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

Guideline ID: 75 Published: 2022 Jan

American Society for Parenteral and Enteral Nutrition (ASPEN)

Compher C, Bingham AL, McCall M, et al. Guidelines for the provision of nutrition support therapy in the adult critically ill patient: the American Society for Parenteral and Enteral Nutrition. JPEN J Parenter Enteral Nutr. 2022 Jan;46(1):12-41. [42 references] PubMed

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Overview

Guideline Objective

To summarize the evidence within nutrition support to guide practitioners in their provision of artificial nutrition to critically ill patients

Patient Population

Critically ill adult patients (over 16 years of age) in surgical or medical intensive care units (ICUs) who are unable to maintain volitional oral intake and are supported by parenteral nutrition (PN) or enteral nutrition (EN)

Recommendations

Recommendation Statements

Question 1. In adult critically ill patients, does provision of higher vs. lower energy intake impact clinical outcomes?

No significant difference in clinical outcomes was found between patients with higher vs lower levels of energy intake. We suggest feeding between 12 and 25 kcal/kg (i.e., the range of mean energy intakes examined) in the first 7–10 days of intensive care unit (ICU) stay. (**Quality of evidence: Moderate; Strength of recommendation: Weak**)

Question 2. In adult critically ill patients, does provision of higher as compared with lower protein intake impact clinical outcomes?

There was no difference in clinical outcomes in the relatively limited data. Because of a paucity of trials with high-quality evidence, we cannot make a new recommendation at this time beyond the 2016 guideline suggestion for 1.2–2.0 g/kg/day. (**Quality of evidence: Low; Strength of recommendation: Weak**)

Question 3. In adult critically ill patients who are candidates for enteral nutrition (EN), does similar energy intake by parenteral nutrition (PN) vs. EN as the primary feeding modality in the first week of critical illness impact clinical outcomes?

There was no significant difference in clinical outcomes between early exclusive PN and EN during the first week of critical illness. As PN was not found to be superior to EN and no differences in harm were identified, we recommend that either PN or EN is acceptable. (**Quality of evidence: High; Strength of recommendation: Strong**)

Question 4. In adult critically ill patients receiving early EN, does provision of supplemental PN (SPN) to meet energy targets vs. no SPN during the first week of critical illness impact clinical outcomes?

There was no significant difference in clinical outcomes. Based on findings of no clinically important benefit in providing SPN early in the ICU admission, we recommend not initiating SPN prior to day 7 of ICU admission. (**Quality of evidence: High; Strength of recommendation: Strong**)

Question 5A. In adult critically ill patients receiving PN, does provision of mixed-oil lipid injectable emulsions (ILEs) (i.e., medium-chain triglycerides, olive oil, fish oil [FO], mixtures of oils), as compared with 100% soybean-oil (SO) ILE, impact clinical outcomes?

Owing to limited statistically or clinically significant differences in key outcomes, we suggest that either mixed-oil ILE or 100% SO ILE be provided to critically ill patients who are appropriate candidates for initiation of PN, including within the first week of ICU admission. (**Quality of evidence: Low; Strength of recommendation: Weak**)

Question 5B. In adult critically ill patients receiving PN, does provision of FO-containing ILE, as compared with non–FO-containing ILE, impact clinical outcomes?

Because there was only one outcome with a significant difference that was not supported by data covering the other key downstream outcomes, we suggest that either FO- or non-FO containing ILE be provided to critically ill patients who are appropriate candidates for initiation of PN, including within the first week of ICU admission. (**Quality of evidence: Low; Strength of recommendation: Weak**)

Evidence Rating Scheme

Quality of Evidence and Definitions

Quality	Definition
High	Further research is very unlikely to change our confidence in the estimate of effect

Quality	Definition
Moderate	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
Low	Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate
Very low	Any estimate of effect is very uncertain

Adapted from: Guyatt GH, Oxman AD, Vist G, et al for the GRADE Working Group. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ 2008;336:924-926.

Recommendation Rating Scheme

Language for Guideline Recommendations

Quality of Evidence	Weighing Risk vs. Benefits	Strength of Recommendation	Guideline Recommendation Language
Very low to high	Net benefits outweigh harms	Strong	We recommend
Very low to high	Net harms are considerable and may outweigh the benefits	Weak	We suggest

Note: In very rare cases, a clinical panel may decide that they should not make a recommendation, but in almost all cases, the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) process encourages panels to make a recommendation regardless of the evidence. Wherever possible, these recommendations are evidence based. When this is not possible, they are deemed expert opinion, which is not a category of GRADE.

Related Content

Supporting Documents

- Supplemental Appendix.
- Clinical Guidelines for the Use of Parenteral and Enteral Nutrition in Adult and Pediatric Patients: Applying the GRADE System to Development of A.S.P.E.N. Clinical Guidelines; 2012 Jan.

Implementation Tools

- Podcast; 2022 Jan.

Patient Education

No patient education materials available.

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TRUST Scorecard

Composition of Guideline Development Group (GDG)

Multidisciplinary GDG Members	**Yes**
Methodologist Involvement	**Yes**
Incorporation of Patient and Public Perspective	★☆☆☆☆

Systematic Review of Evidence

Literature Search	★★★★☆
Study Selection	★★★★★
Evidence Synthesis	★★★★★

Foundations for Recommendations

Strength of Evidence Grade	★★★★★
Description of Benefits and Harms of Recommendations	★★★★☆
Summary of Evidence Supporting Recommendations	★★★★★
Strength of Recommendations Rating	★★★☆☆
Clear Articulation of Recommendations	★★★★☆

Funding Source — **No**

Disclosure and Management of Financial Conflicts of Interests — ★★★☆☆

External Review — ★★☆☆☆

Updating — ★★★☆☆

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