Gastrostomy –
Early detection of post insertion complications

Reference Number
NHSCT/12/508

Target audience:
To ensure that the key symptoms of complications post-insertion and their significance are known to all staff involved in the immediate aftercare of patients who have been given gastrostomies, including hospital medical, nursing and dietetic staff, GPs and the patient and their carers to reduce the risk of complications developing into critical illness or death.

Sources of advice in relation to this document:
Jill Curry, Dietetic Services Manager
Valerie Jackson, Director of Acute Hospital Services

Replaces (if appropriate): N/A

Type of Document:
Trust Wide

Approved by:
Policy, Standards and Guidelines Committee

Date Approved:
1 March 2012

Date Issued by Policy Unit:
24 April 2012

NHSCT Mission Statement
To provide for all the quality of services we would expect for our families and ourselves
Gastrostomy –
Early Detection of post insertion complications

March 2012
1.0 Introduction
The National Patient Safety Agency (NPSA) published a Rapid Response Report (RRR) in March 2010 highlighting the need for early detection of complications after gastrostomy after receiving 11 reports of deaths and 11 reports of severe harm as a consequence of not detecting early complications after gastrostomy. Twenty-two incidents were identified from the Reporting and Learning System (RLS) where serious complications occurring after gastrostomy insertion did not appear to be rapidly recognised and acted on. Reports to the RLS suggest that pain on feeding or external leakage of gastric contents were not always recognised as a potential ‘red flag’ symptom of peritoneal leakage of feed.

1.1 Aim of this Guideline and target audience
To ensure that the key symptoms of complications post-insertion and their significance are known to all staff involved in the immediate aftercare of patients who have been given gastrostomies, including hospital medical, nursing and dietetic staff, GPs and the patient and their carers to reduce the risk of complications developing into critical illness or death.
2.0 Definitions and Scope of the Guideline
Gastrostomies are small stomas created between the stomach and the skin of the abdomen through which a feeding tube is inserted. They can be inserted via endoscopic routes (percutaneous endoscopic gastrostomy (PEG), as single-stage buttons, under radiological guidance (per-oral image-guided gastrostomy (PIG) or radiologically inserted gastrostomies (RIG) or during surgery.

Gastrostomies are used as a medium-to-long term feeding strategy for children and adults unable to meet their full nutritional requirements orally. They are generally inserted during an acute in-patient episode, for example for dysphagic patients following a stroke, with patients returning to their original ward after immediate recovery from the procedure. They may also be inserted electively as a day case or short stay, as a planned intervention, for example, for neurological conditions with progressive deterioration in swallow capacity.

Guidance regarding the appropriateness of the use of gastrostomies for different conditions has recently been published by the Royal College of Physicians and is not within the scope of this policy.

Like any interventional procedure, there is potential for complications (including chemical peritonitis, infection, bowel perforation, haemorrhage, and aspiration pneumonia) but prompt recognition of the early symptoms of potential complications with early action reduces the risk of serious harm or death. Whilst the harm data appeared to relate to initial placement of gastrostomies, the same risks may arise when a PEG is being changed to a gastrostomy button, or after the change of a gastrostomy button, or during tube changes complicated by stenosis. Jejunostomies are also likely to involve similar risks.

3.0 Roles and Responsibilities
It is the responsibility of each member of staff involved in the care of patients before, during and after gastrostomy insertion, to comply with the guidelines set out and report any adverse incidents or ‘near misses’ using the NHSCT incident reporting protocol.

4.0 Key guideline principles
4.1 Patient preparation for feeding tube insertion
- Valid consent should be obtained. Policy for Consent to Examination, Treatment or Care
  http://cancerni.net/networkservices/regionalprojects/modernisingendoscopyservices
- Stop Warfarin 5 days and Clopidogrel 7 days prior to procedure. See BSG guidelines regarding low/high risk conditions. Low molecular weight heparin is required if stopping warfarin. Discuss with cardiologist if Clopidogrel is to be stopped. http://www.bsg.org.uk/clinical-guidelines/endoscopy/anticoagulant-antiplatelet-therapy.html
- Document allergies
- Check full blood count to ensure platelet count is satisfactory and coagulation screen.
Fasting – Oral food intake or nasogastric feed should be discontinued 4 hours prior to the procedure. Clear fluids are permitted up to 2 hours prior to procedure where patients are being fed via nasogastric tube or allowed oral intake. Prolonged fasting of patients should be avoided where possible. Intravenous access should be obtained and IV fluids erected if prescribed to ensure adequate hydration is maintained. 


Liaise with dietician to ensure nutritional assessment planned and feeding regime arranged. This will also help early initiation of discharge planning if appropriate.

4.2 Theatre nurses responsibility
Endoscopy/theatre nurses are to ensure that all patient information, including complications alert label and type/size of feeding tube, is put into the medical notes. Examples of alert labels are in Appendix 1.

4.3 Immediate post – procedure recovery period
1st hour/ while in recovery

Vital signs including blood pressure, pulse, temperature, respirations, SaO2 and pain score are to be observed and recorded every 15 minutes using surgical PEWS (Patient early warning score) documentation.

