. Liquid food and medications are sent through a tube down into the stomach.

This tube is inserted through the nose, down the back of the throat and into the stomach to deliver milk (oral nutritional supplements) and medications.

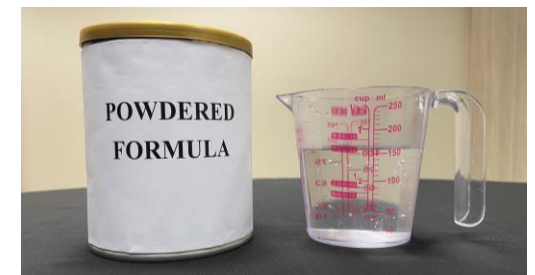


You may discuss with your dietitian what is the best type and frequency of feeding for your loved one.

2. WHAT ARE THE DIFFERENT TYPES OF FEED?



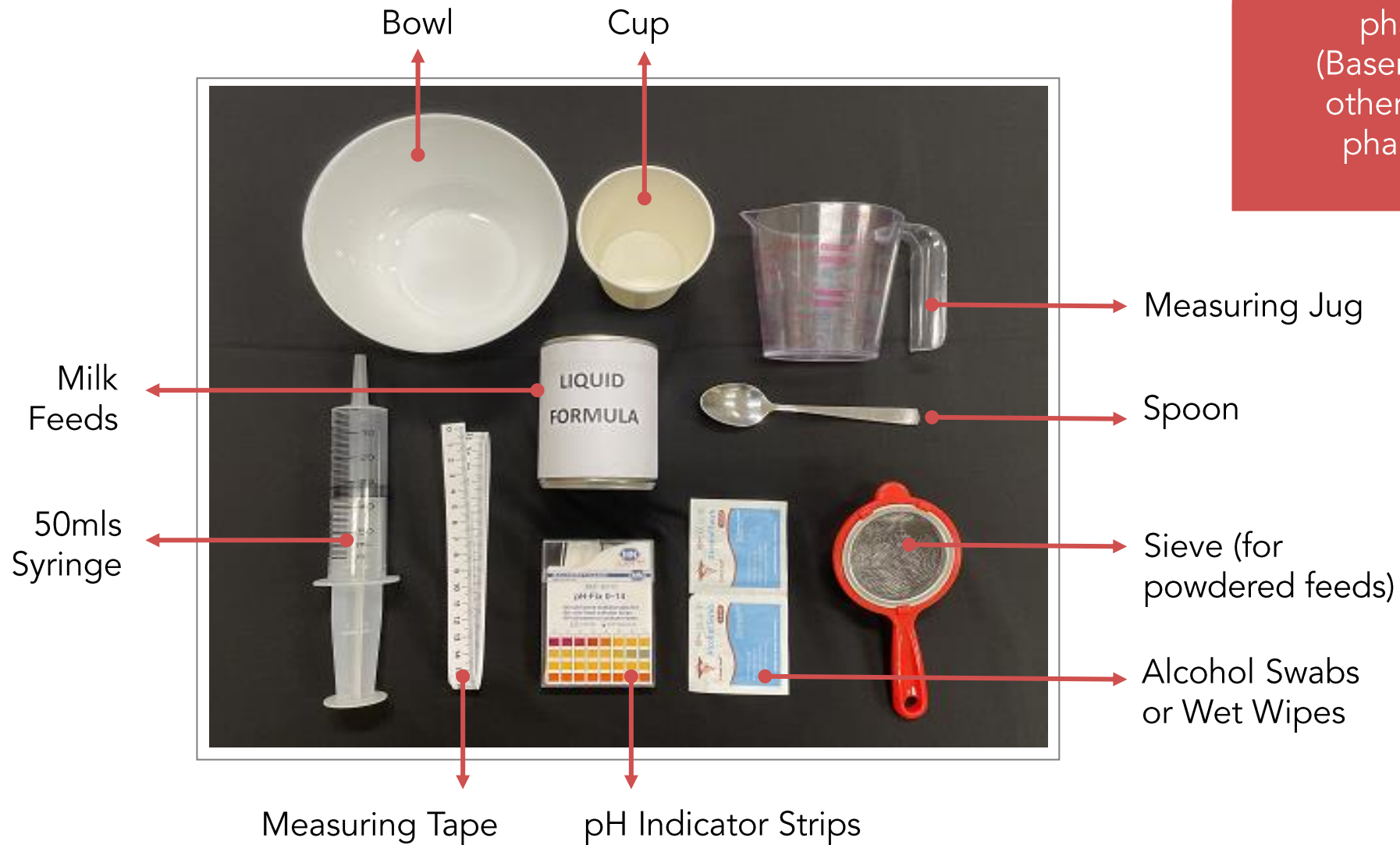
- 1. **Liquid Formula**
Ready to feed



- 2. **Powdered Formula**
Must be mixed with water before feeding

3. ITEMS TO PREPARE FOR FEEDING

These items may be purchased at TTSH's outpatient pharmacy (Basement 2) or other selected pharmacies.



4. PREPARATION OF FEEDS

4.1 LIQUID FEEDS



Wash hands with soap and water, then towel dry thoroughly.



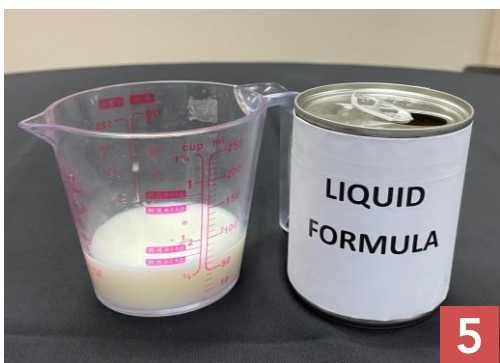
Check the expiry date of the liquid feeds before feeding.



