

PEGs and Balloon Replacement Tubes: A Nurse Led Service

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Objectives

- ▶ Outline who should and should not have a PEG
- ▶ Risks
- ▶ Describe the differences between, and features of, various feeding tubes
- ▶ Briefly outline the initial insertion process
- ▶ Discuss the nurse led service in Southern DHB
- ▶ Provide examples of patient information post insertion

The Plan

- ▶ Who
- ▶ What
- ▶ Why (and why not)
- ▶ Where
- ▶ When
- ▶ How
- ▶ Risks



"Our cable is out of whack. The only channel we get is the Gourmet Food Channel."

WHO?

- ▶ WHO - patients who are unable to ingest sufficient nutrition and fluids to maintain ideal body weight for more than 30 days.



WHAT?

- ▶ Percutaneous Endoscopic Gastrostomy (PEG) tube is inserted with endoscopic guidance. Once the stoma has been established (6 months or more) the PEG can be replaced by a Balloon Replacement Tube (BRT).
- ▶ Feeding tubes can also be placed in radiology (RIG) if there is a problem with oral/ endoscopic access. BRT is used with a different technique.
- ▶ Medications and liquid nutrition can then be given to the patient and can be managed by themselves or their carer once they have been discharged.

WHY?

- ▶ Patients with diseases that limit their desire or ability to eat. Examples dementia, MND, stroke, oesophageal strictures, tumours, motility disorders (achalasia), major brain or facial trauma, premature or failure to thrive infants.
- ▶ Costs less than total parenteral nutrition. Maintains digestive tract health and function. Safer for the patient. Can be managed at home.



WHY NOT?

- ▶ Gastric outlet obstruction, anorexia nervosa, complete oesophageal obstruction, non-compliant patients, severe oesophageal reflux or gastric ulceration, low serum albumen.
- ▶ Jejunal feeding tubes can be added through a PEG (PEJ) if reflux or gastric motility is a problem.



WHERE?

- ▶ Initial insertion needs either radiographic or endoscopic guidance, so a tertiary care facility with gastroenterology service would be appropriate.
- ▶ Once the tract has been established it must be maintained. Damaged and dislodged tubes must be replaced quickly before the tract begins to close. Changing of the tube requires some training but is not difficult once the individual is confident.

WHEN?

- ▶ As soon as practicable. Maintaining nutrition after major trauma like CVA and brain injuries is important to the eventual recovery of the patient.
- ▶ Keeping a healthy gut by using it is also important, preventing atrophy of villi and maintenance of the mucosa, so intestinal bacteria don't migrate into the blood stream. Bile flow is also maintained, reducing the chance of cholelithiasis (gallstones).
- ▶ There is the opportunity for the PEG to be removed and the stoma allowed to close if normal and satisfactory oral intake can be recommenced.

HOW?

- ▶ Using endoscopic guidance, the tube is placed through a small incision made in the abdominal wall using sterile technique. Care must be taken to avoid large blood vessels and loops of the bowel.
- ▶ Once the tube is in place a tract (stoma) is established, which will remain for as long as a device is insitu. The stoma needs daily care to ensure a viable feeding pathway remains.

Endoscopic View



Radiologic View



Risks

- ▶ 1 month mortality 4.0% and 3 month mortality 8.1%
- ▶ Muratori, R, Lisotti, A, Fusaroli, P, Caponi, A, Gibiino, G, Eusbei, L, Altimari, G & Bazzoli, F (2017) Severe hyponatremia as a predictor of mortality after percutaneous endoscopic gastrostomy (PEG) placement. *Digestive and Liver Disease*, 49(2). 181-187.
- ▶ 1 month mortality 15% for patients with dementia
- ▶ Abu, R, Khoury, T, Cohen, J, Chen, S, Yaari, S, Dhaer, S, Benson, A, Mizrahi, M (2016) PEG insertion in patients with dementia does not improve nutritional status and has worse outcomes as compared with PEG insertion for other indications. *Journal of Clinical Gastroenterology*. Aug 2016 Epub
- ▶ For the older age group 1 month 11.3% and 3 month 28.3% (study group with median age of 77)
- ▶ Kara, O, Kizilarlanoglu, M, Canbaz, B, Arik, G, Varan, H, Kuyumcu, M, Kilic, M, Sumer, F, Yesil, Y, Yavuz, B, Cankurtaran, M, Ozturk, O, Kav, T, Halil, M (2016) Survival after percutaneous endoscopic gastrostomy in older adults with neurologic disorders. *Nutrition in Clinical Practice*. May 2016 Epub.

