

Paediatric nasogastric tube feeding

Guide for parents and carers

Interpreter  131 450

NGT Replacement	Contact
Routine replacement	Book through Children's Outpatient Department Monday to Friday 8am to 4pm Phone 07 5687 1173
Accidental removal	Monday to Friday 8am to 4pm Phone 07 5687 1173 Afterhours contact the Children's Inpatient Unit Nurse Team Leader Phone 07 5687 1238

Contents

1. Important information	1
2. Your child's health care team	2
3. Troubleshooting guide	3
4. Why does my child need an NGT?	5
5. What is an NGT?.....	5
6. Nasogastric tube types and replacement	5
7. Nasogastric tube care and use	6
Steps to test pH.....	7
8. Preparation and storage of feeds.....	8
9. Feeding your child.....	9
10. Practising oral feeding skills	10
11. Equipment for home.....	11
12. Medication administration via a nasogastric tube	14
13. Transitioning from a tube to oral feeding	14
Appendix 1 – Parent / Carer skills assessment form	15
Appendix 2 - Tube Insertion.....	17
Appendix 3 – References & Acknowledgements	19

This purpose of this guide is to help parents and carers look after children with a nasogastric tube (NGT) out of hospital. You will receive a visual demonstration and hands-on practical education of nasogastric tube care by nursing staff so that you are supported and confident managing your child's NGT at home.

1. Important information

If your child pulls their tube out; the tube blocks or is accidentally dislodged and you have not been taught how to re-insert - it must be replaced by a trained health care professional.

To arrange a replacement, contact:

- Office hours: Children's Outpatient Department Nursing Team 07 5687 1173
- After hours or weekends: Children's Inpatient Unit Team Leader 07 5687 1238

Your child's tube details	
Tube type:	
Size:	
Insertion length at nostril (e.g. 32cm):	
External length from nostril to end of tube including ENFit cap (e.g. 72cm):	
Date inserted:	
Date due for change:	

The Paediatric Home Consumables Supply is located in the Children's Outpatients Department (Ground floor, D block of Gold Coast University Hospital). It is currently staffed part-time Monday to Wednesday and can be contacted via telephone 07 5687 7946 or email homeconsumables@health.qld.gov.au.

2. Your child's health care team

We understand it may be an emotional time taking your child home with a NGT feeding tube. The Gold Coast Health team are always available to answer questions, support and guidance.

Key contacts for support:

Your Child's Feeding Team	Contact Details
Paediatrician/ Leading Medical Specialist	
Paediatric Dietitian Provides advice, assesses, and recommends nutritional requirements and products.	Ph: 07 5687 5906
Speech Pathologist Provides assessment and treatment of motor and sensory skills of the mouth, including feeding, speech, and language development.	Via main Children's Outpatient Department reception: Ph: 07 5687 3579
Paediatric Inpatient Nursing Team Provides education and support during inpatient admissions. Provides after-hours support/information/troubleshooting via telephone and nasogastric tube replacement when required after-hours.	Children's Inpatient Unit Ph: 07 5687 1238
Children's Outpatient Nursing Team Provide advice, support, and nasogastric tube replacement Monday to Friday 8am to 3pm.	Ph: 07 5687 1173 Email: GCH_PaediatricOutpatients@health.qld.gov.au
Paediatric Pharmacist Provides advice on medication, including how to give medications via a nasogastric tube, how to mix medications and timing of medication administration.	Ph: 07 5687 0609
Paediatric Home Consumables Nurse Provides advice, education, and support to ensure adequate supplies/equipment are provided and appropriately used in the home setting. Arranges feeding pump when required.	Ph: 07 5687 7946 Email: homeconsumables@health.qld.gov.au *Email this nurse one week before you require more supplies.
Bright Sky Bright Sky provides home delivery of a complete range of enteral nutrition products, including enteral tube feeds, oral nutritional supplements, Nutricia feeding pumps, giving set and syringes. Bright Sky is the organisation allocated by Gold Coast Health to provide comprehensive and flexible home support for hospital dietitians and their patients, and can meet the requirements of infants, children and adults who are enteral feeding in the community.	Ph: 1300 886 601 Fax: 1300 886 602 Email: nutrition@brightsky.com.au

3. Troubleshooting guide

This is a guide to some common issues reported by families. If symptoms do not settle with troubleshooting or you are worried about your child, please contact a member of your child's health care team or present to the Emergency Department for review.

