

GASTROSTOMY

HEMOCARE

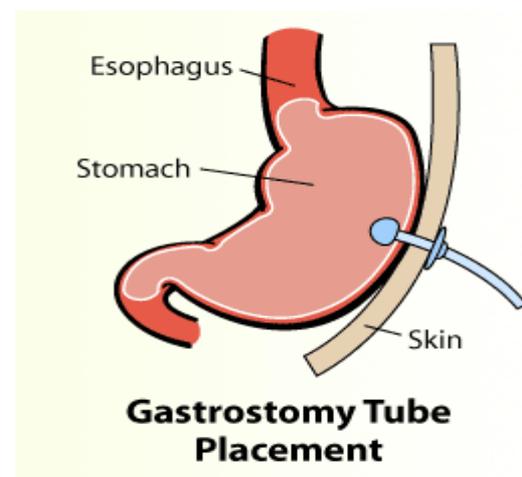
GENERAL PRINCIPLES:

A gastrostomy delivers nourishment through a tube or a button (low profile feeding device) into the stomach for enteral feeding. It is usually indicated for children with medical and surgical problems who cannot eat or drink enough orally, to meet their daily nutritional requirements. Gastrostomy buttons are usually used for children that require enteral feeding long term.

Initial insertion is usually under a general anaesthetic. Subsequent change of the cage type button can be done as a day stay procedure in theatre, or at the out-patient or Accident & Emergency Department of the hospital. Patients with a balloon type gastrostomy button/tube will be assisted by the hospital's Clinical Nurse Consultant Stomal Therapy to apply to Health Support Services NSW (ENABLE) for limited ongoing supply of the gastrostomy devices and feeding tubes.

The hospital dietician involved with the child's care will advise you of your child's nutritional needs including the appropriate formula and feeding regime required by the child. This will also include information on where to get your child's formula.

The hospital's Clinical Nurse Consultant (Stomal Therapy) will be the support person who will give advice regarding the general care and management of the gastrostomy including care of the skin surrounding the button. Education will begin as soon as the child is ready for feeding. Parents will be given this information handout as a back-up support for discharge after the teaching sessions.



How are gastrostomy feeds given?

Gastrostomy feeding can be given in 3 different ways:

- a gravity / bolus (using a syringe) feeding is used to give larger amounts of formula over a short period of time (20 min – 30 min) about 4 – 6 times a day.
- A pump feeding is used for continuous or intermittent feeds where the formula is given over a recommended time (usually overnight). This is usually recommended for children who can not tolerate larger volumes of formula.

- Some children may benefit from having small volumes of bolus feeding during the day and giving the rest of the child's total requirement by continuous pump feeding at night.

1 GENERAL CARE OF THE GASTROSTOMY BUTTON

- Once the wound has healed, daily routine involves cleaning the area around the button with soap and water when bathing or showering. If the area around the button is observed to be wet and or / red, use normal saline or homemade salt solution to clean as required. (see problem solving section)
- Ensure area around button is dried well after bath or shower.
- The retention suture holding the gastrostomy device in place is removed by the CNC Stomal Therapy r after 7 – 10 days. If this is not possible it can be removed by the child's local doctor.
- Rotate the button in full circle during the daily gastrostomy care (only after the retention suture has been removed). This will prevent the button attaching to the skin and may help prevent overgrowth of granulation tissue around the site. **Granulation tissue** also known as "proud flesh" is a result of the body trying to repair/ heal the surgical incision. Usually it is not a cause for worry, but sometimes it may overgrow and may then require treatment. If the granulation tissue bleeds, emits an odour and persistently builds up, call the Clinical Nurse Consultant Stomal Therapy for advice.
- The gastrostomy feeding kit will have x2 feeding tubes in a box which accompanies the child from theatre. It is important that the kit is taken home on discharge and kept in a safe place, as the information listed on the kit may assist you when future supplies are needed. **Always take the feeding tubes with you to the hospital when the child is re- admitted for any reason.**

Feed the child in the position they are most comfortable with. Generally, children are best fed slightly propped up on a pillow. After feeding, the child may be turn towards the right side to facilitate gastric emptying.

1.1 To use the gastrostomy button:

- Open the port cover from the top of the device.
- Insert the feeding tube by aligning the lock and key connector. Match the black alignment on the set with the alignment line on the feeding tube.
- Lock the set into place by pushing in and turning the connector (feeding tube) clockwise until you feel a slight resistance. Note: Do not turn the connector past the stop point.
- To remove the feeding tube, rotate it counter - clockwise until the black line on the set aligns with the black line on the feeding tube. Remove the tube straight up and replace / cap the button with the attached port cover.



