

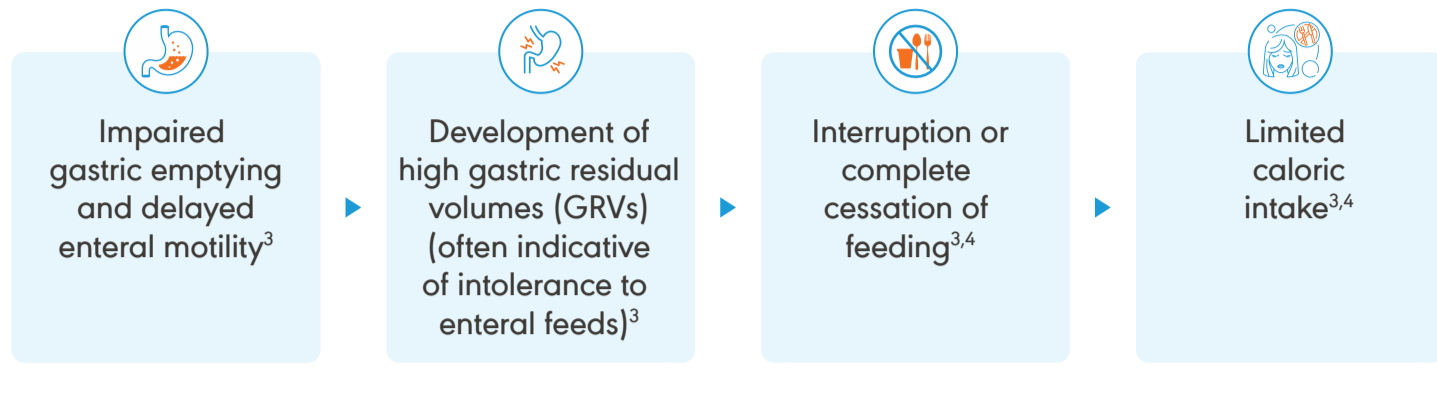
CHALLENGES OF GASTRIC FEEDING AND BENEFITS OF POSTPYLORIC FEEDING

ESPEN 2019 and ASPEN 2016 guidelines recommend initiation of enteral nutrition (EN) within 24-48 hours following the onset of critical illness and admission to ICU and increase goals over the first week of ICU stay.^{1,2}

- Can be achieved through feeding into the stomach (gastric) (known as pyloric/prepyloric feeding), or through feeding into duodenum/jejunum (post-pyloric feeding)³

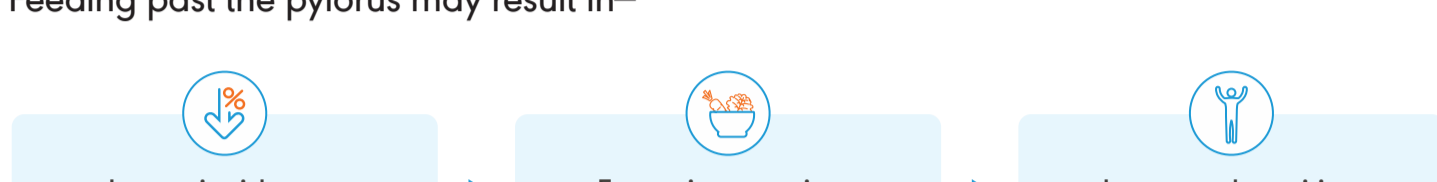
Prepyloric and postpyloric feeding: Making the choice

Certain conditions such as shock, sepsis, traumatic brain injury or pharmacological agents commonly used in the ICU setting (opioid analgesics, vasoactive, and paralytic agents) may predispose critically ill patients to develop impaired gastric emptying and decreased enteral motility.³



Can be seen in up to 60% of this patient population³

Feeding past the pylorus may result in—³

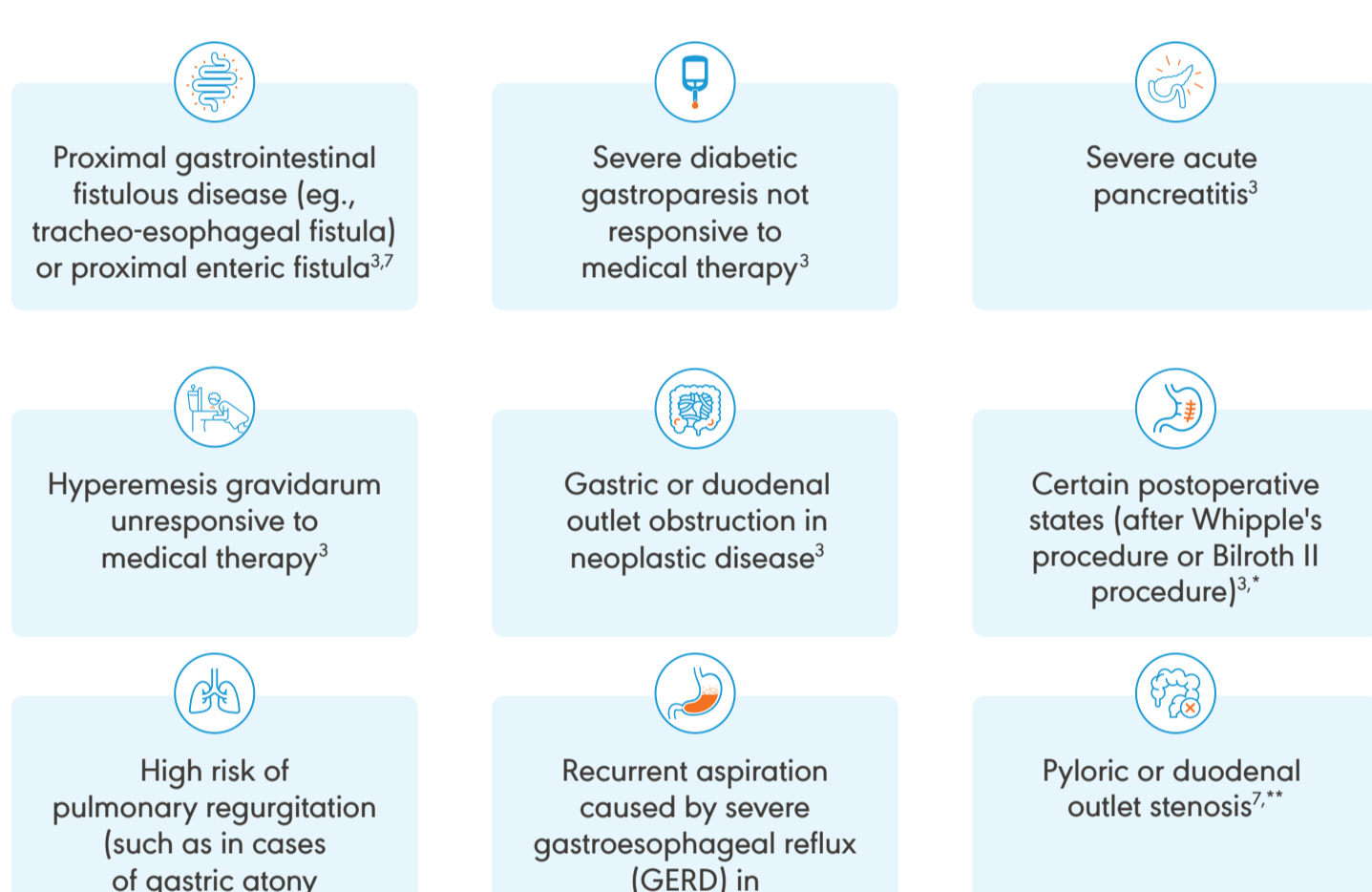


Post-pyloric feeding may reduce the rate of pneumonia (caused as a result of macroaspiration and microaspiration of gastric contents due to development of gastroesophageal reflux caused by high GRVs) and increase amount of nutrition delivered to the patient.⁴

Guideline recommendations for post-pyloric feeding

- **ESPEN 2019:**
 - In patients with gastric feeding intolerance not solved with prokinetic agents, post-pyloric feeding should be used²
 - In patients deemed to be at high risk for aspiration, post-pyloric feeding, mainly jejunal feeding can be performed²
 - In non-intubated patients with dysphagia, and a very high aspiration risk, post-pyloric EN can be performed²
- **ASPEN/SCCM 2016:**
 - Recommend diverting the level of feeding by post-pyloric enteral access device placement in patients deemed to be at a high risk for aspiration¹
- **ACG guidelines 2016:**
 - Conversion to post-pyloric feeding tube should be carried out only when gastric feeding has been shown to be poorly tolerated or the patient is at high risk for aspiration⁵
- **Canadian Critical Care Clinical Practice Guidelines 2015:**
 - Small bowel feeding should be considered for those select patients who repeatedly demonstrate high GRVs and are not tolerating adequate amounts of EN delivered into the stomach⁶

Clinical indications for post-pyloric feeding



Did you know ?

A recent clinical meta-analysis of pulmonary aspiration and nutrition-related outcomes of gastric vs. post-pyloric feeding showed that compared with gastric feeding, post-pyloric feeding was associated with—⁹

- Lower incidence rate of pulmonary aspiration, gastric reflux and pneumonia
- Less incidence of gastrointestinal complications including vomiting, nausea, diarrhea, abdominal distension, high GRV, and constipation
- More optimal gastrointestinal nutrition (including the percentage of total nutrition provided to the patient, the time to tolerate enteral nutrition, the time required to start feeding and the time required to reach nutritional targets)
- Shorter length of mechanical ventilation
- Shorter length of stay in ICU and stay in hospital

Our Solution

AVANOS CORFLO* Nasogastric/Nasointestinal Feeding Tube is a medical grade polyurethane feeding tube that has been specifically designed for patient comfort and safety during tube insertion and use.¹⁰

- It is intended for use in patients who require intermittent or continuous tube feedings via the nasogastric or nasointestinal pathway¹⁰



- **Medical grade polyurethane** remains soft and flexible throughout use^{11,12}
 - Offers larger lumen than silicone or PVC
 - Can remain in situ for as long as functional, hence excellent for long-term intubation
 - Maximum strength and kink resistance
 - Minimizes tissue irritation and reaction
 - Better deterioration and blockage resistance as compared to silicone tubes
- **Clear black markings** to identify tube dislodgements, aid in placement and check migration^{11,12}
- **Simple, water-activated C-19™ external and internal lubricant** eases insertion and improves patient compliance¹¹
- **Anti-clog exit port** that is 3x larger than the inner diameter of the tube to prevent clogging¹¹
- **Dual port** allows simultaneous feeding, flushing and/or medication delivery without unnecessary disconnection from feeding lines¹³
- **Tungsten weighted** (cylindrical shape for flexibility, following the natural course of nasopharynx into esophagus; maximizes patient comfort upon insertion) or **non-weighted** tubes^{10,11}
- **Braided** (to reduce removal friction, with safety distal loop tip to eliminate blunt ends) **stainless stylet or non-stylet options**^{12,13}
- Range in sizes from 5 Fr–12 Fr, available in a wide variety of neonatal, pediatric and adult sizes¹³
- **Radiopaque tube and tip**, with the entire tube visible under X-ray and fluoroscopy^{12,13}
- **No indicated dwell time.** Tube should be monitored, regularly assessed and replaced when clinically indicated based on functionality and patient condition¹³

*where the resultant postoperative edema may create a problem in gastric emptying⁴

**in malnourished oncological patients with gastric or pancreatic cancers who are waiting for definitive or palliative surgery and are required to improve their nutritional status⁷

ESPEN: European Society for Clinical Nutrition and Metabolism; ASPEN: American Society for Parenteral and Enteral Nutrition; SCCM: Society of Critical Care Medicine; ACG: American College of Gastroenterology

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1. Taylor BE, McClave SA, Martindale RG, et al. Guidelines for the provision and assessment of nutrition support therapy in the adult critically ill patient: Society of Critical Care Medicine (SCCM) and American Society for Parenteral and Enteral Nutrition (ASPEN). Crit. Care Med. 2016; 44(2):390-438. 2. Singer P, Blaser AR, Berger MM, et al. ESPEN guideline on clinical nutrition in the intensive care unit. Clin. Nutr. ESPEN. 2019; 38(1):48-79. 3. Sarao A, Kohli-Seth R, Sarao A, & Kohli-Seth R. Sarao, Arora, Ananddeep Singh, and Roopa Kohli-Seth. Controversies: Enteral Nutrition—Pyloric Versus Postpyloric. In: Ortopello JM, Pastores SM, Kvetan V, Ortopello J M, & Pastores S M, & Kvetan V (Eds.), Eds. John M. Ortopello, et al. eds. Critical Care. McGraw Hill, Accessed September 24, 2021. <https://accessmedicine.mhmedical.com/content.aspx?bookid=1944§ionid=143521314>. 4. Alkhwaja S, Martin C, Butler RJ, Gwady-Sridhar F. Post-pyloric versus gastric tube feeding for preventing pneumonia and improving nutritional outcomes in critically ill adults. Cochrane Database of Systematic Reviews. 2015(8). 5. McClave SA, DiBaise JK, Mullin GE, Martindale RG. ACG clinical guideline: nutrition therapy in the adult hospitalized patient. Am J Gastroenterol. 2016;111(3):315-34. 6. Critical Care Nutrition. Canadian Clinical Practice Guidelines 2015. Summary of revisions to the recommendations. [2015; cited 2022 Feb 15]. Available from: <https://www.criticalcarenutrition.com/docs/CNPG%202015/Summary%20CPGs%202015%20vs%202013.pdf>. 7. Niv E, Fireman Z, Vaisman N. Post-pyloric feeding. World J Gastroenterol. 2009;15(11):1281-1288. 8. Pearce CB, Duncan HD. Enteral feeding. Nasogastric, nasojejunum, percutaneous endoscopic gastrostomy, or jejunostomy: its indications and limitations. Postgrad. Med. J. 2002; 78(918):198-204. 9. Liu Y, Wang Y, Zhang B, Wang J, Sun L, Xiao Q. Gastric-tube versus post-pyloric feeding in critical patients: a systematic review and meta-analysis of pulmonary aspiration-and nutrition-related outcomes. Eur J Clin Nutr. 2021; 75(9):1337-48. 10. CORFLO* NASOGASTRIC / NASOINTESTINAL FEEDING TUBES IFU-Jan 2020. 11. CORFLO ANZ Flyer-2020. 12. CORPAK-6341_CORFLO_sell_sheet. 13. Avanos catalogue 2019_ANZ_DH.