	Enteral (Nasogastric) Feeding Procedure	**Procedure Number** *WCDHB-PN-0120*	**Version Nos:** **4**

1. Purpose

This Procedure outlines the process for the planning, administering and monitoring of enteral (Nasogastric) feeding to West Coast District Health Board (WCDHB) patients by WCDHB clinical staff members.

2. Application

This Procedure is to be followed by all WCDHB clinical staff members.

3. Definitions

For the purposes of this Procedure:

Enteral Nutrition is taken to mean the infusion of a liquid diet directly into the GI tract via a naso-gastric or entero-cutaneous tube. Use of enteral feeding is associated with preservation of gut integrity, barrier and immune functions and reductions in septic complications.

4. Responsibilities

For the purposes of this Procedure:

Medical Staff are required to:
- Assess whether nutrition support is required for a patient and if necessary, decide on the safest, simplest, most effective route for the patient eg food fortification, supplement drinks, feeding via a tube into the GI tract or giving nutrients IV (Parenteral Nutrition);
- Arrange for the collection and recording of monitoring data;
- Daily review and if modifications are required to the feeding regime, discuss these with the Dietitian.

Nursing Staff are required to:
- Obtain the patients most recent height and weight;
- Make referral to the Dietitian once a decision has been made to commence an enteral feed;
- Insert the Nasogastric (NG) tube and check placement;
- Set up and change the giving set every 24 hours;
- Check gastric aspirates four hourly for the first 24-48 hours;
- Ensure the feed is correctly stored, prepared and administered.

Dietitian is required to:
- Assess nutritional requirements and decide on the appropriate feed;
- Provide the feeding regimen and discuss this with the nursing staff;
- Arrange the supply of feed to be dispensed to the ward daily from the kitchen;
- Take feeding pump to the Ward.

Kitchen Staff are required to:
- Arrange for a supply of the feed from the pharmacy so that this can be sent daily to the Ward as per the Dietitians' request

5. Resources Required

This Procedure requires:

i) NG tube

ii) Flocare Micromax feeding pump

iii) Giving sets

iv) Feed

v) Patient's Clinical Record

6. Process

1.00 Introduction

1.01 Indications for use if a patient needs nutritional support and the GI tract is accessible and functioning:
i) Severe malnutrition – weight loss >10%, albumin <30g/L, muscle wasting and peripheral oedema; and/or
ii) Moderately malnourished but would be expected to develop significant malnutrition in the short term as a result of an underlying condition eg head and neck cancers or advanced MND; and/or
iii) Normally nourished but unable to commence normal feeding for a considerable length of time (>3-4 days) e.g. post stroke; and/or
iv) Unable to meet nutritional requirements via oral diet alone

1.02 Contraindications for enteral feeding:
i) Major intra-abdominal sepsis
ii) Total obstruction of GI tract or abdominal distension of unknown pathology

1.03 For patients requiring feeding for more than 6-8 weeks, a PEG is the technique of choice.

2.00 Planning and Administering the Feed

2.01 The Dietitian needs to be contacted to estimate the patients requirements, choose the appropriate feed and provide the feeding regime. An accurate weight and height are required for this.

2.02 The NG tube needs to be placed following the WCDHB Nasogastric Insertion of Tube Procedure.

2.03 The Flocare Micromax feeding pump is situated in a cupboard outside the Speech Language Therapist's office in Hannan Ward (Grey Base Hosptial). The key to this cupboard is available from the Dietitians, or from main reception if the pump is required after hours.

2.04 The giving sets are available from stores. If a bottle for decanting is required these are also from stores and a universal giving set is required for these bottles.

2.05 The appropriate feed will be charted in the kitchen by the Dietitian. The kitchen staff will arrange the feed to come from Pharmacy to them and they will deliver the required amount to the ward each day.

2.06 The formula selection is based on the patients requirements. The standard formula is Nutrison – it is a complete diet that contains 1 kcalorie per ml. This comes in a 1000ml ready to hang (RTH) and is usually fed continuously by pump. Other modified formula are available if required for specific disease states such as respiratory disease and diabetes. There are feeds that contain fibre that are used for long-term feeding.

2.07 The feed should be at room temperature to avoid discomfort for the patient. Decanted feeds need to be removed from the refrigerator 30 minutes prior to starting the feed.

2.08 Once the tube is in situ and the placement has been checked via x-ray, the feeding regimen may be commenced.

2.09 The head of the bed should be raised to 30-45 degrees while feeding to reduce the risk of aspiration and left at this angle for an hour after the feed has finished.

2.10 The feeding regime will be started at a low rate and gradually increased until it is meeting the patients estimated requirements. The volume and rate may be increased or decreased depending on patient tolerance, fluid and energy requirement. Normally the regimen starts at 30-50ml per hour of full strength formula and advances 10ml every 4 hours if the previous rate was tolerated and gastric aspirates are normal.

2.11 The tube needs to be flushed with 30ml of warm water before and after the feed, 8 hourly during continuous feeding and before, between and after medication.

2.12 Initially for patients not taking any food or fluid orally, stomach contents should be aspirated every 4 hours for the first 24-48 hours, to assess gastric emptying. If more than 200ml is aspirated, the aspirate should be returned and the feed withheld for 1 hour. The aspirates should be rechecked and if they remain high, feeding stopped and the tube placement and bowel sounds should be checked.

2.13 As the rate and volume increase, IV infusion will need to be decreased. The patient should be meeting their full nutrient and fluid requirement within 48-72 hours.

2.14 The maximum hang time for a RTH formula is 24 hours.

2.15 The giving set needs to be changed after 24 hours use.

3.00 Monitoring

3.01 Daily:

- Fluid balance
- Nutrient Intake from enteral and oral nutrition
- GI function eg bowel activity, nausea, vomiting, abdominal distension
- NG tube position before feed begins – pH less than or equal to 5 using pH paper

3.02 Twice weekly and as clinically indicated:

- Body weight
- Hepatic Secretory Proteins eg albumin, transferrin
- Creatinine and urea
- Electrolytes
- Blood Glucose

3.03 Other Tests:

- Trace elements will need to be monitored during prolonged enteral feeding.

4.00 Problems and Complications – Possible Causes

4.01 Diarrhea

- Too rapid administration of the feed therefore may need to decrease the volume given and the rate
- Causes not related to enteral nutrition such as antibiotic treatment

4.02 Nausea, vomiting, large aspirates

- A condition causing delayed gastric emptying
- Overfeeding – need to withhold feed for three hours and recommence at a lower rate

4.03 Abdominal Discomfort

- Solution too cold
- Gastric distension
- Too rapid administration

7. Precautions And Considerations

➔ The Dietitian needs to be contacted for the estimated requirements and feeding regime including the appropriate feed to use

➔ The NG tube needs to be placed following the WCDHB Nasogastric Insertion of Tube Procedure

➔ Once the tube is in situ and the placement has been checked via x-ray, the feeding regimen may be commenced.

8. References

Gillanders, Lyn. NZDA 2007 Clinical Handbook – 8th Edition. Wellington 2007.

9. Related Documents

WCDHB Nasogastric Insertion of Tube Procedure

WCDHB Informed Consent procedure

WCDHB Clinical Documentation Procedure

Revision History		
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