1.2 Degassing / Decompression

Abdominal pain, discomfort and bloating may be caused by excessive gas or air in the stomach. This is particularly common after a fundoplication surgery. Allowing the air to escape is called degassing or decompression. The decompression process usually takes only a couple of minutes and should be performed prior to each feed and when the child appears to be retching or wanting to vomit.

1.3 To Decompress

- Attach the feeding tube to the button.
- Open the end of the decompression tube / feeding port cover and drain the stomach contents into a container.
- When decompression is finished, flush the tube with at least 5mls of water.
- Flush the feeding tube while still connected to the button with approximately 5 - 10mL of water at the completion of bolus feeds or after completion of overnight pump feeding.

NOTE:

Medications can be given through the bolus feeding tube and flushed well with water. Do not syringe it directly to the gastrostomy button as it may damage the one way valve, causing leaking through the button.

Most feeding tubes (bolus / continuous tube) have a medication port attached at the end that can be used if medication is required.

2 PROBLEM SOLVING

1. Skin Care around the Gastrostomy

It is normal to have a small amount of clear (serous) discharge around the gastrostomy which may make the skin red particularly in the first week following the gastrostomy. Contact the Clinical Nurse Consultant Stomal Therapy if you notice any of the following:

- Persistent redness particularly if it is spreading around the surrounding skin
- pain and discomfort
- swelling
- unusual drainage / discharge around the tube (bloody, odorous, pus)
- fever associated with any of the above

There is usually no dressing required around the button unless there is leakage observed.

2. Skin Care for red and moist (weeping) gastrostomy area

- Clean the site using a cotton bud soaked in saline solution twice daily until cleared.
- If granulation or scar tissue develops around the button and become a problem (bleeding, weeping, inflamed) contact the Clinical nurse Consultant Stomal Therapy who will give advice on treatment.

3. Leakage around the button

Common causes of leakage around the gastrostomy may be a combination of the following:

- A deflated or a burst balloon (if the child has a balloon type gastrostomy).
- Presence of a hypergranulation tissue.
- Infection around the gastrostomy.
- An increased in the intra-abdominal pressure such as presence of air/gas, constipation, during vomiting, retching.
- The child has outgrown the length of the gastrostomy (put on weight).
- The child has lost a lot of weight.
- Problem with delayed emptying of the stomach.

If leaking is observed to be coming out of the button itself, insert the bolus feeding tube, then flush with water (10-20mL is usually enough). Doing this usually will remove thick milk deposits that may be adhering to the valve inside the button. Sometimes, leakage can occur if there is a build up of pressure inside the stomach immediately after a bolus feed or after completion of an overnight feed. Leave the feeding tube attached to the gastrostomy button for at least 20 minute to give the stomach a chance to settle before removing it. If leaking persists, contact the hospital as the anti-reflux valve may already be faulty and the device may need changing.

Apply a barrier cream (eg. Zinc cream) to protect the skin from the acidic content of the leakage. This is particularly important if you notice heavy leakage of stomach contents around the gastrostomy. Ring the hospital's Clinical Nurse Consultant Stomal Therapy if you are concerned so an appropriate treatment/advice may be given.

4. Button blockage

- Prevent blockage by flushing the button via the feeding tube after completion of feeds and after giving medications. Medications should be in liquid form when possible. If not, crush finely and make sure that it is well diluted in water.
- If feeds are not running and button appears to be blocked, try the following before calling the hospital:
 - Try flushing with 10mL of warm water using the bolus feeding tube.
 - Use a gentle push-pull action with the warm water in the syringe
 - If unable to unblock, you will need to change the button

3 ADDITIONAL CARE

(including accidental displacement of Gastrostomy Buttons)

- The balloon type button is held in place by a balloon inflated by your doctor after insertion. Familiarise yourself with the button device before you leave the hospital. The button is covered by a feeding port cover that you can lift to open. On the side of the button you will find an extension that is labelled (BAL). This is the extension that is used for the inflation / deflation of the balloon. The balloon is normally inflated using 3.5 – 4mL (maximum of 5mL) of water.
- It is important to ensure the correct water volume of the balloon regularly. Once every 4 - 6 weeks, you need to aspirate all the water from balloon and replace it with the original amount prescribed. You can do this by:
 - Prepare two 5mL syringes. One syringe must contain the original amount prescribed or used by your doctor.
 - Deflate the balloon with the other (empty) syringe and note amount taken. Ensure that the button is held firmly in place while deflating.
 - Inflate the balloon using the other syringe with water.
 - Remove syringe.
- If the button is discovered to have been dislodged, (usually due to balloon deflation or balloon bursting) rinse the button well with water and check the balloon by inflating it with 5mL of water.
 - If the balloon is still intact (not burst), deflate the balloon completely and reinsert the gastrostomy into the stoma (opening in abdomen where the gastrostomy is previously). Inflate the balloon with the recommended volume of water.
- **If balloon is leaking or unable to inflate, the button needs replacement. Replace it with a new device supplied by ENABLE. If you do not have the spare device (as ENABLE would have put you on the waiting list) remove the remaining water from the balloon and re - insert it back into the opening. Apply a lubricant (KY Jelly) at the tip of the button to facilitate or ease insertion. This will keep the tract open to facilitate insertion of the new device. Do not use the button with the balloon deflated.**
- **If it is only 4-6 weeks since the gastrostomy procedure please try to reinsert the button or tube and take your child to the Emergency Department immediately. DO NOT FEED YOUR CHILD**