Symptom	Possible Causes	Possible Solution
Diarrhoea	Rate too fast Child is not tolerating bolus feed	Contact your child's Nutrition Team to discuss decreasing the rate of feed
	Medication	Contact the Paediatric Pharmacist to review medications
	Contamination	Make sure feeds are being prepared and stored correctly. Ensure hand hygiene is being attended.
	Infection	Your child may be unwell and require a medical review. Present to your GP or the emergency department.
Nausea and / or Vomiting	Rate too fast	Contact your child's Nutrition Team to discuss decreasing the rate of feed or lowering height of gravity feed.
	Tube not in the correct position	Stop feeds. Confirm correct tube placement with Ph testing. Once you have confirmed correct tube placement feeds may be restated.
	Infection It's not uncommon to have some small spills or vomits at times. Large vomits or persistent vomiting is cause for concern.	Is the child unwell and requires review?
Tube blocked	Medications blocking tube - not crushed finely enough or tube was not flushed following administration. If feeds are thick it is important that water flushing is attended to following feeds – NGT can block quickly.	Leave the cap of the nasogastric tube open for 15 minutes and try again. Attach an empty ENFit syringe to the end of the tube and try to push in 1-2 ml of air. This sometimes frees up blockage. If you are unable to unblock the tube using these simple methods the tube will need to be replaced.

Symptom	Possible Causes	Possible Solution
Tube falls out or is pulled out	<p>Tapes not changed often enough.</p> <p>Little fingers managed to pull out the nasogastric tube.</p> <p>Carer accidentally pulled out tube during taping or tube end getting caught.</p>	<p>If you have been trained to reinsert the NGT you may try re-inserting the tube yourself.</p> <p>If you have not been shown how to reinsert the NGT, contacts are on the front page of this booklet.</p>
Constipation	Dehydration / Inadequate fluid intake	Review water flush volumes with your dietitian (this amount may need to be increased in hotter weather).
	Fibre Feeds (older children)	Check with your Child's dietitian whether your child can receive a fibre supplement or high fibre formula.
	Medications	Check with your doctor if there is any medication that may help with bowel health.

4. Why does my child need an NGT?

Generally, a child will be given a nasogastric (nay-zo-gas-trick) tube for feeding as a simple and safe way to deliver expressed breast milk, formula, fluids or medications directly into your child's stomach. NGT may be a temporary or permanent feeding option.

Common reasons include:

- problems taking enough food or fluid orally to maintain or gain weight
- difficulty sucking and swallowing safely
- conditions that require continuous feeding
- avoidance or fear of eating
- needs certain medications.

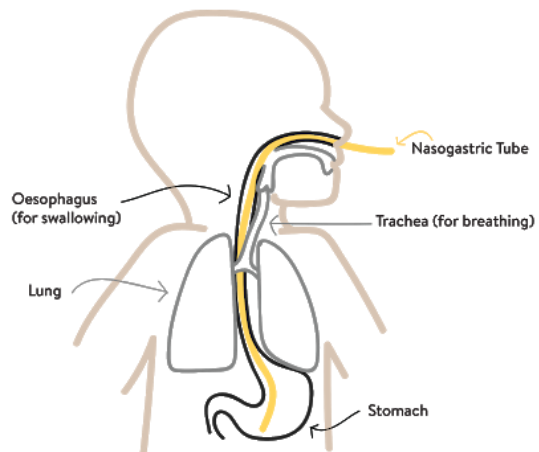
5. What is an NGT?

A nasogastric tube is a soft tube that is passed through your child's nostril (nose), continues down the back of their throat to the oesophagus (food pipe) and into the stomach.

Inserting the nasogastric tube is a short procedure. It isn't painful, but it can be uncomfortable, and some children become distressed. Giving your child paracetamol (Panadol) or any other pain medication prior to inserting the tube will not stop the discomfort.

Nursing staff will assist you to prepare your child for the insertion by using techniques such as:

- Using a dummy and wrapping your child so they feel secure
- Giving a mild analgesic called oral sucrose to children under 1 year of age
- Distracting your child with storytelling or bubbles
- If your child is old enough, involving them in the preparation and explaining the process to them
- If your child is old enough and can swallow safely, asking them to swallow or drink via a straw while the tube is being inserted may help it go down more easily.



Nursing staff will insert the nasogastric tube and provide all the care related to feeding at first. If your child requires long-term feeding via a nasogastric tube, nursing staff will demonstrate step-by-step how to care for and use the nasogastric tube at home, so you feel safe and confident before being discharged home.

In some instances, it may be appropriate for parents/carers to learn how to insert the tubes themselves.

6. Nasogastric tube types and replacement

Short-term polyurethane nasogastric ENFit feeding tubes

Come in a variety of sizes and lengths and can stay in place for one month.

