



POLICY: **Adult Enteral Nutrition – Acute and Personal Care Home Clients**

Program Area: **Across Care Areas – Acute and PCH Clients**

Section: **General**

Reference Number: **CLI.4110.PL.023**

Approved by: **Regional Lead – Acute Care & Chief Nursing Officer**

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PURPOSE:

- To provide an evidence informed standardized approach to the care and maintenance of enteral nutrition provided via tube feeding.
- To minimize risks of adverse events/complications and improve safety for the client receiving enteral nutrition.
- This policy is **not** intended for Home Care Clients. Clients in the community who require enteral nutrition follow Manitoba Home Nutrition Program policies and guidelines.

BOARD POLICY REFERENCE:

Executive Limitation (EL-02) Treatment of Clients

Executive Limitation (EL-03) Treatment of Staff

Executive Limitation (EL-01) Global Executive Restraint Risk Management

Executive Limitation (EL-07) Corporate Risk

POLICY:

Southern Health-Santé Sud supports the use of enteral nutrition in those clients whose nutritional needs cannot be met with oral intake or when oral feeding is contraindicated.

DEFINITIONS:

Bolus Tube Feed – delivery of nutrition via gravity, provided in small amounts multiple times per day at specific times, as tolerated.

Buried Bumper Syndrome – migration of the internal bumper of the Percutaneous Endoscopic Gastrostomy (PEG) tube into the abdominal wall.

Client – any individual that is the recipient of health care services. Client is used interchangeably with resident (in personal care homes (PCH)) and patient (in acute care or transitional care centers).

Continuous Tube Feed – delivery of nutrition through a tube continuously over 24 hours.

Cyclic Tube Feed – delivery of nutrition via a tube feed pump, provided continuously for 10 to 20 hours within a 24-hour time period.

ENFit – ENFit™ is the new International Standard Organization (ISO) standard for connecting nutritional delivery systems such as feeding sets and feeding tubes. All Canadian nutritional delivery products will be equipped with ENFit™ connectors to reduce the frequency of medical tubing misconnections and improve patient safety.

Enteral Nutrition (EN) – provision of nutrients through a feeding tube, directly into the gastrointestinal tract. EN may provide partial or full nutritional requirements. For the purpose of this guideline, tube feeding (TF) is used interchangeably with EN.

G-Tubes – both the Gastrostomy Tube (G-Tube) and Percutaneous Endoscopic Gastrostomy Tube (PEG) are considered G-Tubes. What defines them is the procedure that is used for insertion. Gastrostomy tubes are surgically placed feeding tubes inserted directly through the abdominal wall into the stomach, while PEG tubes are endoscopically placed feeding tubes inserted through the abdominal wall and positioned directly in the stomach. In addition to this, the G-Tubes have 2 profiles – low profile and long shaft. The low-profile is flush to the skin, while the long shaft has up to 4 inches of exposed tubing past the abdominal wall.

Gravity Tube Feed – delivery of nutrition through a tube using gravity instead of a tube feed pump.

Intermittent Tube Feed – delivery of nutrition via a tube feed pump, typically provided in two to four hours intervals, multiple times per day.

Jejunostomy (J-Tube) – surgically placed feeding tube inserted directly through the abdominal wall into the jejunum.

Levin Tube – a tube that is inserted through the nose or oral cavity into the stomach, for the purpose of gastric decompression. It is NOT intended for use in feeding.

Nasoduodenal (ND) Tube – a feeding tube introduced through the nose and positioned directly in the duodenum section of the small intestine via radiology guidance.

Nasogastric (NG) Tube – a tube introduced through the nose and positioned directly in the stomach.

Nasojejunal (NJ) Tube – a small-bore feeding tube introduced through the nose and positioned directly in the jejunum section of the small intestine via radiology guidance.

Orogastric (OG) Tube – a tube introduced through the oral cavity and positioned directly in the stomach.

Percutaneous Endoscopic Jejunostomy (PEJ) – a feeding tube placed through the abdominal wall and positioned directly in the jejunum, via endoscopic placement.

Percutaneous Endoscopic Gastrostomy with Jejunal Extension (PEG-J) – a feeding tube placed through the abdominal wall directly into the stomach, with extension into the jejunum, via endoscopic placement.

Prescriber – a Health Care Professional who is permitted to prescribe medications and/or treatments as defined by provincial and federal legislation, his/her regulatory college or association, and practice setting.

Prokinetic agent – a type of medication that enhances gastrointestinal motility.

Refeeding Syndrome – potentially fatal shifts in fluids and electrolytes that may occur in malnourished patients receiving enteral or parenteral nutrition. These shifts result from hormonal and metabolic changes and may cause serious clinical complications.