Correct positioning of the device will be checked and confirmed at the hospital's x-ray department using a contrast dye.

Once the button is in place, tape it securely in position and take your child to the hospital for replacement of a new set. If this happens during office hours (Monday-Friday 7:30-4.00pm), ring the Clinical Nurse Consultant Stomal Therapy who will assist you in replacing the device. After hours and on weekends, take your child to the

Accident & Emergency Department for replacement. An equivalent size Foley catheter will be inserted by the medical/surgical staff in the interim, as gastrostomy buttons are only accessible during office hours. You can use the Foley catheter for feeding until a new gastrostomy button is reinserted. *Remember that your old balloon type gastrostomy device becomes your emergency tube that will keep the tract open until a new device becomes available.*

Patients who have a cage type gastrostomy device need to have a corresponding size Foley catheter (eg. 16Fg Foley's for 16Fg cage type button). Insert the Foley Catheter approximately 3 – 4cm into the stoma and tape in abdomen to secure. This will keep tract open until a new device can be inserted.

GENERAL CARE OF A GASTROSTOMY TUBE

(Applies only to Percutaneous Gastrostomy Tubes/PEG Tubes)

- Initial insertion of PEG tubes, is done under general anaesthesia. PEG tubes usually need to be replaced in the Operating Theatre.
- PEG is an acronym for Percutaneous Endoscopic Gastrostomy. This describes the tube used as well as the insertion procedure. Essentially this is a feeding tube implanted directly into the stomach through a minimally invasive endoscopic procedure. PEG tubes have an internal retention dome or bolster that holds the tube in the stomach. Peg tubes will have a round disc placed holding the tube at the level of the abdomen to help prevent movement of the tube further into the stomach. Removal of PEG's including accidental displacement must be referred to the surgeon involved.
- An equivalent size Foley catheter will be provided to parents/carers on discharge that can be used to keep the tract (stoma) open if accidental displacement of the tube occurs. For example, a 16Fg Foley catheter will be provided if the child has a size 16Fg non-balloon PEG tube.
- Once the wound has healed, daily routine involves cleaning the area around the tube with soap and water when bathing or showering. If the area around the tube is observed to be wet and/or red, clean the area with Normal Saline twice daily until cleared. Inform the Clinical nurse Consultant Stomal Therapy if redness and leakage persist.
- The tube is secured by a flange with measurement indicators. The tube length is routinely checked to ensure correct placement. Remove photo below

Ensure that the appropriate length of the tube is inside the stomach (has not moved into the small bowel) by checking the measurement and gently tugging the tube until resistance is felt.

- The tube is not aspirated unless a specific order is given. Aspiration of the tube is usually necessary only during the first few days following the initial insertion of the tube.

- Flush the tube with approximately 10 -15mL of water at the completion of bolus feeds or after completion of overnight pump feeding. For children who are receiving medications, it is also important that the tube is flushed with water after the medication is given to ensure thick deposits or residue does not block the tube. Medications in tablet form should be crushed finely and diluted well with water to prevent blockage.
- Feed the child in the position they are most comfortable with. Generally, children are best fed slightly propped up on a pillow. After feeding, the child may be turned towards the right side to facilitate gastric emptying.
- Decompression or degassing of the stomach contents may be necessary for some children to release gas and prevent the child from “bloating”. This is particularly important for children who:
 - Had a recent Fundoplication for reflux.
 - Suffers from constipation
 - Have a tendency to have a lot of gas in their stomach