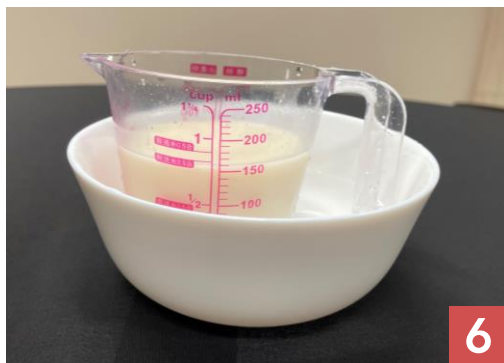
Wipe the top of can/packet to remove any dust.



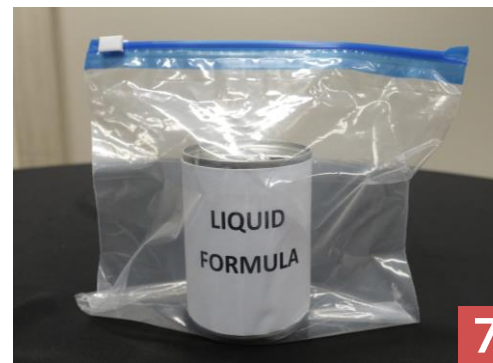
Mix the feed by inverting (shaking) the can/packet several times.



Pour the prescribed amount of feed into the measuring jug according to the schedule.



Warm feed in a bowl of warm water for no longer than 15 minutes, if needed.



Use a clean bag to cover the opening of can/packet if there are any leftover liquid feeds.



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

- Note:**
- Unopened liquid feed can be kept at room temperature.
 - Remaining liquid feed are to be thrown away if left at room temperature for more than one hour.
 - **DO NOT** warm feed in the microwave or boil the feed as it may destroy the nutrients in the feed.

4. PREPARATION OF FEEDS

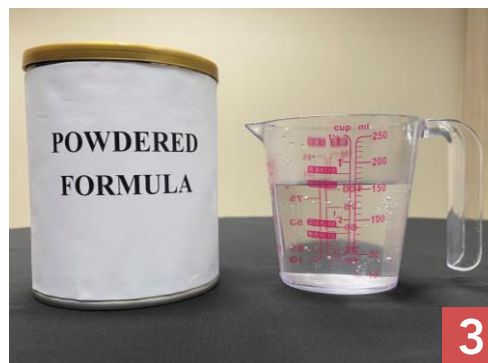


Wash hands with soap and water, then towel dry thoroughly.

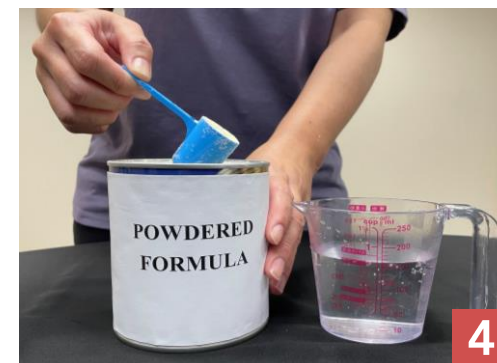


Check expiry date of the formula before feeding.

4.2 POWDERED FORMULA FEEDS



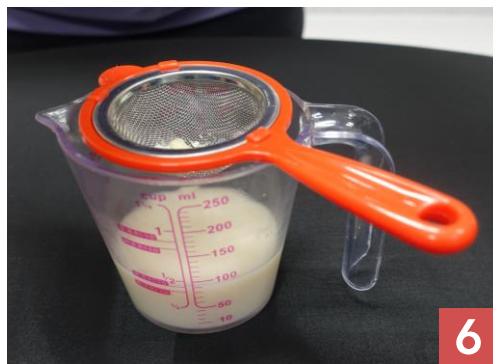
Fill a jug with the amount of warm water according to the feeding schedule.



Scoop the prescribed amount of milk powder into the jug of measured warm water.



Stir it slowly with a spoon and ensure that the powder dissolves completely.



Use a sieve to filter out any clumps of powdered formula which may block the feeding tube.



Use a spoon to dissolve the clumps of powdered formula.

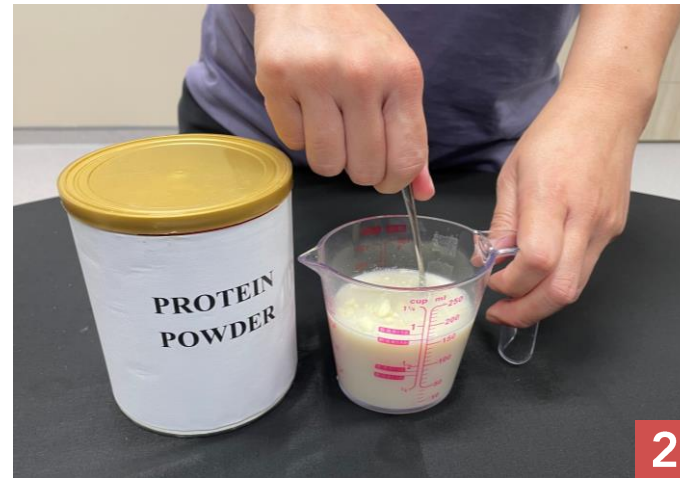
Note: • Do not use hot water directly on the milk powder as it may destroy the nutrients in the powdered formula.