Regulated Health Professions Act – Manitoba legislation that regulates health professions.

Reserved Act – a health care service or procedure that can only be performed by regulated health care professionals as defined by provincial and federal legislation, his/her regulatory college or association, and practice setting.

Small-Bore Feeding Tube (SBFT) – a type of feeding tube specifically designed for feeding that generally comes with a weighted tip and stylet for ease of insertion. It is used to access either the stomach or the small intestine. The exception is pediatric SBFT's.

IMPORTANT POINTS TO CONSIDER:

- For the purpose of this policy, prescribers include Nurse Practitioners (NP), Physicians, Physician Assistants (PA), Clinical Assistants (CA) and Registered Dietitians (RD).
- This guideline does not replace sound clinical judgement or Southern Health-Santé Sud site policies, but provides guidance on best practices for enteral nutrition support for adults. The Elsevier skills outline detailed procedures; however, it is important to confirm and cross-reference with this guideline, and check the “SH-SS Specifics” tab in each referenced skill to align with Southern Health-Santé Sud practice. **If recommendations in Elsevier contradict this policy, use this policy.**
- EN is the preferred and optimal method of nutritional support when:
 - Oral intake is inadequate to meet nutritional needs or is contraindicated.
 - The gastrointestinal (GI) tract is at least partially functioning.
- Every effort to feed via the GI tract is encouraged.
- Utilize Regional Purchasing Contracts and the CLI.4110.PL.023.SD.01 Regional Order Guide - Tube Feed Supplies for Enteral Nutrition to purchase tubing sets.
- For sites that do not have a Tube feed pump, supplies such as feeding sets, tubing, syringes, etc. and formula are available to order from the Regional Centres. For ordering process, reference CLI.4110.PL.023.SD.02 Criteria and Checklist for Sites that do not have a Tube Feed Pump.

Enteral Feeding Sets

- **Routine Use: Feed only Tubing Sets** - Use as the standard for clients on bolus, intermittent feeds and continuous feeds.
- **Special Considerations** - Feed and Flush Administration Tubing Sets: May use for clients on continuous tube feeds in the Special Care/Critical Care Unit. Use clinical judgement to determine if this is required.
- **Enteral Nutrition** requires extensive consideration. Use in **Palliative situations** remain a controversial topic, which requires inter-professional collaboration. Prior to the administration of EN, the entire Health Care Team carefully evaluate whether the benefits outweigh the risks, including whether or not any nutrition support will improve the length and quality of the client's life. It is important to consider the benefits and risks prior to initiating EN, as it is difficult to stop therapy after it has started. Use ORG.1810.PL.005.FORM.01 Ethical Decision Making Framework and Worksheet to assist with decision-making.
- SBFT tubes may be positioned to end in either the stomach or the intestine.
- Insertion and positioning of tubes that terminate in the intestine warrants additional training for nurses regardless of the type of tube that is used. Physicians, Physician Assistants, Clinical Assistants or Nurse Practitioners have authority to insert tubes that terminate in the intestine.
- The insertion of an NG or SBFT (stylet and weighted) into the stomach falls within the nursing scope of practice, and is considered a Reserved Act (Act #4) Not Requiring Additional Education, under the Regulated Health Professionals Act (RHPA). However, as part of professional practice expectations, Registered Nurses and Licensed Practical Nurses performing any skill are expected to be knowledgeable and competent in that skill and to seek out resources, and training to become competent if they are not, in order to safely work to their full scope of practice.
- Removal or replacement of a PEG is within the nursing scope of practice, once the stoma is healed.

- Tubes meant for gastric decompression (i.e. those referred to as Levin Tubes) are not intended to provide enteral nutrition. Verify that the correct tubing is being used for the intended purpose. **Do not use IV tubing or IV pumps for enteral feedings.**

Use of Enteral Nutrition

Indications	Contraindications
<ul style="list-style-type: none"> ○ Unable or unsafe to orally maintain/improve nutritional status. <ul style="list-style-type: none"> ● Unable to swallow ● Unable to eat ● Unable to eat enough ● Impaired digestion/absorption ○ Nothing by Mouth (NPO) for two days or longer ○ Significant malnutrition <ul style="list-style-type: none"> ● Protein-Calorie Malnutrition (PCM) or a risk of PCM with inadequate oral intake (more than two to five days). ○ Normal nutritional status with prolonged inadequate oral intake (more than seven to ten days). 	<ul style="list-style-type: none"> ○ Non-functional digestive system <ul style="list-style-type: none"> ● GI ischemia with hemodynamic instability ● Complete mechanical or non-mechanical bowel obstruction ● Perforated digestive tract ● High output enterocutaneous fistula (greater than 500 mLs) ● Severe vomiting/diarrhea ○ Extended bowel rest ○ Inability to access GI tract. ○ Inability to achieve adequate nutrition by oral or tube feeding (TF)