Long term –Silastic ENFit feeding tubes

Come in a variety of sizes and lengths and can stay in place for up to three months.

Replacement or reinsertion of your child's nasogastric tube

- Your child's NGT tube will need to be replaced every 1 to 3 months, depending on which type of tube has been inserted
- It is important to keep track of when your child's tube was inserted and when it is due to be changed
- The Children's Outpatient Nursing Team (see contact list above) can help you book an appointment time for nasogastric tube replacement. You may be able to schedule the tube replacement appointment to fit in before or after other appointments you have booked around the same time in the Outpatient Clinic to save coming to hospital more.

7. Nasogastric tube care and use

Hand Hygiene

It's important you wash your hands before touching your child's nasogastric tube or preparing their feeds to prevent illness. Wipe down the preparation area, wash hands with soap and water and dry with a clean cloth to prevent possible infection to your child. Wearing gloves is not necessary when at home.

Taping and re-taping your child's nasogastric tube

The NGT is secured in place on the cheek using two pieces of tape. If the tape is no longer sticking, is dirty or wet, we recommend changing it to prevent accidentally pulling out the tube. We recommend changing the tape daily for children with sensitive skin and children who can't bring their hands to their mouth. Re-taping is best performed with two people when your child is calm and has a clean face.


You will need:

- Remover™ or another adhesive remover
- Skin Prep™ or another skin preparation wipe
- Tapes (Duoderm or Comfeel + Hyperfix)
- Scissors
- Syringe to test pH following change
- pH testing paper
- A wrap or blanket to swaddle your child

Re-taping steps:

1. Cut DuoDERM and Hyperfix to required size
2. Wash your hands in warm soapy water
3. If your child is old enough, explain the procedure using words they can understand
4. Consider swaddling/wrapping infants and young children to help keep your child as still as possible
5. Check insertion number at nostril or mark tube at nostril to ensure it doesn't move during the tape change
6. Holding the nasogastric tube in place, carefully remove the existing tapes using a remove swab. Inspect skin for broken areas. If you notice any areas of concern continue with taping and once finished report to Children's Outpatients Nursing Team
7. Wipe skin with Skinprep swab and allow to completely dry
8. Place DuoDERM or Comfeel under the nasogastric tube, lay nasogastric tube on top of DuoDERM, check the tube insertion number at your child's nostril to make sure the tube hasn't moved and place Hyperfix on top of DuoDERM/Comfeel and tube to secure tube in place. Try to get tapes as close to the nose as possible to prevent little fingers sneaking in the gap and pulling the tube out
9. Unwrap your child or provide comfort
10. Check that the nasogastric tube remains in the correct position by checking number or mark at nostril and performing a pH check
11. Wash hands in warm soapy water.

Confirming correct placement of your child's nasogastric tube

 Before you use the NGT you should always check that the placement is correct. When correctly positioned, the tip of the nasogastric tube sits in the stomach. Stomach/gastric contents are acidic. Performing a pH test (measuring acidity or alkalinity) on the fluid that is aspirated/pulled out of your child's nasogastric tube allows confirmation that the fluid is acidic and is correctly positioned in the stomach. If the tube is not correctly positioned or has moved, it can be misplaced into the throat or lungs. This can happen without any obvious signs to indicate there is a problem and can lead to serious complications for your child.

Checking nasogastric tube position is an essential part of safely caring for your child's NGT. ***pH testing must be carried out every time your child's tube is accessed*** (before administering feeds, medication, water flushes and after changing tapes) ***or if you have concerns that the tube may have moved*** (if your child has been vomiting, coughing vigorously, vomits during a feed, has loose tapes, after re-taping or if there is any other possibility it may have moved).

Always keep pH testing strips in their supplied container with the lid on firmly and keep a check on the expiry date to ensure accuracy of reading.

How to test pH

You will need:

- A 2, 5 or 10 ml ENFit enteral syringe to aspirate/pull out fluid.
- A 2, 5 or 10 ml ENFit enteral syringe to flush.
- pH testing strip.
- Cooled boiled water to flush after aspirating/pulling fluid out.

Steps to test pH:

1. Wash your hands in warm soapy water.
2. Open the ENFit cap by unscrewing the NGT.
3. Attach a 2, 5 or 10ml ENFit enteral syringe (purple) on the end of the NGT and pull back/aspirate 2-3mls of fluid.
4. Place a drop of the aspirated fluid on the pH testing strip as per manufacture instruction.
5. Compare the colour of the test strip to the colour scale on the container to determine pH reading.
6. A pH reading below 5.5 indicates an acidic reaction and indicates correct placement in the stomach.
7. Once correct placement is confirmed the tube can safely be used
8. Following testing and confirmation of correct placement, flush the tube with 2-3ml of cooled boiled water to prevent tube blockage.