Stoma site must also be checked every 15 minutes for bleeding, leakage of gastric contents or tube displacement and outcome recorded.

ANY COMPLICATIONS MUST BE REPORTED TO ENDOSCOPIST IMMEDIATELY.

For inpatients, a verbal handover must be given by the recovery nurse to the ward nurse before discharge back to the ward.

For day case patients, advice regarding monitoring of the feeding tube and alert information should be given to the patient’s carers prior to discharge, including information regarding the type and size of tube inserted and observations required.

Recovery staff should also provide the ward staff or carers with a copy of:
   Feeding tube information leaflet from the manufacturer.
   Patient information leaflet.

4.4 Post procedure Care at ward level

PEWS and pain score to be observed and recorded half hourly for next hour, then 4 hourly for 24 hours.

Observe stoma site for signs of leakage, redness, swelling, irritation and tube displacement.

Remove small dressing around site, dry site gently but thoroughly with sterile gauze after 12hours.

Nil by mouth or via gastrostomy for 4 hours unless otherwise indicated by endoscopist. BSG guidelines state feeding via PEG can occur at 4 hours if no complications.
• Prior to commencing feed, flush gastrostomy with 100mls sterile water using a 50ml enteral syringe. If the patient reports no pain, proceed to commence feeding as per dietitian’s feeding regime.
• Ensure NHSCT re-feeding guidelines are followed in those patients assessed as at risk (staffnet.hscni.net/Refeeding_Syndrome_in_Adult_Patients_Prevention_and_Management_Guidelines.pdf)

**STOP FEED/ MEDICATION DELIVERY URGENTLY IF PATIENT**
• SPIKES A FEVER
• BECOMES BREATHLESS
• COMPLAINS OF PROLONGED OR SEVERE PAIN
• IF UNABLE TO COMMUNICATE REPORT EXCESSIVE RESTLESSNESS
• STOMA SITE IS BLEEDING OR LEAKING GASTRIC CONTENTS
• COMPLAINS OF PAIN WHEN FEED RUNNING
SEEK MEDICAL ADVICE URGENTLY AND CONSIDER CT SCAN, CONTRAST STUDY OR SURGICAL REVIEW

4.5 Pre discharge
• Patient/carer must be provided with:
  • Verbal and written advice on daily care of stoma site and using feeding equipment.
  • Information regarding the signs of potential complications and emergency contact numbers
  • Feeding tube manufacturers’ information leaflet.
  • Copy of the enteral feeding regime and dietetic contact numbers for ongoing nutritional follow-up, for patients with a new feeding tube, or where there have been changes made to an established feeding regime.
• Arrange for the patient to be reviewed by senior medical staff before discharge.
• Ensure alert information is included in the dietetic discharge summary to community staff.

*If patient/carer contacts WARD complaining of any of the danger signs, WARD staff are required to ascertain symptoms and seek advice from Gastro Intestinal team immediately. If necessary advise that patient be taken to the nearest A&E department.*

4.6 Early displacement of PEG

BSG Guidelines suggest that the gastro-cutaneous fistulous tract becomes established within two weeks of PEG placement but may take up to 4 weeks to mature. Therefore if a PEG tube becomes displaced within the first two weeks the tract should be allowed to heal and further endoscopic PEG tube insertion considered. There should be no attempt at inserting urinary catheters/replacement PEG tubes in a gastro-cutaneous tract that is <2 weeks old. If a PEG tube is
displaced between 2-4 weeks then re-insertion of urinary catheter/replacement gastrostomy tube should only be considered by experienced personnel.

4.7 Early removal of a PEG
PEG tubes can only be safely removed when a tract is fully established. This can only be assumed after a minimum of 14 days and up to 4 weeks in patients with impaired healing.

5.0 Monitoring
Each department involved in gastrostomy will be expected to audit their practice and communicate any deviation from this guideline.

6.0 Equality, Human Rights and DDA
The guideline is purely clinical/technical in nature and will have no bearing in terms of its likely impact on equality of opportunity or good relations for people within the equality and good relations categories.

7.0 Alternative formats
This document can be made available on request on disc, larger font, Braille, audio-cassette and in other minority languages to meet the needs of those who are not fluent in English.

8.0 Sources of Advice in relation to this document
The Policy Author, responsible Assistant Director or Director as detailed on the guideline title page should be contacted with regard to any queries on the content of this guideline.

Acknowledgements

South Eastern HSC Trust, Guideline to ensure Early Detection of Complications after Gastrostomy. October 2010


United Hospitals Trust, “Looking after feeding tubes” booklet, Whiteabbey

Endoscopy Unit Nurses and Dietitians

References


2. Royal College of Physicians and British Society of Gastroenterology. Oral feeding difficulties and dilemma A guide to practical care, particularly towards the end of life. RCP, 2010

Useful resources for patients

NHS information for patients having a percutaneous endoscopic gastrostomy tube (www.uhb.nhs.uk/pdf/PiHavingPegInserted.pdf)

Royal College of Radiologists Information for patients undergoing a percutaneous gastrostomy 2008 (www.rcr.ac.uk/docs/patients/worddocs/CRPLG_15.doc)
Appendix 1