Monitor for Complications and Tolerance of EN

- Use a stepwise approach to assess for complications and tolerance of EN.
- Assess for the following:
 - Aspiration
 - Abdominal distension
 - Nausea/emesis
 - Bowel pattern (decreased bowels sounds)
 - Abdominal discomfort
 - Blood glucose control
 - Deterioration of hemodynamics or overall status

Gastric Residual Volume (GRV)

- Do not routinely assess GRV
 - The use of GRV's as a predictor of EN intolerance is controversial and may not be best practice. There is no consensus in the literature to confirm a safe level of GRV. Thresholds range from 120 to 500 mLs.
 - GRV's are ONE of several parameters that can be used to monitor the patient's tolerance to EN and should NOT be used in isolation.
- It may be appropriate to check GRV's when:
 - Establishing EN in acutely ill Special Care Unit (SCU) patients and as assessed and ordered by prescriber
 - The feeding tube terminates in the stomach. Do not assess GRV's when the tube terminates in the small bowel. This is not a safe practice.
- If ordered by prescriber, check GRV's using the following parameters:
 - Check GRV Q4H for 48 hours,
 - If GRV is less than 200 mLs, refeed aspirate, continue TF, recheck GRV in four hours,
 - If GRV is greater than 200 mLs, but less than 500 mLs, refeed aspirate, continue TF and consider starting prokinetic agent; if second GRV is greater than 200 mLs after prokinetic agent start, consult MD and/or
 - If GRV is greater than 500 mLs discard aspirate, hold TF and notify the prescriber.

Managing Complications

Aspiration

- Elevating the Head of Bed (HOB) is primary prevention of aspiration.
- HOB is always greater than 30 to 45 degrees or Reverse Trendelenburg during EN administration, unless otherwise contraindicated.
- Maintain 30 to 45 degree position for 30 minutes post intermittent/bolus feeds.

Refeeding Syndrome

- Refeeding Syndrome can occur due to rapid feeding after a period of malnutrition. The syndrome usually occurs 24 to 48 hours after refeeding has started. Any patient who has had little or no nutrition over five days is at some risk. Severely malnourished patients are at very high risk of developing Refeeding Syndrome.
- Refeeding (oral, enteral or parenteral nutrition) triggers a switch from fat to carbohydrate metabolism, with consequent insulin release; depleted thiamine stores; and increased shift of potassium, phosphate, magnesium and water into cells.
- Monitor for the following signs and symptoms:
 - Muscle weakness, respiratory +/- cardiac failure, paralysis, coma and rebound hypoglycemia.
- Actions
 - Identify risk
 - Consider thiamine supplement
 - Feed and hydrate gradually
 - Restore circulatory volume cautiously
 - Monitor electrolytes

PROCEDURE:

1. Refer to the indications/contraindications of EN and the Ethical Decision Making Framework and Worksheet (ORG.1810.PL.005.FORM.01).
2. Consult with the health care team to determine if EN is clinically and ethically appropriate.
3. Engage with the client/alternate decision maker to determine if the intervention aligns with their wishes. Document in the medical chart.
4. Nursing to ensure all equipment and supplies are available.
 - Small Acute Facilities – Refer to CLI.4110.PL.023.SD.02 Criteria and Checklist for Sites that do not have a Tube Feed Pump to determine capability of starting a tube feed.
 - Refer to the Quick Reference Guide and Operation and Service manual if needed, to operate the system.
 - EN pumps are centrally stored at the Regional Centres. Reference ORG.1913.PR.001 Tube Feed Pump - Equipment Management if a Tube Feed Pump is required.
 - Compatible Tubing Sets are required for the EN pump to work. Connect with Supply Chain Management (SCM) to order approved tubing sets, based on the current provincial contract and the Standardized Tube Feeding Supplies List for purchasing. Reference ORG.4110.PL.023.SD.01 Regional Order Guide - Tube Feeding Supplies for Enteral Nutrition.
5. If EN is indicated as per above, and ordered by prescriber, implement and follow the Enteral Nutrition Standard Order (CLI.4110.PL.023.FORM.01).
 - Document an accurate and recent weight, prior to establishing EN.
 - PCH client - weight requirements to be determined individually, minimum monthly as per PCH Standards.
6. Follow CLI.8011.PL.001 Hand Hygiene and maintain clean technique throughout initiation and maintenance of EN.