Nurse Led Service

- ▶ Planning the insertion appointment, organising the ward admission and contributing to patient education pre-procedure
- ▶ PEG patient and carer information pamphlet
- ▶ PEG checklist
- ▶ First assist for the PEG insertion (skin side)
- ▶ PEG competency on the NZGNC website
- ▶ Ward post insertion care sheet
- ▶ Patient post discharge care sheet
- ▶ Tube maintenance service, including phone assistance to carers, patients and care centres.
- ▶ Drop in tube changing service including traction removal of initial device
- ▶ Training for patient, carers and care centre staff in changing balloon tubes at home.
- ▶ Resources nurses for hospital services including dieticians, paediatrics, oncology and ED

Ward post insertion care sheet

WARD INFORMATION - PEG FEEDING TUBE

Patient Label

Date of insertion: _____

This patient has had a PEG (Percutaneous Endoscopic Gastrostomy) inserted.

METICULOUS HANDWASHING IS MANDATORY PRIOR TO HANDLING THE PEG

Patient Care

- ❖ Check insertion site (report bleeding, pain, swelling, erythema)
- ❖ Check abdomen (signs of peritonism, bowel sounds)
- ❖ Check vital signs (BP, Pulse ½ hourly for 2 hours then hourly for next 4 hours, and then as required)

Feeding

- ❖ **Nil by Mouth and Nil by Tube for 4 hours**
- ❖ If the patient is well after 4 hours, the PEG should be tested by injecting water through the feeding port – i.e. 50mls of tepid water in a 60cc syringe
- ❖ If this is tolerated – feeding can be commenced or resumed as per dietician's instructions
- ❖ Patients need to be semi recumbent (at least 45 degrees) or, ideally, sitting upright for feeding
- ❖ Patients prone to regurgitation – consider low volume continuous feeding

After the procedure it is crucial that patients and/or carers are familiar with the day-to-day care of the tube. The nurse will ensure that the patient/carer understands what is involved. The information sheet "PEG Feeding Tube – Patient Information" should be explained and given to the patient before discharge. Pharmacy and dietician service should also go through medications and an appropriate feeding regimen. The patient is expected to remain in hospital until this has been achieved but can usually be discharged the day after insertion.

TUBE CARE AFTER FIRST 4 HOURS

Before use:

- ❖ Check the skin measurement of the tube prior to feeding to confirm it hasn't dislodged or moved.
- ❖ Check for signs of infection at the stoma site, report any unusual findings.
- ❖ Ensure the bolster is slightly off the skin (approx 0.5 cm)
- ❖ Flush the tube with water before and after each use with the amount indicated by the dietician.
- ❖ Avoid putting tension on the tube or pinching or clamping
- ❖ Check for leakage around site and assess skin integrity – dressings should be changed regularly and are not recommended after the first couple of days.
- ❖ Observe for signs of nausea, vomiting, diarrhoea, abdominal distension or cramping as any of these may indicate tube migration – Contact Gastroenterology Dept (Ext 8292) immediately if this occurs.
- ❖ Each day hold the tube out from the body and rotate 360 degrees, then a further 90 degrees.

Blocked tube:

- ❖ If tube appears to be blocked – flush with warm water and if the problem persists contact the Gastroenterology Department (Ext 8292).

Accidental tube removal:

- ❖ If the tube is accidentally dislodged and the PEG has only recently been inserted (within the preceding six weeks), cover the stoma opening with an occlusive dressing and contact the Gastroenterology Department (Ext 8292). The gastrostomy may need to be re-inserted as the tract into the stomach will not have matured and should not be used for further feeding.
- ❖ If the tube dislodges and the gastrostomy tract is well established it is important to keep the tract open with a tube of the same size.
 - Insert a balloon gastrostomy if one of suitable size is available.
 - Alternatively insert a urinary catheter of the same Fr size, inflate the retention balloon and tape the external tube to the skin. Feeding and medication can continue through the IDC until a replacement tube is arranged through Gastroenterology Dept.