4. PREPARATION OF FEEDS

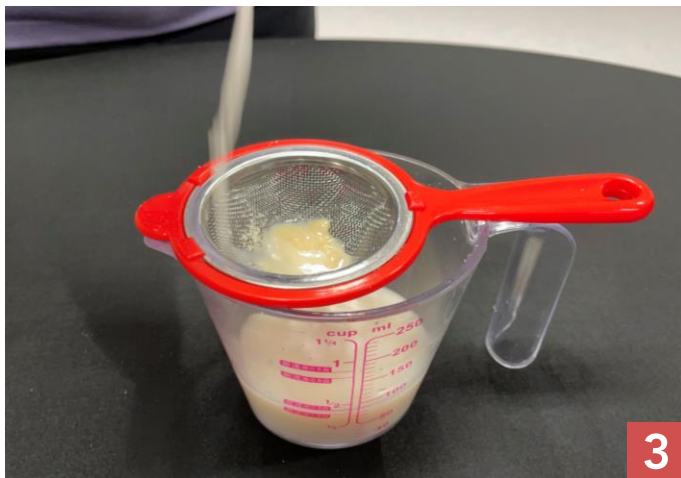


Scoop the prescribed amount of protein powder and add it to the jug of milk (feed).

4.3 PROTEIN POWDER



Stir the feed and ensure that the powder dissolves completely.



Use a sieve to filter out any clumps of protein powder which may block the feeding tube.



Use a spoon to dissolve the clumps of protein powder.

Note: • Protein powder is thick and may not dissolve easily.

5. PREPARE THE CARE RECIPIENT



Inform your care recipient that it is time for feeding.



Raise him/her to an upright position: Support his/her back with one or a few pillows **AND/OR** lean him/her against the wall/bed frame



Perform oral hygiene (at least three times a day)



Perform suction (if required) before feeding. This helps to:

- Remove any excess mucus/ sputum
- Prevent retching (i.e., feeling of wanting to vomit)



Change the plaster on your care recipient's nose daily and/or if it becomes loose or dirty.



Observe your care recipient for any signs of discomfort or restlessness.

Note: • To check for redness/sore around the nostrils.

6. CHECK FOR READINESS TO FEED

6.1 CHECK THAT THE TUBE IS PROPERLY POSITION IN STOMACH

IMPORTANT !



Check that the tube is secured to your care recipient's nose by a plaster. Ensure that the **marking tape** on the tube (beneath the plaster) is located outside the nostril.



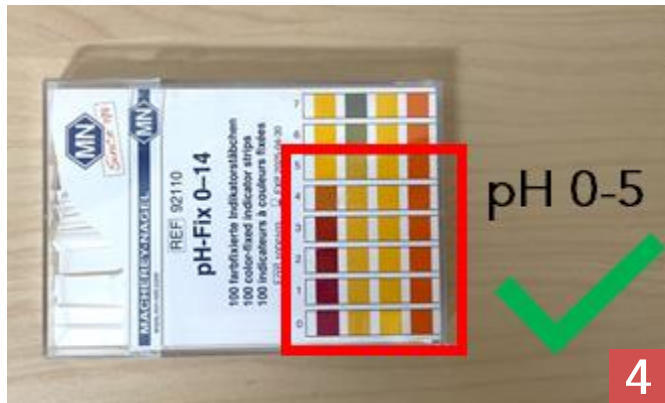
Open your care recipient's mouth to check that the tube is **not coiled inside the mouth**.



Use a measuring tape to measure the **external tube length** (from the tip of the nostril to the bottom of the feeding port).

The external length of the tube should be the same or only have a difference of +/- 2cm from the original insertion length.

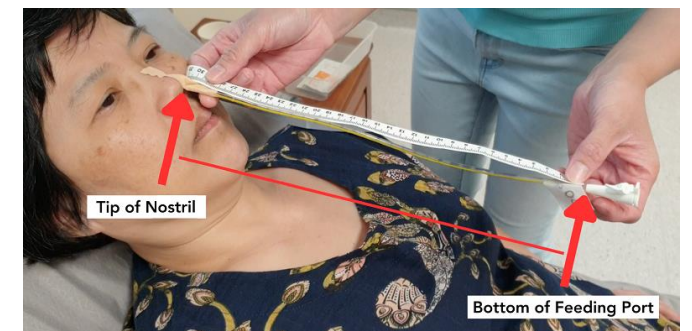
Perform this check daily before the first feed of the day or when the **marking tape** is changed.



Aspirate some fluids from the tube using a syringe and apply it onto a pH indicator strip. You can proceed to feed if the pH reading is between **0 to 5**.

Note:

- Some pH strips have markings in 0.5 increments. Therefore, it is acceptable to feed if the pH falls within the range of 0 to 5.5.
- Inform Healthcare Provider if external length of the NGT tube is more than or less than 2cm from the original insertion length.



6. CHECK FOR READINESS TO FEED

6.2 WITHDRAW STOMACH CONTENTS FROM THE TUBE



Wash hands with soap and water, then towel dry thoroughly.



Bend the tube to prevent air from entering the stomach.



Remove the feeding port cap.



Release the bend only after the syringe is securely connected to the tube.



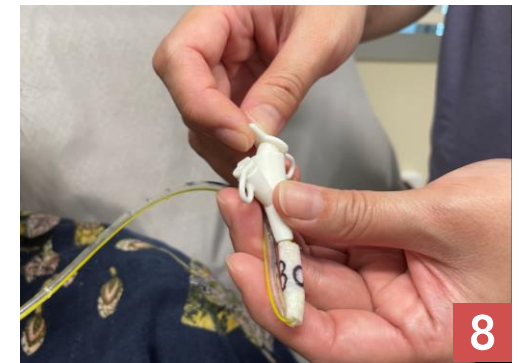
Pull the plunger slowly till there is no more stomach fluid to be withdrawn.



Bend the tube again.



Remove the syringe from the tube.



Recap the feeding port.