ALERT STICKERS

Medical notes alert sticker

IF THERE IS PAIN ON FEEDING OR EXTERNAL LEAKAGE OF GASTRIC CONTENTS OR FRESH BLEEDING,
STOP FEED/MEDICATION DELIVERY IMMEDIATELY. OBTAIN SENIOR ADVICE URGENTLY AND CONSIDER CT SCAN, CONTRAST STUDY OR SURGICAL REVIEW

GP/Dietetic discharge summary /Looking after feeding tubes booklet

IF THERE IS PAIN ON FEEDING OR EXTERNAL LEAKAGE OF GASTRIC CONTENTS OR FRESH BLEEDING,
ADVISE CARERS TO STOP FEED/MEDICATION IMMEDIATELY AND URGENTLY REFER TO:
9-5pm Antrim day procedure Unit Tel 028 94422458.
Outside Hours contact nearest A&E

IF THERE IS PAIN ON FEEDING OR EXTERNAL LEAKAGE OF GASTRIC CONTENTS OR FRESH BLEEDING,
ADVISE CARERS TO STOP FEED/MEDICATION IMMEDIATELY AND URGENTLY REFER TO:
9-5pm Causeway Day Procedure Unit Tel 028 70346105 or Stoma Nurse Tel 70346264
Outside Hours contact nearest A&E

Dietetic HETF summary alert label

IF THERE IS PAIN ON FEEDING OR EXTERNAL LEAKAGE OF GASTRIC CONTENTS OR FRESH BLEEDING
ADVISE CARERS TO STOP FEED/MEDICATION IMMEDIATELY AND URGENTLY REFER TO
(9-5pm) Antrim day procedure Unit Tel 02894422458
Causeway Day Procedure Unit Tel 028 70346105.
Outside hours contact A&E DEPT
<table>
<thead>
<tr>
<th>Patient’s name</th>
<th>Affix patient label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td></td>
</tr>
</tbody>
</table>

DATE:
Your feeding tube allows nutrition and fluids to go directly into the stomach when you are unable to eat or cannot eat enough to meet all of your nutritional requirements from the food and fluids eaten. This booklet aims to provide information about how to care for your feeding tube and what to do if problems arise. If you have any further questions after reading this booklet or require more information contact your Nurse, Dietitian or GP.

Please keep this booklet in a safe place for future reference.

**PEG TUBE DETAILS**

<table>
<thead>
<tr>
<th>Date of Insertion</th>
<th>Reason For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of Insertion</td>
<td>Type of Tube</td>
</tr>
<tr>
<td>Type of Tube</td>
<td>Size of Tube</td>
</tr>
<tr>
<td>Level of Fixation Device</td>
<td>Balloon Volume</td>
</tr>
</tbody>
</table>

**DETAILS OF REPLACEMENT TUBES**

<table>
<thead>
<tr>
<th>Date</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For Change</td>
<td>Reason For Change</td>
</tr>
<tr>
<td>Type of Tube</td>
<td>Type of Tube</td>
</tr>
<tr>
<td>Size of Tube</td>
<td>Size of Tube</td>
</tr>
<tr>
<td>Balloon Volume</td>
<td>Balloon Volume</td>
</tr>
</tbody>
</table>
TYPES OF GASTROSTOMY FEEDING TUBES

A Gastrostomy tube is inserted directly through the abdominal wall into the stomach. Most are inserted by the Percutaneous Endoscopic technique and is known as a PEG tube. It may be inserted surgically or under X-ray guidance and is known as a RIG tube. All are held in place by a soft spongy balloon or bumper inside and on the outside by a skin disc/fixation device.

1. Percutaneous Endoscopic Gastrostomy (PEG) Tube
When long term tube feeding is required it is usually a PEG tube that will be inserted initially. A PEG tube will usually last for about 18-24 months or longer before it needs to be replaced. If the end of the tube becomes damaged it may be repaired or replaced without changing the complete tube. If the tube needs repaired or replaced contact your community nursing team.

2. Radiologically Inserted Gastrostomy Tube (RIG Tube)
A RIG Tube is a G Tube inserted with X-ray guidance. These tubes may be stitched or fixed with T-fasteners for the first 10-14 days. Do not rotate the tube or loosen the fixation device until these stitches or T-fasteners are removed. The water in the balloon can be checked after the stitches are removed and then weekly.

3. Replacement Gastrostomy Tube or G Tube
When the PEG tube is changed, it will be replaced with a balloon gastrostomy tube or button gastrostomy (SLPGD). This can usually be done at home by the Hospital Diversion Nursing Team. This tube is held in place with a water filled balloon. To ensure the tube stays in place, the amount of water in this balloon needs to be checked every 7 days. This is done by removing the existing water from the balloon with a syringe and replacing it with the correct amount of sterile water stated on the tube. These gastrostomy tubes usually last approximately 3 - 6 months before they need replaced with a new tube.

4. Stoma low profile gastrostomy device (SLPGD button)
When the PEG tube is changed, it may be replaced with a button gastrostomy (SLPGD). This is a type of Gastrostomy tube which sits close to the skin with no tubing extending on the outside.