Patient post discharge care sheet

PATIENT INFORMATION – PEG feeding tube.

Patient Label

Date of insertion: _____

This information sheet is to be given to the patient and carers before discharge

After the procedure it is crucial that patients and/or carers are familiar with the day-to-day care of the tube. The nurse should ensure that the carer/patient understands what is involved. The pharmacist and dietician should also go through medications and an appropriate feeding regimen. The patient is expected to remain in hospital until this has been achieved but can usually be discharged the day after insertion. The retention bolster should be checked before discharge and the measurement at the top of the bolster should be written here:

_____ cm top of the bolster.

METICULOUS HANDWASHING IS MANDATORY PRIOR TO HANDLING THE PEG

FEEDING and MEDICATIONS

Before use:

- ❖ Flush the tube with water **before AND after** each use with the amount indicated by the dietician.
- ❖ Check the position of the bolster. Top of the bolster should be in the same position (see above) each time. Gently slide the bolster back to usual position if it has moved.
- ❖ Avoid pulling hard on the tube while accessing.

TUBE and SKIN CARE

Each day:

- ❖ Hold the tube out from the body and rotate 360 degrees, then a further 90 degrees.
- ❖ Check for leakage around site and assess skin condition – dressings are not recommended after the first couple of days.
 - If leakage is occurring, check bolster position.
 - If leakage continues and is concerning, contact Gastroenterology Dept.
 - If skin looks inflamed and feels sore, patient feels hot or unwell, contact your GP.
- ❖ Use usual skin cleaner (soap/soap free wash/sorbelene/etc) to gently wash behind bolster, rinse well and gently pat dry.
- ❖ Ensure the bolster is slightly off the skin (approx 0.5 cm).
- ❖ Observe for signs of nausea, vomiting, diarrhoea, abdominal distension or cramping as any of these may indicate a problem with the tube – Contact Gastro Dept immediately if this occurs.

TUBE PROBLEMS

Blocked tube:

- ❖ If tube appears to be blocked – look at the tube and attempt to locate the blockage. Squeeze the tube GENTLY at this point to break up the blockage then flush with warm water. If the blockage persists, contact your GP or the Gastroenterology Department.
- ❖ Preventing the blockage is best:
 1. Ensure feed is shaken/mixed well before putting through the tube.
 2. Ensure tablets are well crushed and diluted or consider changing medication to liquid form.
 3. Ensure the tube is flushed before and after use.

Tube is dislodged:

- ❖ If the tube falls out within six weeks of insertion cover the hole on your abdomen with an occlusive dressing and contact the Gastroenterology Dept using the details listed in the box below.
- ❖ If your tube has been in for more than 6 weeks it is very important to keep the hole it was inserted into open. This hole will close in just a few hours so immediate action is needed. (If allowed to close, you may need another procedure to make a new one, so the importance of replacing the tube ASAP cannot be overstated). If available, a balloon gastrostomy or similar sized urinary catheter can be gently placed in the hole to keep it open but this should only be done after receiving appropriate training. Otherwise contact the Gastroenterology Dept using the details listed in the box below

GASTROENTEROLOGY DEPARTMENT

(03) 474 0999 ex 8292 Until 4.30pm Mon-Fri

**After hours contact the Dunedin Hospital Emergency
Department.**

A PEG tube will last for as long as it is properly cared for. Most will last over 12 months.

Once the original tube perishes it will need to be replaced. Usually this will be with a balloon feeding tube. These types of devices do need to be changed more frequently (3-6 monthly) as the balloon can deflate or perish in the stomach. It is a very quick and easy procedure to change these.

A low profile (or button) gastrostomy can also be considered when changing to a balloon device. The device sits close to the skin and can be more easily concealed under clothing and swimwear. Please talk with the Gastroenterology Dept nursing staff if you would like more information on this.