What if I am unable to aspirate any fluid to check the pH?

- If your child can safely take oral fluids give them a small drink, wait a few minutes, and retry aspirating fluid.
- Leave the tube unclamped or the cap open for 10-15 minutes and then retry aspirating fluid.
- Turn your child onto their left side for 10-15 minutes and then retry
- Push 2-3 ml of air into the tube and then retry aspirating fluid
- Check the length of the tube or mark on the tube at your child's nose. Has it moved since the last feed? If it has moved, move the tube to the required length or mark and retry aspirating fluid
- If you are still unable to aspirate any fluid for checking the pH after trying the above, please contact the Children's Outpatients Department Nursing Team in hours (07 5687 1173) or the Children's Inpatient Unit afterhours (07 56871238) for assistance and guidance
- If correct tube placement cannot be performed by performing a pH test it is considered unsafe for the tube to be used.

What if the pH reading is higher than 5.5 (an alkaline reading)?

- If your child's feed has just been given or if your child is on a continuous feed, the feed can decrease the acid in the stomach (make it more alkaline). Wait 15-30 minutes and retry aspirating fluid. If your child can safely take oral fluids give them a small drink, wait a few minutes then retry aspirating fluid.
- Medication can reduce the acidity of the stomach. Check with your child's health care team to determine if your child is taking one of these medications.
- If despite these actions the pH reading remains higher than 5.5 please contact the Children's Outpatients Department Nursing Team in hours (07 5687 1173) or the Children's Inpatient Unit afterhours (07 56871238) for assistance and guidance.

Bathing and showering

It is fine for your child to have a bath or shower. Make sure the tube is capped/closed prior to getting in the bath or shower. In most cases your child's tapes will become wet or damp and require replacing.

Swimming

Generally, it is ok to go for short swims with the tube in place providing it is capped/closed and not attached to feeds. The tapes once wet; lose their ability to hold the nasogastric tube in place and there is potential for the tube to be dislodged and require replacement. Tapes should be changed after swimming and correct position confirmed.

Play / Participate in sport

Yes, children should be encouraged to participate in their usual activities of daily living. Tape the tube to clothing, tie up in a pony tail or place under a hat to prevent it dangling and being pulled at. We would not recommend participation in contact sport due to the risk of dislodgement or accidental pull out.

8. Preparation and storage of feeds

Expressed breast milk (EBM)

Breast milk	Room temperature	Refrigerator	Freezer
Freshly expressed into a closed container	6–8 hrs. (26°C or lower). If refrigeration is available store milk there.	No more than 72 hours. Store in back, where it is coldest.	Two weeks in freezer compartment inside refrigerator (-15°C) Three months in freezer section of refrigerator with separate door (-18°C) 6–12 months in deep freeze (-20°C**)
Previously frozen (thawed in refrigerator but not warmed)	4 hours or less (i.e. the next feed)	Store in refrigerator 24 hours	Do not refreeze
Thawed outside refrigerator in warm water	For completion of feed	Hold for four hours or until next feed	Do not refreeze
Infant has begun feeding	Only for completion of feed, then discard	Discard	Discard

**Chest or upright manual defrost deep freezer that is opened infrequently and maintains ideal temperature

*Reproduced with permission from National Health and Medical Research Council 2012, Infant Feeding Guidelines. NHMRC, Canberra p59.

Warming expressed breast milk (EBM)

Microwaving of EBM is not recommended as this can create uneven heating and burn your baby during feeding. The best way to warm EBM is to stand the container of breast milk in a larger container of warm water or hold it under warm running water.

How to transport your EBM

- EBM - fresh, frozen or thawing for long or short distances must be transported using an insulated container/bag with a freezer brick.
- If EBM remains frozen on arrival at destination, place it in freezer as soon as possible.
- If EBM has started to thaw it is not suitable for re-freezing. It must be placed in the refrigerator and used within 24 hours.
- If EBM is freshly expressed and not previously frozen, you can either store in refrigerator and use within 72 hours or place in the freezer for freezing.

Powdered and Pre-Prepared Formula

- Always follow the feed company's instructions as they appear on the feed label.
- Store pre-prepared "ready to hang" feeds in a cool, dry space until opened. Once opened store in the fridge and discard after 24 hours
- For infant feeds use cooled boiled water to prepare powdered formula. Cover and store in the fridge and discard 24 hours after mixing. It is recommended to prepare as close to feeding times as possible. Additives (such as Polyjoule, Duocal & Carb Plus) should be added once the powdered formula has been prepared as per your child's individual feeding plan.