Some PEG tubes may have a jejunal extension. This should be managed as a jejunostomy feeding tube and advice on how to manage this is not included in this booklet.

Diagram of a PEG tube

Diagram of a Replacement Gastrostomy or RIG tube
INSERTION OF PEG OR RIG FEEDING TUBE

After feeding tube insertion, nothing will be given by mouth or through the feeding tube for 4 hours. After this period feeding can be started following a flush of 30mls sterile water

If there is any resistance or pain:

DO NOT FORCE WATER DOWN THE TUBE AND POSTPONE FEEDING

If the water flush goes in without difficulty, commence feeding according to the dietician’s instructions.

Do not touch the stoma site for 8-12 hours after placement. There may be some blood and clear/yellow fluid discharge. This is normal and should stop within a few days.

Observe the site for signs of bleeding or infection.

It is important to be aware of signs of peritonitis and if present to treat as an emergency:-

IF THERE IS PAIN ON FEEDING OR EXTERNAL LEAKAGE OF GASTRIC CONTENTS OR FRESH BLEEDING,

STOP FEED/MEDICATION IMMEDIATELY AND URGENTLY CONTACT:

9-5pm Antrim Day Procedure Unit Tel: 028 9442 2458.

9-5 pm Causeway Day Procedure Unit Tel: 028 7034 6105 or Stoma Nurse Tel: 028 7034 6264

How to care for your feeding tube and stoma site

The opening in your abdomen to your stomach, through which the tube goes, is called the stoma site.

Good hand hygiene is very important – always wash your hands with soap and water and dry well before working with the feeding tube and stoma site.

For the first 4 weeks after insertion of a new PEG or RIG

- The stoma should be cleaned initially twice daily with cooled boiled water or saline and gauze. Begin at the stoma site and work outwards. Then dry the area thoroughly to prevent infection.
- It is important that the area around the tube is dried gently but thoroughly.
- PEG tube should be rotated in a full circle each day. Do not rotate a RIG tube until the stitches or T-fasteners are removed (usually after 14 days).
- Do not release or adjust the fixation device for the first 4 weeks.
- Observe stoma site for any leakage, swelling, irritation, redness, skin breakdown or soreness around the stoma. If the site becomes inflamed and tender to touch, seek medical advice.
- While the stoma site is healing (4 weeks) it is advised not to bathe or immerse the area in water. If showering ensure the feeding tube ends are fully closed.
Daily cleaning routine for PEG or RIG (4 weeks onwards) and Button and Replacement Gastrostomy Tubes

- Check stoma site daily for any signs of leakage, swelling, irritation, redness, skin breakdown, soreness or excessive movement of the tube in and out of the stomach. If you notice any of these, inform your Community Nurse or attend the Treatment room at your Health Centre.

- Clean the skin around the stoma site daily using mild soap, warm water and gauze (saline will be used while in hospital).

- Gently remove any crusting and debris around the stoma site and fixation device with warm water and gauze swab.

- Continue to rotate the tube in a full circle each day as part of the cleaning routine. This stops the tube sticking to the stomach wall.

- The fixation device can be adjusted daily to allow further cleaning of the skin underneath. This can be done weekly for PEG tube or daily for Replacement Gastrostomy tube and reduces the risk of over granulation and “buried bumper syndrome” (see problem solving information later).

- After cleaning, the fixation device should be replaced back to its original position (judged from the numbered position marks). It is important that the fixation device is not too tight or skin damage may result. It should sit ¼ inch (6mm) from the skin surface for PEG tube and 1-2mm for RIG or Replacement Gastrostomy tubes.

- The level of the fixation device may change if the patient gains or loses weight. This change, however, will be gradual.

- Make a note of the numbered position mark at the tube exit site.

- The stoma site will not normally need a dressing unless advised by community nursing and if there is excessive oozing or leakage a dry absorbent dressing may be required.

- After 4 weeks bathe as normal. Always ensure the area is dried thoroughly afterwards to prevent infection.

- Do not use moisturising creams or talcum powder around the stoma site.

Feeding tube Extension sets

Clean with soap and water, rinse thoroughly with clean water, air dry and store in a clean, dry container. These may be reused until a replacement is necessary.
FLUSHING THE FEEDING TUBE

Your feeding tube must be flushed with sterile or cooled boiled water before and after each feed to prevent tube blockage. Your feeding tube must also be flushed before, between and after medications. The amount that you need to flush will be determined by your Dietitian.

Type of water and syringes

50ml oral/enteral catheter tip or female luer lock syringes should be used for flushing. Smaller syringes can be used for medicines when necessary but produce greater pressure on the feeding tube, therefore flush slowly when using these.

For those living in nursing/residential home or cared for at day centre:

- Use sterile water for flushing. Once a bottle of sterile water is opened it is no longer sterile and must be discarded after use. A new bottle is recommended for each flushing episode.
- A new single use syringe should be used for each flush and discard used syringes. Reusable syringes are available which can be reused many times for the same patient and cleaned as per manufacturer instructions.

