



In this issue:

- 1..... Preoperative Nutrition Optimization of the Oncology Patient: A Scoping Review
- 2..... Association between early enteral nutrition and clinical outcome in patients with severe acute heart failure who require invasive mechanical ventilation
- 3..... Development of a Competency Model for Placement and Verification of Nasogastric and Nasoenteric Feeding Tubes for Adult Hospitalized Patients

Preoperative Nutrition Optimization of the Oncology Patient: A Scoping Review

Publication: *J Am Coll Surg* 2022;234:384–394.

Authors: Brajcich BC, Stigall K, Walsh DS, Varghese TK, Barber AE, Kralovich KA, Wescott AB, Pockaj BS, Ko CY and Laronga C

This scoping review was submitted by the Division of Research and Optimal Patient Care, American College of Surgeons, and designed to develop recommendations for general surgeons regarding preoperative nutritional support for patients with cancer. Nutritional interventions were studied in isolation or as part of Enhanced Recovery Pathways. The preoperative recommendations address five interventions as described below:

Nutritional counseling	Providing preoperative nutritional education by trained nutrition specialists, as part of a multicomponent prehabilitation regimen, especially to at-risk patients with GI cancer, should be strongly considered.
Oral protein and calorie supplementation	Nutritional supplementation is strongly recommended for patients with GI cancer who are malnourished. The optimal quantity is yet to be determined, but benefit in colorectal cancer has been seen with quantities as low as 250 mL per day (with 24 g protein).
Immunonutrition and pharmaconutrition	Preoperative immunonutrition (arginine, omega-3 fatty acids, or dietary nucleotides alone or in combination) can be recommended for patients with GI cancer. Consideration for provision after surgery is also advised.
Synbiotics and probiotics	Synbiotics or probiotics should be considered for patients with colorectal cancer.
Enteral and parenteral supplementation	Data was limited, however preoperative enteral supplementation should be considered for at-risk patients with esophageal cancer, especially those who are unable to maintain sufficient caloric intake by eating orally.

Studies looking at nutritional interventions occurring within 24 hours of surgery, i.e., carbohydrate loading were not considered in this review. Recommendations are based on general data and not a substitute for clinical judgement and individualized care.

[Access Article](#)

Summary prepared by Nestlé Health Science

All trademarks are owned by Société des Produits Nestlé S.A., Vevey, Switzerland.
©2022 Nestlé. All rights reserved.

Association between early enteral nutrition and clinical outcome in patients with severe acute heart failure who require invasive mechanical ventilation

Publication: *Journal of Parenteral and Enteral Nutrition* 2022;46:443-453

Authors: Saijo T, Yasumoto K, Ohashi M, Momoki C, Habu

This study examined the association between early enteral nutrition (EEN) and clinical outcomes in patients with severe acute heart failure (ACF) requiring invasive mechanical ventilation (IMV).

Of 2,579 cardiac patients admitted to a single center cardiac care unit (CCU), 86 patients fit the study criteria for this retrospective observational study. 56 were entered into the early enteral nutrition (EEN) group, initiated on EN within 48 hours of intubation. 30 were in the delayed enteral nutrition (DEN) group, initiated on EN after 49 hours of intubation.

Target goal was 25 kcal/kg ideal body weight the first week. 38% of subjects received solely EN, whereas 62% received EN and PN. EEN subjects were relatively equally distributed between EN vs. EN + PN, however 80% of DEN subjects received EN + PN.

Results:

The primary outcome was CCU length of stay (LOS):

- Median length of stay was significantly shorter in the EEN group vs. the DEN group (10 days vs. 15 days; $p=0.007$).

Secondary outcomes:

- IMV time: median time was significantly shorter in the EEN group than in the DEN group (5 days vs. 8 days; $p=0.008$)
- Number of patients with infection during IMV: infection rate trended lower in the EEN group vs. DEN group (30% vs. 53%; $p=0.062$).
- Multivariate analysis found earlier EN initiation, shorter IMV time and less incidence of infection to all be independent factors with statistical significance for associations with CCU LOS.

EEN may improve outcomes by helping maintain the integrity of the intestinal mucosa, protecting the immunological function of the gastrointestinal tract, and decreasing malnutrition. The authors recommend initiating EN nutrition therapy as soon as possible after hemodynamic stability, preferably within 48 hours of intubation.

[Access Article](#)

Summary prepared by Nestlé Health Science

All trademarks are owned by Société des Produits Nestlé S.A., Vevey, Switzerland.
©2022 Nestlé. All rights reserved.

Development of a Competency Model for Placement and Verification of Nasogastric and Nasoenteric Feeding Tubes for Adult Hospitalized Patients

Publication: *Nutrition in Clinical Practice* 2021;36:517-533.

Authors: Powers J, Brown B, Lyman B, Escuro AA, Linford L, Gorsuch K, Mogensen KM, Engelbrecht J, Chaney A, McGinnis C, Quatrara BA, Leonard J, Guenter P

Proper placement of nasogastric/nasoenteric (NG/NE) feeding tubes is crucial to prevent adverse events. Misplacement of feeding tubes can lead to sinusitis, pressure injuries, bronchopulmonary injury and, in rare cases, complications that result in death. This paper provides a review and update of placement techniques and training competencies for all employees who are inserting feeding tubes.

For patients expected to require enteral nutrition (EN) support for up to 4 to 6 weeks, short-term enteral access is indicated. Sometimes hospital staff may initially repurpose a 16 French or larger gastric decompression tube for feeding. However, switching to a small-bore (≤ 12 French) NG/NE tube in patients requiring feeding beyond 5-7 days may reduce complications and improve patient comfort.

Refer to the article for a comprehensive overview of the various placement techniques including the advantages, disadvantages, placement success, and placement time, as well as information on the verification techniques used to assume proper placement of the feeding tube tip once it is inserted.

To assure the best care for patients, institutions should establish training and competency guidelines for staff who are inserting NG/NE feeding tubes. The authors recommend referring to the ASPEN model for bedside feeding tube placement competencies.

[Access Article](#)

Summary prepared by Nestlé Health Science

All trademarks are owned by Société des Produits Nestlé S.A., Vevey, Switzerland.
©2022 Nestlé. All rights reserved.

NEST-15290-0622