Key points

- Protect hanging feeds from direct sunlight and heat. Ideally feed in a cool environment.
- Make sure all feeding equipment is used, cleaned and discarded as per manufacture recommendation. Some home consumables will be single use whilst others will be multi-use and require washing in hot soapy water, rinsed with cold tap water or cooled boiled water, and stored in a clean dry container to protect from germs and harmful bacteria. The Home Consumables Nurse will provide with you correct instruction for your child's specific consumables.

9. Feeding your child

Feeding plans and administration of feed vary from child to child. Plans may include some oral feeding, feeding via a feeding pump, gravity feeding using an open-end syringe, or a combination of these.

Top Up

Most common in infant feeding, this method allows an infant to feed orally and the remaining amount is given via the nasogastric tube. Top-up volumes can be delivered with an open-end syringe using:

1. Gravity – feed flows through the tube via gravity; or
2. Pump – feed is pumped through the tube at a set rate using a Nutricia Flocare Infinity pump.

Continuous

Using this method, feed is delivered via a Nutricia Flocare Infinity pump that is programmed to run constantly over a set period. This method is suitable for children who cannot tolerate large volumes, are unwell or require overnight feeds.

Bolus

This is a set volume of feed, given over a short period of time. Feed may be given over 15-60 minutes depending on your child's individual feeding plan. This method mimics the typical feeding pattern of children. Bolus feeding can be delivered via gravity with an open-end ENFit enteral syringe or a Nutricia Flocare Infinity pump. There may be several bolus feeds given during the day.

Nutricia Flocare Infinity Pump

The feeding pumps used and loaned out by Gold Coast Health are Nutricia Flocare pumps. You will be provided with a Flocare Infinity pump on a loan basis from either the Paediatric Home Consumables Unit or directly loaned via Bright Sky.

You will be given training and time to practice operating the pump prior to your child discharging home. There is also an interactive online pump simulator learning site that has been created by Nutricia that allows you to practice set-up and programming of the Flocare Infinity pump:

https://www.nutriciaflocare.com/infinity_simulator.php

Important Note: Water Flushes

Water flushes are an important part of your child's feeding plan. They help to keep the inside of your child's nasogastric tube clean, provide essential hydration, minimise constipation, and prevent blockages that could lead to an otherwise unnecessary NGT replacement.

Flush the nasogastric tube after feeding. Flush volume may vary depending on the age of your child. It is recommended to follow your child's individual feeding plan. If volumes are not included, use 2-5mL of cooled boiled water.

10. Practising oral feeding skills

Positive oral experiences

If your child is being fed by a NGT but is still able to safely eat and drink it is important that they continue to practice these skills daily. Check with your child's Speech Pathologist and Dietician to see which foods and fluids are safe for your child to take orally and the best ways to develop oral feeding skills.

Any oral intake should be positive and enjoyable for your child. Never force them to eat or drink. It is important to include your child in family mealtimes. Watching their family members eat helps them to associate their mouth with eating and food. If safe to do so they should be encouraged to touch and taste foods. If your child uses a dummy it is a good idea to provide the dummy during nasogastric tube feeding times to support the association between sucking, swallowing and feeling full.

Tips for encouraging your baby to eat whilst they are tube feeding

- Set up tube feeds to mimic oral feeds. Some ideas include:
- Feed your baby when they are showing signs of hunger
- Positioning:
 - Infants: administer feed while having skin to skin contact.
 - Older babies: hold or position to facilitate social interaction at tube feeding times.
 - Eating solids: seat in a high chair.
- Make associations between tube feeds and oral stimulation e.g. Mouthing a toy and smelling a food prior to and while being tube fed to create a positive link between the feeling of hunger and oral stimulation.
- Have foods present so that your child can smell food and watch you eating.
- If tolerated, offer a standard shaped dummy to encourage non-nutritive eating.
- Wherever possible hide the tube/syringe during nasogastric feeds so that your child makes associations between tastes, oral experiences and feeling full rather than the tube and feeling full.
- Signs your baby may need a break include frowning, arching, pulling away from teat. Respond to signs of discomfort (nasal flaring, grunting, red in the face) by giving your child a break.

Mouth care

It is important to pay attention to mouth care for infants and children with feeding tubes to ensure that their gums, teeth and mouth stay healthy. This is especially important if your child is not eating regular meals.