For those living at home:

- The community nurse or Dietitian will assess and advise whether sterile water is necessary or if cooled boiled water is suitable for flushing and whether a reusable syringe can be used for flushing.
- If advised to use cool boiled water, tap water should be boiled, placed in a clean container, allowed to cool and cover, then store in the fridge for up to 24 hours.
- Reusable syringes are available which can be reused many times for the same patient and cleaned as per manufacturer instructions.

MANAGEMENT OF THE FEED

The Dietitian will advise patients and their carers about how much feed and flushes are needed and provide a written copy of the feeding regimen.

✓ All feeds should be given at room temperature. Check expiry date on feed.

✓ Once a sterile pack or bottle of feed has been opened, it must be used within 24 hours or discarded.

✓ During feeding, and for 60 minutes after feeding, the patient should sit in an upright position at no less than 30-45 degrees.

✓ Only feeds recommended by the Dietitian should be administered through the feeding tube.

✓ The rate and duration/timing of the feed administration most suitable for the patient will be included in the feeding regime advised by the Dietitian.
MANAGEMENT OF THE FEEDING EQUIPMENT

Feeding may be either through a feeding pump as continuous feeds using a giving set over many hours or as short bolus feeds through a pump. Also feeds may be given flushed through as bolus feeds using a 50 ml syringe.

Patients and/or carers will be shown how to set up the feed, use the feeding pump and give flushes.

Setting up and disconnecting a feed:

1. Wash and dry hands thoroughly before setting up and disconnecting feed.
2. Gather all necessary equipment together. A new giving set should be used for each new pack/bottle of feed and discarded after 24 hours.
3. Gloves and apron should also be worn when setting up feed in hospital, nursing home and day care setting. This is not necessary for patients in own home unless advised by the community nurse.
4. Use 50 ml oral/enteral catheter tipped or female luer lock syringe to flush the tube with water.
5. Connect the giving set to the feed securely – this will break the seal on the feed when connected properly. There should be no need to pierce the feed’s protective foil cap.
6. Hang the feed on the stand and so that it remains higher than the pump and giving set.
7. Insert the giving set into the feeding pump and prime the giving set. Ensure the giving set and feeding tube clamp are open.
8. Connect the giving set to the feeding tube. Set the feeding pump to the rate (and dose if required) and press start.

Feeding pump

These are on loan from the contracted supplier to the Northern Trust. A new pump will be provided by the hospital and these require to be serviced bi-annually. The service date can be found on a sticker on the pump and a replacement pump can be requested by contacting the number on the pump or the company representative.

Clean the feeding pump daily by wiping with a mild detergent and water solution. Wipe up any spills immediately.

If a malfunction occurs with the pump, follow manufacturers’ instructions. If this does not resolve the problem, contact the company representative.
Prior to administering any medication via a feeding tube the hospital or local Pharmacist should be contacted to advise on the types of drugs which can be used.

Liquid medicines are not always the best way to give drugs via feeding tubes and the Pharmacist can advise on the most appropriate medicine and formulation to use. All liquid medicines should be measured and given using appropriate sized oral/enteral catheter tipped or female luer lock syringe.

If tablets are to be used they must be able to be crushed or dissolved prior to administration. This is important as un-dissolved particles can block the tube.

Before and after drug administration at least 30 mls of water should be flushed down the tube, using a 50ml oral/enteral catheter tipped or female luer lock syringe. Adequate flushing of the feeding tube is essential to ensure that the full dose of the drug is given.

When several drugs are to be given, each drug should be given separately, the tube should be flushed with 5–10 mls water between each drug, using a 50 ml oral/enteral syringe.

**DO’S AND DON’TS WITH YOUR FEEDING TUBE**:

DO…check the stoma site every day
DO…clean and dry the stoma site carefully each day
DO…flush the tube regularly as instructed
DO…protect exposed end of giving set with a clean/sterile cap while disconnected.
DO…keep handling of the connections to a minimum.
DO…discard giving set and open feeds at end of feeding episode and in 24 hours
DO…keep the Y-adapter end of the feeding tube or extension set above the stoma site i.e. normally pointing towards the chest
DO…alternate the position of the clamp on the tube and do not leave it closed when not in use, this will help preserve the life of the tube.

DO NOT………put anything down the tube except recommended feed, water and medicines
DO NOT……….handle the connector at the end of the feeding tube excessively
DO NOT………over tighten the giving set to the luer lock end of the tube as it will make it difficult to remove
DO NOT………clamp the tube except with the clamp provided
DO NOT………add medicines to feeds as some interact with the feed
DO NOT………change the type or amount of feed given without speaking to your Dietitian/GP
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Action</th>
</tr>
</thead>
</table>
| Accidental tube removal or displaced PEG tube  
Or RIG tube | Feeding tube not anchored securely  
Tube may be damaged  
Tube pulled out by patient or carer, or tube falls out | Tube must be replaced as soon as possible to keep stoma/tract open.  
**Within 4 weeks of tube insertion:**  
- Stop feed immediately. If tube dislodged but not fully removed tape skin to prevent further movement.  
- Contact hospital / go to A&E  
- Look for signs of peritonitis which is life threatening and must be treated as an emergency.  
**After 4 weeks of tube insertion:**  
- Contact community nursing / GP or Out of Hours GP to arrange for be replaced as soon as possible.  
Hospital Diversion Nursing Team will replace feeding tube 8.45am – 11am or visit A & E and bring your spare tube with you. |
| Accidental removal or displaced Gastrostomy (G) Tube | Feeding tube not anchored securely  
Damaged tube  
Tube pulled out by patient or carer, or tube falls out  
Water in balloon evaporated and not replaced.  
Internal balloon damaged | Tube must be replaced as soon as possible to keep stoma/tract open  
- Contact community nursing / GP or Out of Hours GP to arrange for be replaced as soon as possible.  
- Hospital Diversion Nursing Team will replace feeding tube between times : 8.45am – 10.45pm or visit A & E and bring your spare tube with you. |
| Blocked tube | Not flushing or inadequate flushing of the tube before and after feed.  
Not flushing or inadequate flushing between each medicine and after all medicines.  
Tablets, if crushed not well dispersed in water  
Medications not given separately  
Foods / liquids other than prescribed feed, water and medicines put down tube | First make sure the tube and extension set are not kinked or clamped  
The following steps may help to unblock the tube:  
- Use 50ml syringe – flush with warm water  
- Do not use coke, pineapple juice or other liquids  
Do not use excessive force or attempt to unblock with any sharp instruments  
- Rub the blocked part of the tube between the thumb and forefinger  
- Sometimes the blockage can be aspirated out of the tube, try pulling on the syringe.  
- If still blocked contact community nursing or GP to prescribe pancreatic enzyme solution or ClogZapper to unblock it. This contains pancrea enzymes and helps to clear a blocked tube. Caution must be taken get this medicine on your hands & skin.  
- Pancreatic Enzyme solution: mix contents of 3 capsules of Pancrex other prescribed preparation eg Creon 10,000) or 1 teaspoon Pancre powder with ½ teaspoon of Sodium Bicarbonate (Baking Soda) in 2 sterile water. Flush this mixture into the tube using a 50ml syringe a leave for at least 30minutes. (Sodium Bicarbonate activates the par enzyme).  
- Feeding tube may need to be removed and replaced with new tube. |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaking stoma site (leakage of stomach contents)</td>
<td>• Constipation • Stoma site is too large • Delayed gastric emptying • Fixation device not fitted properly • Incorrect feeding position</td>
<td>• Ensure external fixation device is positioned correctly – flush skin allowing 6mm movement only. • If balloon gastrostomy check balloon inside stomach is inflate correct water volume and tight to stomach wall. • Keep upright position when feeding and keep tube positioned stoma site (not tucked in underpants). • Check for constipation and contact Dietitian to review feeding regimen. • Continue feeding unless large volumes are leaking. • Contact Dietitian who may consider reducing feeding rate. • Keep stoma site clean and dry • Contact Community Nursing to discuss dressings • Contact GP to review medications</td>
</tr>
<tr>
<td>Note: Small amounts of mucus discharge is normal.</td>
<td>• Giving set or extension set not connected properly. • Y – adapter end of feeding tube broken or not closing properly • Feeding tube or Y-adapter end of feeding tube or extension set fractured due to connected too tightly</td>
<td>• Check all parts and connections of feeding tube and sets. • Ensure spare gastrostomy tube / Y – adapter is available. • If require a new Y-adapter or extension set contact Community Nursing to order a replacement. Instructions on how to change adapter are included within new Y-adapter repair kit. • Continue feeding unless large volumes are leaking. • Contact Dietitian who may consider reducing feeding rate. • Consider feeding tube may need replaced – contact Community Nursing / GP to refer for tube replacement.</td>
</tr>
<tr>
<td>Leakage from feeding tube</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Buried Bumper Syndrome” identified as unable to rotate tube, tube blocked with feed leakage and pain at tube site</td>
<td>• PEG tube not rotated daily • Fixation Device held too tightly against the skin</td>
<td>• Contact Community Nursing to assess. • Position external fixation device to 6mm • Note position of external fixation device to make sure it is not tight. • The external fixation device should be adjusted as patients w increases.</td>
</tr>
<tr>
<td>Infection of the stoma site i.e. may appear red, inflamed, hot, pus, exudate and sometimes unpleasant smell</td>
<td>• Poor cleaning and handling of the tube and stoma site. • Not loosening fixation device and cleaning under and around it at least once weekly.</td>
<td>• Inspect stoma site daily for redness and discharge. • Contact Community Nursing to take a swab for cultures if indi • Only apply a dressing if advised by Community Nursing. • May require antibiotics.</td>
</tr>
<tr>
<td>Problem</td>
<td>Possible Cause</td>
<td>Action</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| Over Granulation ‘proud flesh’ at stoma site (appears as overgrowth of pink, bleeding, “cauliflower-like”, moist tissue.) | • Friction and too much movement of feeding tube.  
• Tube being pulled downwards.  
• Fixation device may be too loose / too tight | • Keep stoma site clean and dry. Handle the site gently otherwise it will bleed. Continue to rotate tube 360° daily.  
• Keep tube positioned above stoma site to prevent friction and possible leakage.  
• Check that fixation device can move in and out by 6mm.  
• Contact Community Nursing to discuss if dressings and creams are required. |
| Constipation | • Inadequate fluids given.  
• Low fibre feed  
• Side effects of medication  
• Laxatives not taken as advised | • Ensure all feed and fluids are given as recommended.  
• Do not miss water flushes.  
• More fluid may be needed in hot weather. Contact Dietitian to advise.  
• Contact Dietitian to consider change of feed to provide more fibre.  
• Discuss with GP / Pharmacist to review medications.  
• Consider laxative treatment and contact GP |
| Diarrhoea | • May be due to type / rate of feed but is usually caused by antibiotics, other medications or unrelated illness.  
• History of previous bowel problems | • Always ensure good hygiene standards when handling the tube administering the feed.  
• Check medication which could cause diarrhoea. Consult GP / Pharmacist.  
• Stop laxatives while diarrhoea present.  
• Ensure feeding pump is set at correct rate.  
• Contact Community Nurse / GP to consider checking stool cultures to rule out infection.  
• Extra fluids are likely to be needed if prolonged diarrhoea (longer than 24hrs). Contact Dietitian / GP to discuss this.  
• Contact Dietitian to consider change of feed. |
| Regurgitation / aspiration / abdominal discomfort / nausea / vomiting | • Poor feeding position  
• Possible reflux of feed  
• Too high feeding rate  
• Delayed gastric emptying  
• Tube misplacement  
• Change in physical condition | • Confirm feeding position / technique. Feeds should be given at correct temperature.  
• Ensure head and shoulders are raised to 30 - 45° during feed at least 1 hour after feeding.  
• Check for causes of vomiting e.g. infection, antibiotics.  
• If vomiting is severe consider reducing rate or stop feed.  
• Contact GP / Dietitian to discuss options to ensure adequate are given.  
• If vomiting check position of tube is unchanged. If tube length appears different stop feed and contact GP / Community Nurse visit A&E.  
• Rule out constipation.  
• Contact Dietitian for advice on type and rate of feed.  
• Contact GP who may review and suggest medications. |
### Problem

#### Goal / Aim

- Ensure all staff/carers/family are trained on how to use pump
- Ensure all have read written instructions for pump
- Keep written instructions and contact number to hand

#### Action

- Check clamp is not on (if present)
- Check tube/giving set for kinks.
- Consult written instructions.
- If pump continues to malfunction, switch off.
- Contact pump company rep Monday to Friday 9am-5pm for advice.
- To obtain replacement pump, contact pump manufacturer directly by phoning the number on pump.

---

### SWALLOWING DIFFICULTIES

If the feeding tube has been fitted due to a swallowing difficulty, a speech and language therapist will have already assessed the patient. The swallow will often continue to be monitored by the community speech and language therapist (SLT) for as long as is deemed appropriate.

The following are signs that your swallow may still be poor:

- Coughing or choking on your saliva or any food or drinks that you do take, if applicable
- Still unable to swallow your saliva
- Wetness or gurgliness in your voice
- Wetness or gurgliness in your chest
- Change in breathing pattern – shortness of breath/wheeze
- Recurring chest infections.

The following may indicate that a review of your swallow would be beneficial:

- If you notice you can trigger a swallow more easily and/or more frequently
- If you notice that you are now coping with your saliva compared to previously.
- If you are no longer having chestiness or chest infections.

To assist recovery of your swallow you should:

- Adhere to SLT advice/recommendations
- Regularly complete any exercises given to you by your SLT
- Regularly carry out the routine of mouth and teeth cleaning recommended by your dentist
- Practice swallowing with your saliva. Swallow often and strongly, with effort
- Use your voice as much as you always have, as this exercises some of the same muscles you use when swallowing.

If you think there has been an improvement in your swallow please contact your speech and language therapist to discuss having a review. You should not resume eating and drinking without advice as this may cause ongoing, and in some cases, severe, chest problems.
MOUTH CARE

Tooth brushing/mouth care is especially important for tube fed patients even when they are not eating or drinking anything. When the mouth is not being cleaned, there is a higher risk of chest infection and more frequent reoccurrences. Other common problems can include: foul smelling breath, hard crusty tongue, bleeding gums, loosening teeth, excessive tartar/scale on the teeth, although usually, no pain is experienced. By the time these problems develop, providing dental treatment is difficult, and may have more risks than benefits.

Good oral hygiene practice established at the start of enteral feeding, will prevent the need for high risk treatment later. When tube feeding is first established you should see your own dentist for advice on mouth care. Alternatively you can be referred to the community dental service. This is important whether you have your own natural teeth or dentures.

