Guidelines for the provision of nutrition support therapy in the adult critically ill patient: The American Society for Parenteral and Enteral Nutrition (ASPEN)

Publication: *Journal of Parenteral and Enteral Nutrition*
First Published: November 16, 2021
JPEN. January 2022;46(1):12-41.
Authors: Charlene Compher, Angela L Bingham, Michele McCall, Jayshil Patel, Todd W Rice, Carol Braunschweig, Liam McKeever

These guidelines update five of the 2016 recommendations from the ASPEN/SCCM critical care guidelines. The Grading of Recommendations, Assessment, Development and Evaluations (GRADE) was limited to guideline questions that 36 randomized controlled trials (2001 to 2020) helped address.

Guideline Questions	Recommendation	Discussion on Clinical Application
1. Energy intake	12-25 kcal/kg in the first 7-10 days of ICU stay	Rely on clinical judgment
2. Protein intake	1.2-2.0 g/kg/day	Individualize protein prescription
3. Energy intake by PN vs. EN	Similar energy provided as PN during early critical illness is not superior to EN.	Lower cost and convenience of EN vs PN may help determine route used.
4. Supplemental PN	No clinically important benefit in providing supplemental PN prior to day 7 of ICU admission.	Recommend not initiating supplemental PN prior to day 7 of ICU stay; tolerance to EN may improve during this time.
5a. Mixed oil ILEs vs. 100% soybean-oil ILE	Either mixed-oil ILE or 100% soybean-oil ILE are appropriate for initiation of PN, including during the first 7 days of ICU admission.	Optimizing ILE provision helps avoid excessive dextrose and hyperglycemia.
5b. FO-containing ILE vs. non-FO-containing ILE	Either one may be provided to critically ill patients, including during the first 7 days of ICU admission.	Important to give adequate EFA to meet requirements if PN exceeds 10 days. EFA content of mixed-oil and FO-containing-ILE is lower than soybean-oil ILE.

Adapted from Table 1

Much more detail can be found in Table 1 of the publication, currently being offered under free access. In addition, authors mention a separate clinical recommendations paper will follow to provide guidance on many areas where the data is insufficient and/or guidelines are based on expert opinion.

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Summary prepared by Nestlé Health Science

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European Society for Clinical Nutrition and Metabolism (ESPEN) practical guideline: Home enteral nutrition

Publication: *Clinical Nutrition*
Published: February 2022:468-488
Authors: Stephan C Bischoff, Peter Austin, Kurt Boeykens, Michael Chourdakis, Cristina Cuerda, Cora Jonkers-Schiutema, Marek Lichota, Ibolya Nyulasi, Stephane M Schneider, Zeno Stanga, Loris Pironi

Without enteral nutrition, a variety of ill patients' nutritional states and prognoses are likely to deteriorate, especially if there is no effective treatment for their underlying medical condition. This guideline, originally published in 2020, is useful for health care providers as well as patients. As outlined across 5 chapters, 61 evidence-based recommendations have been reviewed and updated as needed on the indications, contraindications, implementation, and monitoring of home enteral nutrition (HEN).

1. **Indication and contraindication for HEN**
2. **Access devices**
   - 2.1 based on short term (<6 weeks) or long term (>6 weeks) HEN
   - 2.2 handling of tubes, exit sites, and consumables
   - 2.3 start of HEN
   - 2.4 administration
   - 2.5 drug administration
3. **Products recommended for HEN: standard situation vs special situations (diarrhea/constipation, diabetes)**
4. **Monitoring and termination of HEN**
   - 4.1 when and how patients should be monitored
   - 4.2 termination
   - 4.3 management of complications
   - 4.4 assessment of QoL
5. **Structural requirement to perform HEN**
   - 5.1 education and nutritional support team
   - 5.2 infrastructure

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Summary prepared by Nestlé Health Science

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Feeding intolerance score in critically ill patients with enteral nutrition: A post hoc analysis of a prospective study

Publication: *Nutrition in Clinical Practice*
First Published: October 22, 2021
Authors: Jiajia Lin, Yang Liu, Lu Ke, Gang Li, Cheng Lv, Jing Zhou, Bo Ye, Baiqiang Li, Qi Yang, Zhihui Tong, Weiqin Li, Jieshou Li

This study utilized data from a previous cross-sectional study of 118 ICUs of various types to apply a feeding intolerance (FI) scoring system based on GI symptoms. They reviewed the records of 1098 patients for 28-day mortality risk, 200 of which were non-survivors.

FI Score

Variable	Range	Points
Abdominal distension/pain	None	0
	Mild distension and no abdominal pain	1
	Moderate distension or IAP 15-20 mg Hg or transient abdominal pain	2
	Severe distension or IAP > 20 mm Hg or persistent abdominal pain	5
Nausea/vomiting	None	0
	Nausea but no vomiting	1
	Nausea and vomiting without a requirement for decompression or 250 mL ≤ GRV < 500 mL	2
	Vomiting requiring gastric decompression or GRV ≥ 500 mL	5
Diarrhea	None	0
	Loose stools ≥ 3 times/day with 250 mL ≤ volume < 500 mL	1
	Loose stools ≥ 3 times/day with 500 mL ≤ volume < 1500 mL	2
	Loose stools ≥ 3 times/day with volume ≥ 1500 mL	5

Adapted from Table 1

Total score

Abdominal distension/pain + nausea/vomiting + diarrhea:

- 0-2 points: continue EN, increase or maintain initial speed and symptomatic treatment
- 3-4 points: continue EN, slow down the speed, reevaluate EN tolerance after 2 hours
- 5+ points: suspend EN, reevaluate or replace infusion route

The 28-day mortality in patients based on their FI scores was as follows:

- 13.1% for a score of 0
- 21.2% for a score of 1-2
- 28% for a score of 3-4
- 54.4% for a score of 5+

Regression analysis found the FI score to be an independent risk factor for 28-day mortality in enterally fed critically ill patients (odds ratio [OR]: 1.37; 95% CI, 1.25–1.51; p <.001). Use of this tool may facilitate timely treatment of FI during enteral feeding, improving nutrition therapy in these patients.

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