Ways to care for your child's mouth include:

- Brush teeth at least twice daily with toothpaste (if allowed) and a soft tooth brush
- Teeth can be brushed when they first appear. For children who are yet to cut teeth a silicone baby-safe training tooth brush can be used to aid mouth care and oral stimulation
- A clean moist face washer to cleanse the mouth and tongue.

Mouth stimulation and positive oral experiences are important for infants and children to assist them in developing and coordinating their sucking, swallowing, speech and language development. Some children may become sensitive and reluctant to have anything near their face or mouth. If your child doesn't want to participate in mouth care, please discuss with your child's Speech Pathologist for strategies to provide positive oral experiences for your child and reduce oral aversion.

11. Equipment for home

You will be provided with appropriate home consumables and equipment on discharge from the hospital.






What are home consumables?





- Products and/or equipment that are necessary to provide the ongoing care of a child with a NGT at home. Required home consumables are provided at no cost to you from Gold Coast Health or in some instances included in your child's Bright Sky nutrition order.
- The Paediatric Home Consumables Supply is located in the Children's Outpatients Department (Ground floor, D block of GCUH), currently staffed part time Monday to Wednesday and can be contacted via telephone 07 56877946 or email homeconsumables@health.qld.gov.au
- The Paediatric Home Consumables nurse will generate a Clinical Consumables Authorisation that will inform you of correct consumable product names and quantity that will be supplied ongoing for your child.

What is ENFit?

You will notice the syringes and connections for your child's nasogastric tube are purple and have a screw-locking system. These are ENFit consumables and have been designed specifically for giving feeds and medications directly into the stomach – the safety locking system does not allow other syringes or lines to connect to your child's nasogastric tube if they are not meant for enteral feeding (i.e. orange or clear syringes).

Types of equipment/home consumables you may receive:

Item	Description / Instructions	Photo
<p>Nutricia Flocare Infinity pump</p>	<p>Depending on your child's individual feeding plan and type of feeds a feeding pump may be necessary.</p> <p>Gold Coast Hospital and Health Service are currently using Nutricia Flocare Infinity pumps. If required, you will be provided with a Nutricia loan pump from Bright Sky or the Paediatric Home Consumables Unit.</p> <p>In instances when a pump is loaned from the Paediatric Home Consumables Unit a refundable \$50 equipment loan deposit will be required.</p>	<p>The pump is battery powered and requires charging regularly</p> 
<p>ENFit syringes</p>	<p>A plastic device used to pull back stomach contents to check pH, deliver feeds via gravity, and to provide medications and water flushes. ENFit syringes are coded using the colour purple.</p> <p>The number of syringes supplied will be dependent on the number of feeds per day, number and type of medications and your child's age.</p> <p><u>Cleaning recommendations for reusable syringes:</u></p> <ul style="list-style-type: none"> - Separate the syringe and plunger and clean both in warm soapy water - Rinse both pieces with cold tap water and dry with paper towel - Store in a dry container - Discard after a maximum of seven days or 40 uses. 	<p>Syringes with dark purple plungers are reusable with appropriate cleaning for seven days or 40 individual uses.</p>   <p>Syringes with light purple plungers are single use</p>
<p>Medication straws</p>	<p>Plastic straw with ENFIT connection placed inside liquid medication bottles to prevent spillage and make it easier to measure dosages correctly.</p>	
<p>Hyperfix</p>	<p>White adhesive tape used to keep your child's nasogastric tube in place.</p>	

Item	Description / Instructions	Photo
<p>Nutricia Flocare Infinity pump feeding sets</p>	<p>Tubing that fits into the feeding pump and connects to your child's NGT to deliver feed.</p> <p>Use one feeding set every 24hrs unless advised otherwise (e.g. If your child is immunocompromised or under one year of age then sets are single-use).</p> <p><u>Cleaning recommendations:</u> Once feed is completed disconnect set from your child's nasogastric tube and run cooled boiled water through the set to rinse out remaining feed. Once rinsed store in a dry container in the fridge until next use for a maximum of 24 hours.</p>	
<p>Duoderm / Comfeel</p>	<p>Yellow/brown or clear adhesive tape that is placed directly on your child's cheek to protect the skin.</p>	
<p>pH Testing Strips</p>	<p>Used to confirm that the NGT is in your child's stomach. Correct placement must be confirmed before every access with a pH reading of less than 5.5</p> <p>Brand may change – contact a nurse from your child's health care team if unsure how to use.</p>	
<p>Skin-prep and remover wipes</p>	<p>Individually packaged wipes used to prepare and protect the skin.</p> <p><i>Skin-Prep</i> is used prior to applying tapes and assists adherence to the skin and can reduce skin irritation.</p> <p><i>Remover</i> makes removing tapes easier for your child to tolerate as well as preserving the skin and reducing irritation.</p>	

How and when are home consumables provided?