If you have your own teeth, tooth brushing is still required twice a day – the dentist will give you individual advice about how this should be carried out but some general advice includes:

- Sit upright / semi upright
- Use a DRY medium toothbrush - no water
- Smear only of fluoride containing toothpaste to avoid excessive foam/bubbles
- Spit out any residue (do not rinse)

If you need assistance of a family member or carer to clean your teeth/mouth, some further advice is listed below:
- Carers should wear gloves and protective glasses
- Using a light source (eg a pen torch) when looking inside the mouth
- Use of Suction may also have been assessed as a requirement
- Gently clean tongue, palate, inside cheeks and lips with soft, water moistened tooth brush at least daily, and more frequently where recommended

Use of the following is not recommended:
- X Lemon and glycerine swabs
- X Pink sticks for cleaning teeth as the foam may dislodge and cause choking
- X Pineapple juice

If you have dentures, these should be cleaned thoroughly with a denture brush once a day, and rinsed after every meal. Dentures should be left out of the mouth for some period of time every day - this could be at night or at another time that is convenient.

- Remember to clean all surfaces of any existing dentures
- Soaking dentures in cleaning fluid is not sufficient, they should also be brushed
- Gently clean tongue, palate, inside cheeks and lips with soft, water moistened tooth brush at least daily, and more frequently where recommended
- Remember these are general recommendations, individual dental assessment is extremely important. Life long, regular dental check ups are advised, even if you have no remaining natural teeth.
**Role of Health Care Professionals in Tube Feeding**

**Hospital Nurse**
- Link with Community Nurses.
- Provide syringes, giving sets.
- Demonstrates how to give medicines via tube.
- Demonstrates how to flush tube
- Advises on mouth care

**Hospital Dietitian**
- Assess nutritional requirements
- Provides feeding regimen with instructions on time, rate, volume and type of feed.
- Educates on feed related problems.
- Links with Community Dietitian and Community Nurse.
- Requests GP prescription for feed and water.
- Provides feeding pump, stand and charger.
- Written information to include type and size of tube and contact numbers
- Refers to the Community Dentist.

**Hospital Pharmacist**
- Confirms medicines are suitable via feeding tube
- Provides 3 day supply of feed and sterile water.

**Discharge with 7-10 days supply of giving sets and syringes and feeding pump**

**Patient’s Home / Nursing Home**

**Community Nurse**
- Aims to make contact within 24 hours of discharge.
- Reviews feed and medication administration.
- Monitors stoma site care and condition.
- Orders giving sets and syringes.
- Orders replacement tubes and extension sets.
- Direct link with Hospital Diversion Nursing Team.
- Take blood/swab samples for requested tests as required.

**Community Dietitian**
- Hospital Dietitian will provide telephone review within first 2 weeks of discharge.
- Aims to visit within 2 - 4 weeks.
- Reviews current feeding regimen based on nutritional requirements
- Provides feeding regimen
- Advises on feed related problems.
- Monitors weight and feed tolerance
- Links with all community health care team
- Links with GP to amend prescription
- Liaises with Hospital Dietitian if re-admitted to hospital

**Local Pharmacist**
- Provide feed delivery / collection.
- Medication review via tube.
- Provides advice on suitable forms of medication via tube.

**GP**
- Provide prescription for feed, sterile water and medications.
- Refer to other services for assessment and support e.g. SLT.
- Arrange blood tests as required.

**Hospital Diversion Nursing Team**
- Supports the role of Community Nurse
- Addresses stoma site problems
- Replaces balloon gastrostomy or button feeding tubes
## USEFUL CONTACT NUMBERS

<table>
<thead>
<tr>
<th>Service</th>
<th>East Antrim Area</th>
<th>Antrim / Ballymena Area</th>
<th>Mid Ulster Area</th>
<th>Causeway Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day Surgical Procedure Unit</td>
<td>No contact</td>
<td>(028) 94422458</td>
<td>No contact</td>
<td>(028) 7034 6105</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Or Stoma Nurse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(028) 7034 6264</td>
</tr>
<tr>
<td>Community Nurse</td>
<td>Contact Health Centre</td>
<td>Contact Health Centre</td>
<td>Contact Health Centre</td>
<td>Contact Health Centre</td>
</tr>
<tr>
<td>General Practitioner</td>
<td>Contact Health Centre</td>
<td>Contact Health Centre</td>
<td>Contact Health Centre</td>
<td>Contact Health Centre</td>
</tr>
<tr>
<td>Hospital Dietitian</td>
<td>(028) 9055 2294</td>
<td>(028) 9442 4152</td>
<td>(028) 7936 6853</td>
<td>(028) 7032 7032</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ext. 5545</td>
</tr>
<tr>
<td>Community Dietitian</td>
<td>(028) 9055 2292/2377</td>
<td>(028) 2563 5224</td>
<td>(028) 7936 6853</td>
<td>(028) 2766 0355 Exl</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(028) 2563 5549</td>
<td></td>
<td>(028) 7034 4831 Exl</td>
</tr>
<tr>
<td>Speech &amp; Language Therapist</td>
<td>(028) 90552328 (Whiteabbey)</td>
<td>Antrim: (028) 9442 4442</td>
<td>(028) 7936 6970</td>
<td>(028) 7034 7859</td>
</tr>
<tr>
<td></td>
<td>(028) 2826 6133 (Moyle)</td>
<td>B’mena: (028) 2563 5498</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Community Pharmacist: - 

Enteral Feeding Pump Rep: -

---

Looking After Your Gastrostomy Feeding Tube produced by the Northern Trust Nutrition and Dietetic dept, February 2012. To be revised February 2013.