- Note:**
- Swab the port and the tip of the syringe before each connection.
 - After testing with pH indicator (refer to next page), collect all the fluid in a container or disposable cup.
 - Note the amount, colour and nature of the fluid.

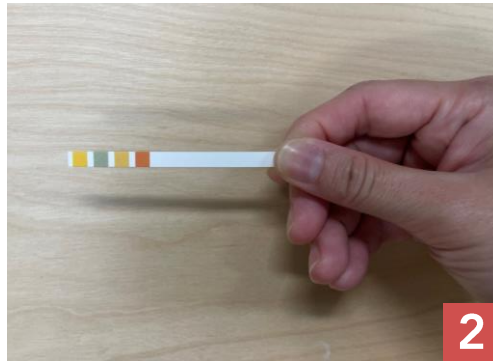
6. CHECK FOR READINESS TO FEED

6.3 USE A pH INDICATOR STRIP TO CHECK THAT THE FLUID ASPIRATED IS FROM THE STOMACH



1

Remove one strip of pH indicator from the container.



2

Hold onto the white part of the pH indicator strip. Do not touch the coloured portion.



3

Use the syringe to push out some fluid from syringe onto the pH indicator strip.



4

Ensure the four coloured zones of the pH indicator strip comes in contact with the fluid.



5

Read the result only when the colour of the pH strip has stopped changing.



6

Compare the colour changes on the strip against the colour chart on the pH indicator container.



7

You can proceed to feed if the pH reading falls between 0 to 5.

Note: • Some pH strips have markings in 0.5 increments. Therefore, it is acceptable to feed if the pH falls within the range of 0 to 5.5.

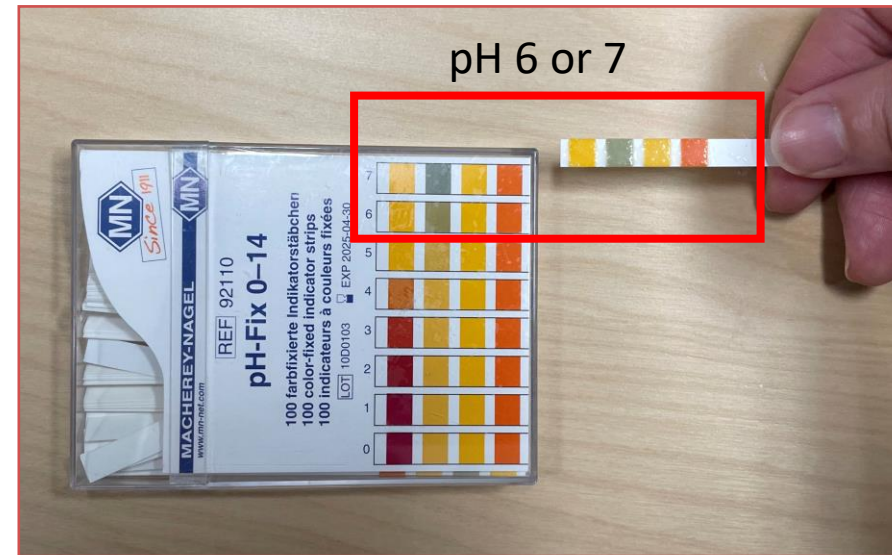
6. CHECK FOR READINESS TO FEED

6.4 WHEN THE pH READING OF THE STOMACH FLUID IS 6 OR 7

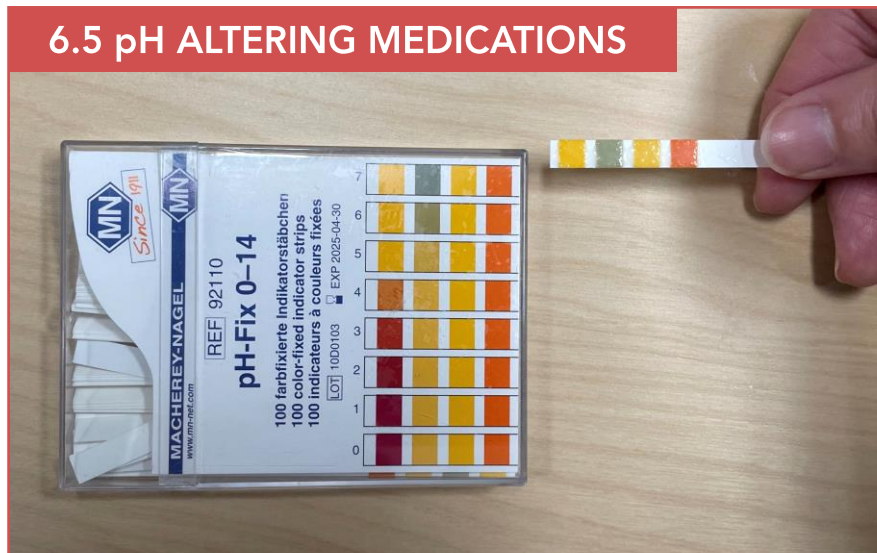
IMPORTANT !

Ensure that **two** of the following decision criteria are met before proceeding to feed your care recipient:

- The stomach aspirate (extracted fluid) is more than 10mls and resembles gastric contents.
- Your care recipient has had the same pH for the last 24 hours.
- Your care recipient has been taking pH altering medication in the last 24 hours (refer to Section 6.5).



6.5 pH ALTERING MEDICATIONS

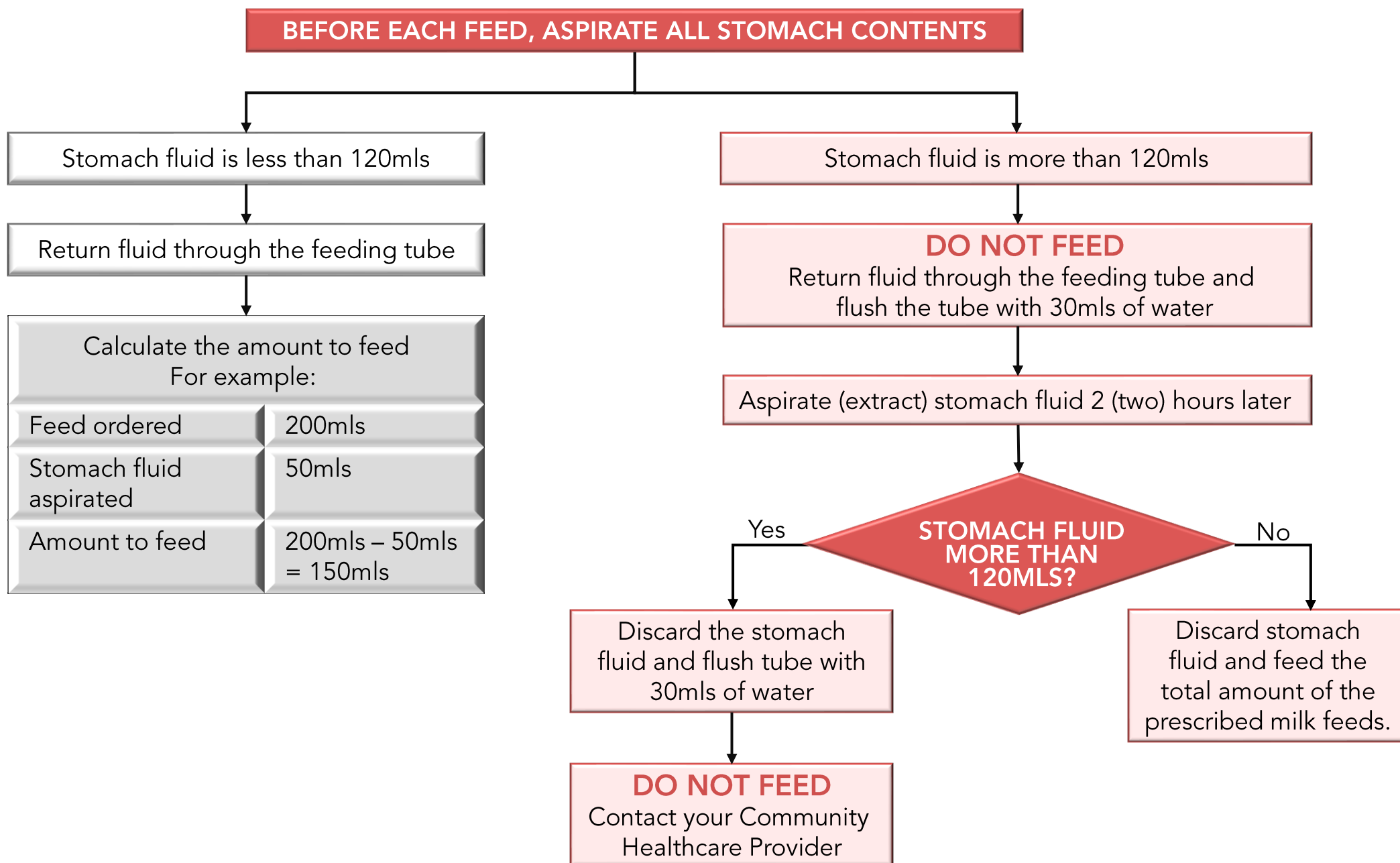


- You may encounter a higher pH reading (6 or 7) if your care recipient is on pH altering medications.
- Do consult nurse/pharmacist (if required) if you are unsure.

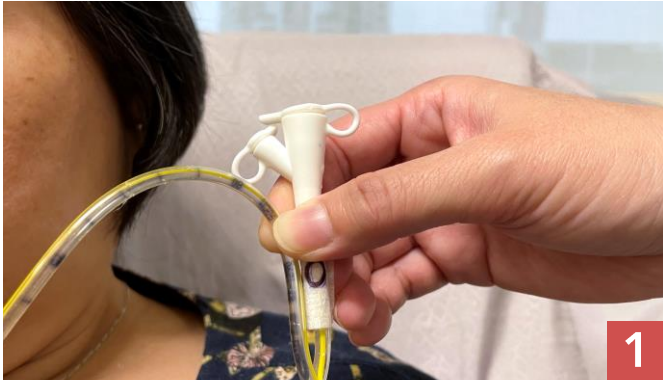
Note:

- Some medications may require separate administration from milk feeds to ensure their effectiveness. If you have any concerns, please consult your pharmacist.

7. CHECK FOR TOLERANCE TO FEED



8. PERFORM TUBE FEEDING (STEPS 1 – 6)



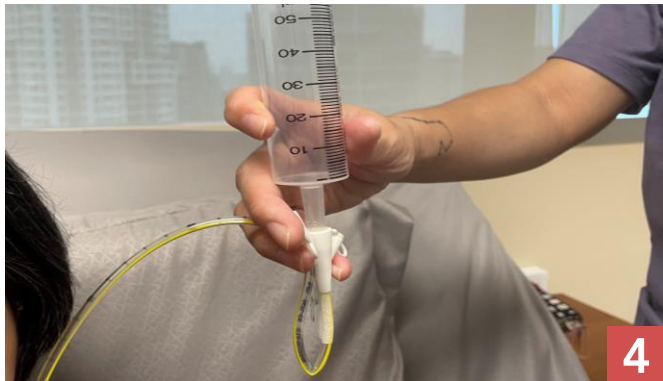
Bend the tube to prevent air from entering the stomach.



Remove the feeding port cap.



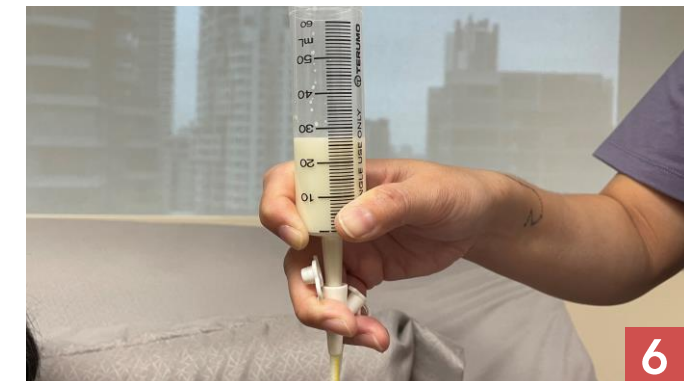
Connect only the barrel of the syringe, while keeping the tube bent with your other hand.



Take note of the way you hold the syringe to prevent it from dislodging (shifting) and causing spillage.



Bend the tube while filling the syringe with milk feeds. This is to prevent excessive air from entering, which may cause stomach discomfort.



Release the bend slowly and allow the milk to flow into the tube. Repeat step 5 to 6 until all milk feeds are given.

- Note:**
- Be patient as the flow of feeds may be slow.
 - Swab the port and the tip of the syringe before each connection.

8. PERFORM TUBE FEEDING (STEPS 7 – 11)



Always hold the syringe at the level of your care recipient's forehead to control the flow of feeds.

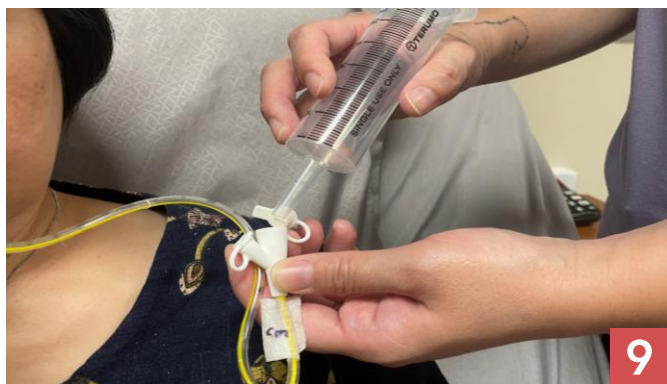


STOP FEEDING
if any of the following occurs:

- Persistent cough
- Shortness of Breath (SOB)



Flush the tube with 30mls of water at the end of feeding to prevent any blockage in the tube.



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



Recap the feeding port.



Keep your care recipient in an upright position for at least half an hour (30 minutes) after feeding to prevent any backflow of stomach content.

Note: • Wash and dry the items and keep them clean until the next feeding.

9. ADMINISTRATION OF MEDICATIONS VIA NASOGASTRIC TUBE

1. Ensure that the right medication is being prepared.
2. Follow the instructions given by your pharmacist.
3. Administer medications during prescribed timing.
4. All medications to be prepared and feed in liquid form.
5. If you are administering medications after a milk feed, flush the feeding tube with water **before** administering the medications to prevent it from mixing with the milk feeds.
6. Flush the tube with water **after** administering the medications to ensure that there are no medications left in the tube.

9.1 PREPARE DIFFERENT FORM OF MEDICATIONS FOR FEEDING

LIQUID FORM

- E.g. syrup, mixture or suspension



TABLET FORM

- Crush the tablet in the mortar or pill crusher/grinder and grind it into fine powder with no visible clumps.
- Stir the powdered medication well with water until it dissolves completely in the water.



CAPSULE FORM

Hard Gelatin Capsule

- Separate the two halves of the capsule and empty the contents into a cup or mortar.
- Stir the contents well with water until the medication dissolves completely in the water.



Soft Gelatin Capsule

- Cut a small opening in the capsule. Fully empty the contents and mix well in water.

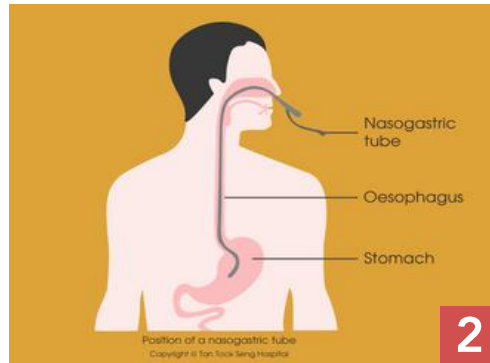


9.2 ADMINISTRATION OF MEDICATIONS VIA NASOGASTRIC TUBE (TABLET / CAPSULE FORM)



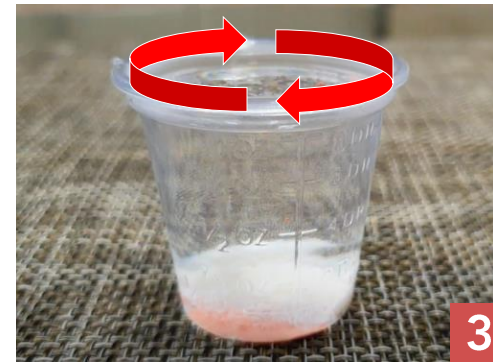
1

Wash hands with soap and water, then towel dry thoroughly.



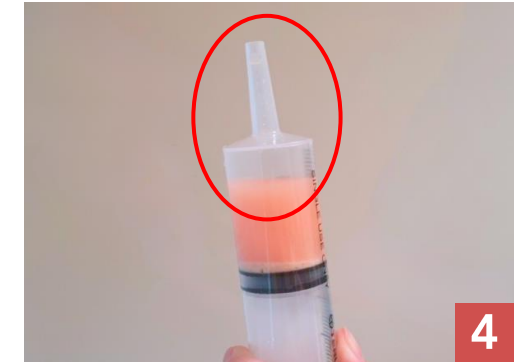
2

Ensure the nasogastric tube is in the correct position. (Please refer to page 7 to check for proper tube placement).



3

Swirl the medication mixture that was prepared earlier to ensure that any leftover residue at the bottom is dissolved completely.



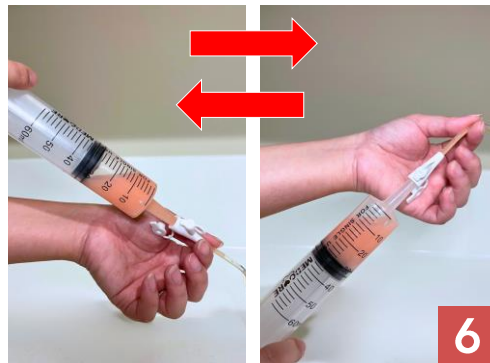
4

Using a 50mls syringe, pull the plunger and draw the dissolved medication into the syringe, and let in an additional **5mls of air**.



5

Connect the nasogastric tube with the syringe's tip facing upwards to prevent clogging at the tip of the syringe.



6

Point the syringe downwards and slowly inject 10mls of the medication mixture into the tube. Then point the syringe upwards. Repeat this until the syringe is empty.



7

Once the syringe is empty, bend the tube, disconnect the syringe from the tube and put back the feeding port cap.



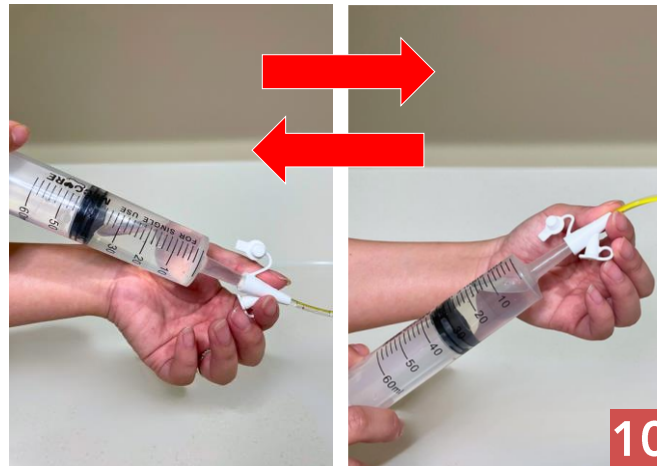
8

Fill the syringe with 30mls of water and **5mls of air**.

9.2 ADMINISTRATION OF MEDICATIONS VIA NASOGASTRIC TUBE (TABLET / CAPSULE FORM)



Connect the syringe to the tube with the tip of the syringe facing upwards.



Point the syringe downwards and slowly inject 10mls of the water into the tube. Then point the syringe upwards. Repeat this until the syringe is empty.



After feeding the medications, wash and dry hands thoroughly.

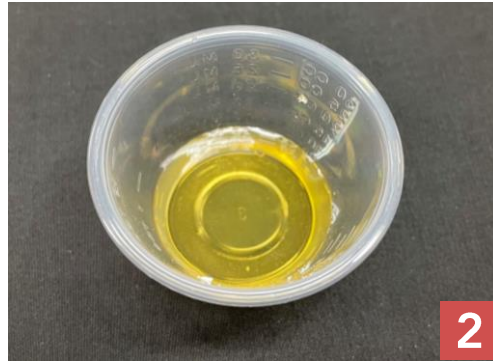
Keep your care recipient seated upright for at least half an hour (30 minutes) after feeding to prevent any backflow of stomach content.

- Note:**
- This method is for administration of medications (in powder form) only.
 - Please do not use this method for administering milk feeds.
 - Please do not mix medication with milk feeds.
If you are giving medications after a milk feed, flush the tube with 30mls of water before giving the medication.
 - If your care recipient has undergone stomach surgery, please check with his/her care team if this method of administration is suitable.

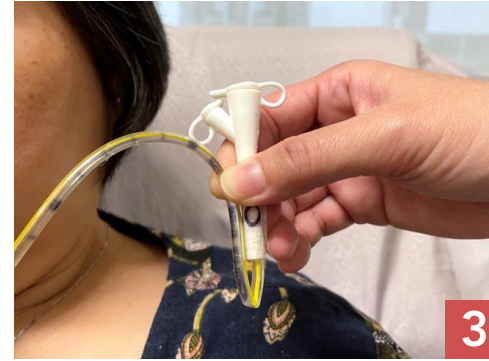
9.3 ADMINISTRATION OF MEDICATIONS VIA NASOGASTRIC TUBE (LIQUID FORM)



Wash hands with soap and water, then towel dry hands thoroughly.



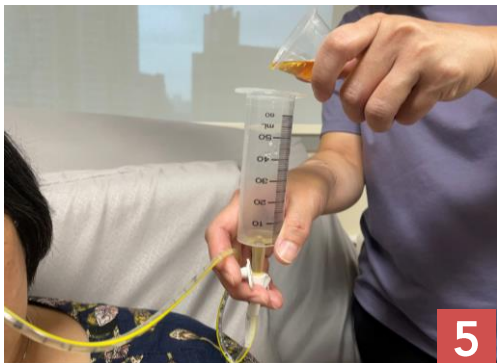
Carefully pour the prescribed amount of liquid medication into a medication cup.



Bend the tube.



Only connect the barrel of the syringe, while keeping the tube bent with your other hand.



Pour the liquid medication into the syringe.



Release the bend slowly and allow the medication to flow into the tube.



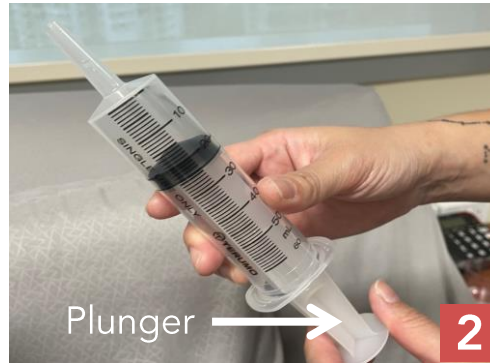
Flush the tube with water at the end of feeding to prevent any blockage in the tube.

10. TROUBLESHOOTING

10.1 IF THERE IS NO ASPIRATES (STOMACH CONTENT) AND/OR THE TUBE IS BLOCKED BEFORE FEEDING



Turn your care recipient onto their left side if there are no contraindications (risks) in doing so.



Withdraw/pull the plunger to fill the syringe with 20mls of air.



Bend the tube and uncap the feeding port. Connect the syringe and unbend the tube.



Push in 20mls of air slowly to dislodge the tube from stomach wall.

If you cannot do so, contact your Healthcare Provider. If you can do so, check for aspiration. If no aspirate, proceed to step 5.



Keep your care recipient on his/her left side for up to 30 minutes.



Pull the plunger to check for aspiration. If there is no aspirates, bend the tube and remove the syringe. Put back the feeding port cap.



Raise the head of the bed to at least 45 degrees and push in 10mls of cool boiled water into the tube slowly.

Observe for signs of coughing/breathlessness and you may monitor the oxygen saturation level (SpO2)



Check for aspirates again within the next 30 minutes. If there is still no aspirate, please inform your Community Healthcare Provider.

10. TROUBLESHOOTING

10.2 IF THE TUBE IS BLOCKED DURING FEEDING



Bend the tube.



Pour the remaining feeds/ medication from the syringe into a cup.



Bend the tube before removing the syringe.



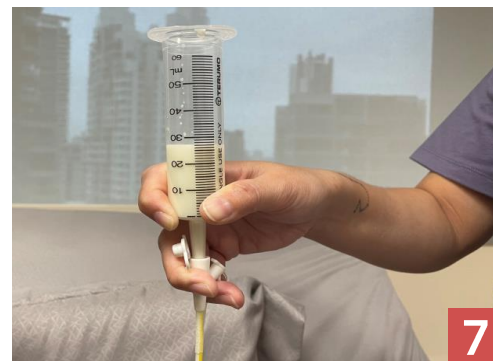
Put back the feeding port cap.



Attach plunger to the barrel of the syringe.



Attach the syringe to the tube. Pull the plunger gently to remove the aspirate that caused the blockage.



If you are successful in removing any milk clumps that caused the blockage, throw them away. Try to feed your care recipient again.



If you are unable to remove the blockage, please inform your Community Healthcare Provider.

11. SIGNS AND SYMPTOMS TO MONITOR AFTER FEEDING:

- Abdominal discomfort or distension (swelling)
- Diarrhoea
- Vomiting
- Respiratory distress or discomfort (in the lungs)

12. COMMUNITY HELP

DURING OFFICE HOURS:
Contact your HOME NURSE

AFTER OFFICE HOURS:
Contact a PRIVATE NURSE
THROUGH AGENCY

Note:
Seek medical
advice if the
above
symptoms
persist.

13. ITEMS

You may purchase the items at selected pharmacy.

ITEMS	QUANTITY
Size 12 silicone feeding tube	
Micropore tape	
Adhesive tape (e.g., band aid)	
50mls syringe	
pH indicator	
Mortar and pestle or pill crusher/grinder	
Measuring jug (100mls)	
Feeding set (for continuous feeding)	
Feeding pump (if required)	
Spigot (if required)	
Type of feed:	
Others	

14. FEEDING SCHEDULE:

TIME	TYPE OF FEED	RATE OR AMOUNT (ml/hr) or (ml/feed)	WATER FLUSHES (mls)

15. TUBE DETAILS:

	REMARKS
Tube type:	
Size:	
External tube length:	
Last changed:	
Next change on:	



NASOGASTRIC TUBE FEEDING VIDEOS:



-
1. **CARING FOR YOUR CARE RECIPIENT**
with Nasogastric Tube (NGT)



-
2. **PREPARING MILK FEEDS**
for Nasogastric Tube (NGT)
Feeding



-
3. **PERFORMING NASOGASTRIC TUBE**
(NGT) Feeding



-
4. **PREPARING & ADMINISTRATION**
of Medications via Nasogastric
Tube (NGT)



-
5. **TROUBLESHOOTING**
Common Nasogastric Tube (NGT)
Feeding Issues

7-STEPS OF HAND WASHING TECHNIQUE



1. **WET HANDS**, apply soap and rub your palms together.



2. **RUB THE BACK** of the hand. Repeat the step on the other hand.



7. **RUB BOTH WRISTS** in a rotating manner. Rinse and dry thoroughly.



7 STEPS of HANDWASHING

3. **INTERLACE FINGERS** and rub both hands together.



6. **RUB FINGERTIPS** on the palms. Repeat on the other hand.



4. **INTERLOCK THE FINGERS** and rub the back of the fingers on both hands.



5. **RUB INDEX FINGER** and thumb of both hands in rotating manner.



NOTES

A series of 15 horizontal dotted lines for writing notes, each starting and ending with a small red diamond marker.

Contact:
6357 7000 (Central Hotline)



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