- During your child's stay in hospital, the nursing team will refer your child to the Paediatric Home Consumables Unit.
- The nurse will assess your child's needs to advise quantity and type of consumables required.
- The unit will send you home with enough consumables to last approximately 2 weeks. Following this, ongoing supply will be provided by the Paediatric Home Consumables Unit.
- Home consumable orders are supplied to patients on a monthly basis. Orders are not automatically packaged or supplied. You must place an order with the Paediatric Home Consumables Nurse each month. Orders may be placed via telephone or email and are required to be placed a week prior to collection to ensure correct supply is available.
- In most situations a member of our Paediatric Home Consumables Unit will visit you during your child's hospital admission to discuss the process of ordering and collecting home consumables however this is not always possible. If this does not occur, we would encourage you to make contact via telephone 07 5687 7946 or email homeconsumables@health.qld.gov.au so one of our friendly nursing staff can introduce you to the service, explain the process and make sure you have adequate supply.
- If your child's feeding situation changes or the supply order needs adjusting, please contact the Paediatric Home Consumables Unit and discuss requirements.

12. Medication administration via a nasogastric tube

- Wherever possible give medications in liquid form to prevent blockage of the nasogastric tube.
- Crushing tablets or removing the coating from capsules may change the action of the medication. The Paediatric Pharmacist will sit down and discuss your child's medications with you before you go home and provide advice on how to administer safely.
- Never mix medications with feed or in the same syringe as other medication unless directed by your child's health care team. Some medication may interact with the feed solution, the most common ones are Phenytoin (Dilantin), aluminium-coated antacids and iron supplements.
- If more than one medication is to be given at the same time, always separate with a small volume water flush to avoid mixing and interaction of the medications in the tube.
- If you have any questions in relation to medication administration, please contact the Paediatric Pharmacist Monday – Friday 08.00am – 16.00hrs on 07 5687 3579.

13. Transitioning from a tube to oral feeding

There are many reasons why a child may require a nasogastric tube for feeding. These will determine when it is safe for your child to return to oral feeding and how the health care team will plan to wean your child from nasogastric feeds.

Is your child ready to transition towards or return to full oral feeding?

- Has the medical condition leading to tube placement in the first place been resolved?
- Is your child growing? We expect them to track along a centile on their growth chart and gain an expected amount of weight.
- Can your child swallow safely?
- Does your child have the oral skills to eat the volume of food needed to support nutrition?
- How well is your child in terms of general health?

It may be necessary for your child to be linked into a specialty feeding clinic with a team of multidisciplinary health professionals (Speech Pathologist, Dietician, Occupational Therapist, Psychologist and Nursing) in order to support you and your child during the tube weaning process.

Appendix 1 – Parent / Carer skills assessment form

***see iEMR form over page**

For staff – form located via: GCH Intranet > Clinical Forms Catalogue > D. Clinical Forms Alphabetical Listing > [Parent Carer Skills Assessment for Tube Feeding](#)

Appendix 2 - Tube Insertion

In some situations, it may be appropriate for parents or caregivers to be educated and trained on how to insert their child's nasogastric tube.

Inserting a nasogastric tube should only be attempted by parents or carers who have been adequately trained and assessed as competent to do so by nursing staff using the 'Parent/Carer Skills Assessment for Tube Feeding Form' (See Appendix 1 above).

Inserting a nasogastric tube requires two people. Ensure the home environment is quiet, your child is settled, and you are not in a rush.

Gather required equipment on a clean table/bench/shelf close to where you will replace the tube.

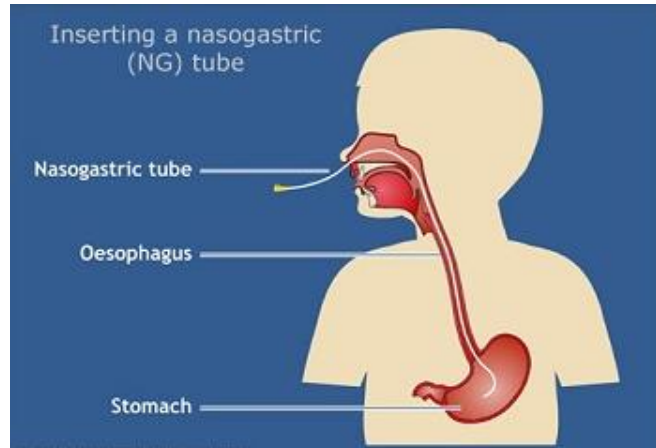
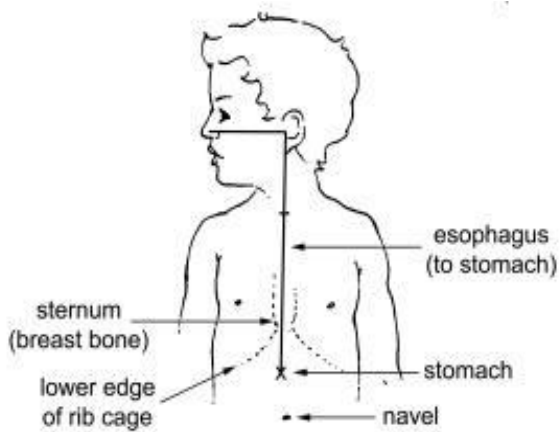
You will need:

- New or clean tube appropriate for your child
- Water-based lubricant
- Tapes (DuoDERM or Comfeel and Hyperfix)
- Skin Prep™ or another skin preparation wipe to protect your child's skin
- Scissors
- A wrap or blanket to swaddle your child
- Syringe to test pH following insertion
- pH testing paper

Steps for nasogastric tube insertion:

1. Wash hands in warm soapy water
2. Prepare equipment by cutting tapes to required size
3. Measure how far tube should be inserted and cross-check length with previous insertion (number at nostril before tube was removed)
4. Lubricate tube
5. If your child is old enough, explain the procedure to them using words they can understand
6. Clean your child's face and nose with warm soapy water and allow to completely dry
7. Apply Skin prep swab to your child's cheek and allow to completely dry
8. Consider best position for your child. Swaddling/wrapping infants and young children is useful in assisting you to keep them as still as possible. If your child is older, you may offer distraction such as an iPad or toy.
9. Before commencing insertion ensure that a second person is in position and your child is secure
10. As shown by your child's nurse, place the new nasogastric tube into the opposite nostril to where the old tube was (unless there is a physical reason not to do this). Insert the tube in a backward and downward motion. If the child is old enough, he/she can help by taking small sips of water through a straw as you insert the tube. A baby could suck on a dummy as the swallowing action assists the tube to move into the stomach.
11. Never force the tube during insertion. If your child starts to cough, their colour changes or you feel a lot of resistance then stop the procedure and remove the tube. Give your child a 30-minute break and re-attempt with a maximum of two attempts.
12. Stop inserting the tube when you reach the pre-determined insertion length and secure in place with tapes.

13. Place DuoDERM or Comfeel under the nasogastric tube and lay nasogastric tube on top of DuoDERM/ Comfeel. Check the tube insertion number at your child's nostril to make sure the tube hasn't moved, then place Hyperfix on top of DuoDERM/Comfeel and NGT to secure tube in place. Try to get tapes as close to nose as possible to prevent little fingers sneaking in the gap and pulling NGT out
14. Unwrap your child and/or provide comfort
15. Finally, and most importantly check that the NGT is correctly positioned in the stomach by checking number or mark at nostril and performing a pH check. NGT position in the stomach must be confirmed prior to using the nasogastric tube for the safety of your child.



Sourced from: The Royal Children's Hospital Melbourne, Nasogastric tubes online resource

We do not recommend more than two attempts to replace your child's nasogastric tube at home. If you have attempted to re insert your child's nasogastric without success or are having trouble obtaining a correct pH reading to conform position, please contact Children's Outpatient Nursing Team on 07 5687 1173 during office hours or the Paediatric Inpatient Unit Team Leader on 07 5687 1173.

Appendix 3 – References & Acknowledgements

Reference List:

1. 'Tube feeding: training guide for parents / carers', Children's Health Queensland Hospital and Health Service (2016).
2. 'ENFit: meet the ENFIT enteral feeding system' by Medicina (2017).
3. 'A guide for patients: cleaning your re-usable syringes' by Medicine. Accessed 1st June 2020 from: <https://medicina.co.uk/resources/#1526911747789-27611a64-8701>

Contributors:

Project leads: Kelly-Anne Ince (Paediatric Nurse Navigator) and Emily Walsh (Clinical Nurse).

Reviewed by: Associate Professor Dr Susan Moloney (Director of Paediatrics, GCUH), Nicole Ross (Lead Dietician GCUH), Jacqui Wilcox (Dietician GCUH), Rachel Fairhurst (Speech Pathologist, GCUH), Lisa Morton (Registered Nurse, Paediatric Home Consumables), Janet Reinbold (Clinical Nurse Educator), GCH Consumer Advisory Group, Janice Burt (External Communications and Engagement Officer, Gold Coast Health).