7. If it has been determined the client is nil per os – nothing by mouth (NPO), post the “No Food, Drink or Medication by Mouth” (CLI.6310.SG.013.SD.01). Write the date and time NPO started on the poster.
8. Reference the Enteral Nutrition Section of Elsevier Skills. Be sure to Check – “SH-SS Specifics” tab section on Elsevier. Discrepancies are noted under each skill below.
 - [Feeding Tube: Verification of Placement](#)
 - Before initial set up of enteral feeds, confirm tube placement with radiology to ensure the tube is in the correct position/location. Do not begin the initial enteral feed until correct placement is confirmed.
 - [Feeding Tube: Irrigation – CE](#)
 - Use room temperature tap water (safe drinking water) for flushes
 - [Feeding tube: Medication Administration -CE](#)
 - Flush minimum 15 mLs between meds
 - [Feeding Tube: Enteral Nutrition via Nasoenteric, Gastrostomy, or Jejunostomy Tube – CE](#)
 - Head of Bed greater than 30 to 45 degrees during feed and 30 minutes post feed
 - Follow SH-SS guideline for GRV’s
 - [Feeding Tubes: PEG, Gastrostomy, and Jejunostomy Care – CE](#)
 - NOTE: Do not disturb stoma for first 48 hours unless necessary (e.g. excessive drainage, signs of infection, etc.); notify physician if any concerns
 - For the first 48 –72 hours the stoma tract is considered an open wound
 - For cleaning and bolster rotation recommendations, refer to the “extended text” tab
 - [Low Profile Gastrostomy Tube Replacement or Removal – CE](#)
 - If tube feeding is no longer needed, it is important to leave the tube in place for a minimum of four to six weeks to allow maturation of stoma.
 - [Long Shaft Gastrostomy Tube Replacement or Removal – CE](#)
 - If tube feeding is no longer needed, it is important to leave the tube in place for a minimum of four to six weeks to allow maturation of stoma.
 - [Nasogastric or Orogastric Tube: Insertion and Removal -CE](#)
 - [Feeding Tube: Small-Bore Insertion, Care and Removal - CE](#)

Cleaning

- EN Tubing: Clean the connection and the port daily at a minimum, with water and 2x2 gauze or cotton tipped applicator, as required.
- EN Pump: Refer to the Cleaning and Disinfection section within the Operation and Service manual.

Documentation

Includes, but is not limited to:

- Actions taken to determine appropriateness of EN, capturing the interdisciplinary team members involved in decision-making.
- All discussions with client/alternate decision maker, including the risk and benefits identified, and health teaching provided.
- Type of feeding tube inserted, insertion site, how the tube placement was confirmed, initial external length of feeding tube, and how the procedure was tolerated.
- Fluid balance record, including formula type, hourly intake, flush volume and aspirate volume, if indicated. It is important to document formula/flush volumes separately on this record.
- All system assessments; feeding tolerance; any complications identified; insertion site assessment and care; and feeding system changes.

Discharge Planning

- If a client is required to continue EN at home, refer to the Manitoba Home Nutrition Program.

- If a client is required to continue EN and transferred to Transitional Care Centre or PCH, sending facility ensures the receiving facility has the required education and supplies to be able to accommodate the client. References the interfacility transfers sections below.

Interfacility Transfers within Southern Health-Santé Sud

- The sending facility's bed utilization coordinator/Clinical Resource Nurse (CRN)/Registered Dietitian (RD) confirms if the receiving site requires a TF pump, enteral nutrition products and feeding tube supplies.
- If enteral nutrition products are needed, the bed utilization coordinator/CRN and/or RD, orders an adequate amount of enteral nutrition products from Nutrition and Food Services (NFS) and feeding tube supplies from Supply Chain.
 - The supply order needs to contain the receiving facility's account information.
- If TF pump is required, refer to ORG.1913.PR.001 Tube Feed Pump - Equipment Management Procedure.
- The supplies accompany the client at the time of transfer.
- The receiving facility references this policy and ensure all supplies, enteral nutrition product are ordered as needed to continue EN.
- The admitting Physician or CRN continues the EN regimen based on the transfer or Physician orders and immediately refers to the site RD as per facility process.

Receiving Transfers from outside Southern Health-Santé Sud

- The receiving facility's CRN/RD confirms if the receiving site requires a TF pump, EN products and feeding tube supplies.
 - Checks with the NFS manager to confirm if enteral nutrition products are at the facility. Checks stores to ensure supplies are available at the site.
 - Checks the TF pump central storage area. References ORG.1913.PR.001 Tube Feed Pump - Equipment Management Procedure.
- If EN products and supplies are not available at the receiving site, the CRN/RD ensures the sending site sends adequate amount of EN product and supplies to the receiving facility. The supplies accompany the client at the time of transfer.
- If EN products are needed, the CRN and/or RD, order an adequate amount of enteral nutrition products from NFS and feeding tube supplies from Supply Chain.
 - The supply order needs to contain the receiving facility's account information.
- The receiving facility references this policy and ensure all supplies, EN product are ordered as needed to continue EN.
- The admitting Physician or CRN continues the EN regimen based on the transfer or Physician orders and immediately refers to the site RD as per facility process.

SUPPORTING DOCUMENTS:

CLI.4110.PL.023.FORM.01	Enteral Nutrition Standard Order
CLI.4110.PL.023.SD.01	Regional Order Guide – Tube Feed Supplies for Enteral Nutrition
CLI.4110.PL.023.SD.02	Criteria and Checklist for Sites that do not have a Tube Feed Pump

REFERENCES:

ORG.1913.PL.001	Preventative Maintenance on Equipment
ORG.1913.PR.001	Tube Feed Pump – Equipment Management
CLI.4110.PL.018	Oral Hygiene Policy
CLI.6310.SG.013.SD.01	No Food, Drink or Medication By Mouth
CLI.8011.PL.001	Hand Hygiene
ORG.1810.PL.005.FORM.01	Ethical Decision Making Framework and Worksheet

Elsevier Clinical Skills (2022) <https://point-of-care.elsevierperformancemanager.com/skills>

Shared Health (2022) [Learning Management System](#) - Kangaroo OMNI Demo

[Enteral Nutrition Resources – Health Provider Site \(HPS\)](#)

2014 Canadian Do Not Crush List, University of Manitoba, Faculty of Pharmacy

Safe Handling of Medications – Pharmacy – WRHA

http://home.wrha.mb.ca/prog/pharmacy/drugs_safehandling.php

Enteral Compromised Dosage Form List

Dissolve and Dose Instructions

Crush, Dissolve and Dose Instructions

Canadian Virtual Hospice Resources

[Lack of Appetite and Loss of Weight](#)

[When Death is Near](#)

[Help with Eating](#)

<https://swallowingdisorderfoundation.com/>

[Body image and dysphagia](#) by Dr. Michelle Fingeret

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2440847/>

<https://onlinelibrary.wiley.com/doi/full/10.1002/ncp.10474>

<https://onlinelibrary.wiley.com/doi/full/10.1002/ncp.10615>

Canadian Malnutrition Task Force – Why NPO Is not a healthy diet order for hospitalized patients June 2014

2017 WRHA Adult Enteral Nutrition Clinical Practice Guideline

American Society for Parenteral and Enteral Nutrition. [A.S.P.E.N]. (2009). Enteral nutrition practice recommendations. *Journal of Parenteral Enteral Nutrition*, 33(2), 122-167.

Bankhead, R., Boullata, J., et al. (2009) American Society of Parenteral and Enteral Nutrition, Enteral Nutrition Practice Recommendations: Special Report. *Journal of Parenteral and Enteral Nutrition*.

Infection prevention and control of healthcare associated infections: Enteral Feeding. (2012) National Institute for Health and Clinical Excellence, The Royal College of Physicians, London.

Ojo, O. (2014). Problems with use of a Foley catheter in enteral tube feeding. *British Journal of Nursing*, 23(7), pp. 360-2, 364.

Perry, A, Potter, P. & Ostendorf, W (2014) *Clinical Nursing Skills & Techniques –8th Edition*. St. Louis, Missouri: Elsevier/Mosby: Chapter 31-Enteral Nutrition.

Khair, J. (2005) Guidelines for testing the placing of nasogastric tubes. *Nursing Times*, 20, 26-27.

Morton, P. G., Fontaine, D. K. (2013). *Critical Care Nursing: A Holistic Approach*. 10th ed. Lippincott, Philadelphia. Enteral Nutrition and Delivery pp 893-905.

Polisena, Julie. (2008). Foley Catheters for Gastrostomy or Jejunostomy Feeding Tubes: A Review of the Guidelines and Clinical Evidence. Health Technology Inquiry Service (HTIS)

Simons, S. & Abdallah, L. (2012). Bedside assessment of enteral tube placement: Aligning practice with evidence. *American Journal of Nursing*, 112(2), 40-46.

Handbook of Drug Administration via Enteral Feeding Tubes, 3rd Edition 2015 on behalf of British Pharmaceutical Nutritional Group