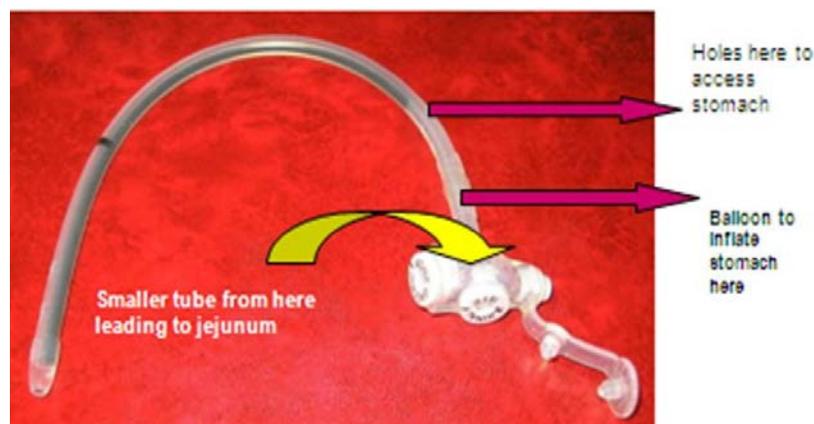
Note: See no. 3 for Problem Solving

4 WHEN TUBE ACCIDENTALLY FALLS OUT

- If the tube falls out, the tract (hole) will remain open for about an hour then starts to close. It is important that as soon as the problem is discovered, an equivalent size Foley catheter (same size as the tube that came out) is inserted to about 3-4cm into the opening (hole). This will keep the tract open until an appropriate tube is available to replace it.

5 TRANSGASTRIC JEJUNAL FEEDING TUBE

This tube enables jejunal feeding and gastric decompression. It is used for patients who have severe gastric reflux, patients at risk of aspiration and patients not tolerating gastric feeds.



The tube has 2 ports (jejunal and gastric) and a balloon port.

- The jejunal lumen travels the entire length of the tube which allows delivery of feeds past the stomach and into the jejunum thus eliminating reflux and aspiration.
- The gastric lumen travels halfway and stops within the region of the stomach. This allows for gastric decompression to relieve symptoms of pain due to gas build - up.
- The balloon port is for inflating the balloon on the inside of the stomach wall. This balloon should be filled with no more than 10mL of water for older children (about 5mL for small children) The balloon should be checked every 4-6 weeks and re-inflated to the original volume if required.
- Never turn this button.

Using the tube:

- The jejunal lumen is only for continuous feeding (via pump) and must be flushed before and after feeds and at regular intervals 4th hourly (eg. during the day when not feeding)
- The gastric lumen is for decompression and administering medications. Decompression when required is done by simply opening the cap at the end of the feeding tube. Gas will automatically come out if present. Crushed tablets finely and mixed with at least 10mL of water to prevent blocking the tube. It is not recommended to administer Losec (granules will adhere to tube wall and will block the tube) through this device.

Care of tube and stoma need a picture with arrows pointing to parts

- Cleanse skin with warm soapy water and dry well.
- Flush the **jejunal** lumen with water:
 - before and after feeds
 - at least every 4 hours during continuous feeds (10mL water)
 - at regular intervals (at least 4 hourly when not using)
- Flush the **gastric** lumen with water
 - after decompression,
 - after giving medications
 - at least 4 hourly when not using.

Securing the Tube

The device is held in place by a balloon inflated with water (located in stomach). It needs to be checked every 4-6 weeks to ensure it remains inflated.

Managing Accidental Displacement of the Transgastric Device

- The stoma (opening in the skin where tube enters) will start to close over approximately an hour after the tube is dislodged. It is important to take the child back to the hospital as soon as possible when this occurs.

- If the device has not completely come out, tape it in place in order to keep the stoma open.
- If the device has completely come out and you have the previous balloon type Gastrostomy device (the gastrostomy button that was used prior to the change into the transgastric device), insert the gastrostomy button as an interim measure to keep the stoma open until another transgastric device can be reinserted in Radiology Department of the hospital.
- Please note that there are only limited numbers of devices available in the hospital and it may take some time for a replacement device to be available. Contact your doctor or Charmaine (Chary) Richards (Clinical Nurse Consultant Stomal Therapy) as soon as possible so replacement can be arranged.

Additional Information for Parents

Home Enteral Nutrition Factsheets:

<https://www.schn.health.nsw.gov.au/fact-sheets/category/#cat24>

The CHW Clinical Nurse Consultant for Stomal Therapy runs a “**nurse only**” clinic in Outpatients Department Tuesday afternoons.

Any non-urgent problems/issues and ongoing advice about your child's gastrostomy can be attended to at this clinic.

For appointment please call 9845 2525

GASTROSTOMY INFORMATION FOR DISCHARGE

NAME OF SURGEON: _____ PHONE: _____

SURGERY DATE: _____

CLINICAL NURSE CONSULTANT: _____
(STOMAL THERAPY)

APPLIANCE CENTRE : _____

DIETITIAN: _____

TYPE OF FORMULA: _____

AMOUNT: _____

FEEDING TIMES: _____

BUTTON TYPE: _____

SIZE: _____

LENGTH (cm): _____

Foley Catheter Provide as Emergency Tube: Size: