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Long-Term Nutrition: A Clinician's Guide to Successful Long-Term Enteral Access in Adults

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Abstract

Long-term nutrition support requires long-term enteral access. To ensure the success of long-term enteral access, many factors need to be taken into consideration. This article represents a guide to placing and maintaining access in patients requiring long-term nutrition and addresses many of the common questions regarding long-term enteral access, such as indications, types of access, feeding after access placed, and recognition and treatment of potential complications. This guide will help the clinician establish and maintain access to maximize nutrition in patients requiring long-term nutrition. (*Nutr Clin Pract*. 2016;31:737-747)

Keywords

enteral nutrition; tube feeding; nutritional support; enteral access; gastrostomy; jejunostomy

Malnutrition is a state of sustained imbalance between the availability of nutrients and body requirements that results in a pathophysiologic state in which organ function is altered. Primary or secondary malnutrition has deleterious effects on our body systems, including impairment of gastrointestinal (GI), pulmonary, thyroid, muscle, and immune system functions.[1–5]

Several rapid screening tools have been validated for assessment of nutrition status, including the Subjective Global Assessment (SGA) and the Mini-Nutritional Assessment (MNA).[6–9] Other validated scoring systems, such as the Nutritional Risk Score 2002 (NRS-2002) or the Nutrition Risk in the Critically Ill (NUTRIC) score, are used for patients admitted to the hospital for whom future intake is anticipated to be insufficient.[10–13]

Once hospitalized patients with high nutrition risk are identified, initiation of nutrition therapy is necessary. Enteral nutrition (EN) is preferable over parenteral nutrition (PN) due to its ability to maintain gut integrity, reduce the inflammatory response, and support commensal bacteria.[14,15] EN supports the structural and functional integrity of the GI tract and should be initiated within 24–48 hours of admission in critically ill patients when no contraindications exist and as early as possible in non–critically ill patients. In those patients who are anticipated to require EN for >4 weeks, long-term enteral access may be necessary to provide the adequate nutrition requirements. This article discusses topics of long-term enteral access, including indications, types of access, feeding after access placed, and common complications.

Indications for Long-Term Access

Short-term access for feeding includes nasal/oral gastric tubes or nasal/oral small bowel tubes. Long-term access is generally required for those patients who cannot tolerate adequate oral intake for an extended period of time. Common indications for long-term access include patients with cancer (especially head and neck cancers), strokes, and disabling neurological disorders preventing the adequate intake of nutrition (Table 1).[16–22] However, in patients with dementia, long-term enteral access is controversial.[22] For long-term access, a transabdominal tube is needed, and a gastroenterologist, radiologist, or surgeon can place the enteral access device.

Once the clinician and patient determine the need for long-term enteral access, the type of access must be decided to optimize feeding for the patient's underlying condition. The choice of long-term access is dependent on patient- and disease-specific factors. Access techniques that have been described are percutaneous endoscopic gastrostomy (PEG), percutaneous endoscopic gastrojejunostomy (PEGJ), direct percutaneous endoscopic jejunostomy (DPEJ), radiographic percutaneous enteral access, and surgical enteral access (Table 2).[23–27]

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