

CRITICAL CARE GUIDELINES

ROUTE OF FEEDING



Enteral Nutrition (EN) is preferred over Parenteral Nutrition (PN) and should be initiated early according to international critical care guidelines¹⁻⁵

Recommendations:

ESPEN, 2019

If oral intake is not possible, early EN within 48 h shall be initiated in critically ill adult patients rather than early PN.

Guideline on clinical nutrition in the intensive care unit 2019¹



SCCM/ASPEN, 2016

EN is preferred over PN for the critically ill patient who requires nutrition support therapy.

Guidelines for the Provision and Assessment of Nutrition Support Therapy in the Adult Critically Ill Patient 2016²



Canadian Critical Care Nutrition, 2014

EN should be used in preference to PN. EN should be initiated early within 24-48 hours following admission to ICU.

Guidelines 2014⁴



ESICM, 2017

Early Enteral Nutrition within 48 hours, initiated at a low rate, in the majority of critically ill patients. Delay EN in patients with e.g. uncontrolled shock, hypoxaemia and acidosis, GI bleeding, overt bowel ischaemia, bowel obstruction.

Clinical Practice Guidelines, 2017⁵



Asia-Pacific and Middle East regions

Initiation of early nutrition therapy as soon as feasible (within 48 h) in critically ill patients requiring nutrition therapy is recommended. EN is preferred over PN for the critically ill patient who requires nutrition support therapy unless EN is contra-indicated. EN is preferred given the lower risk of infection and reduced hospital length of stay compared with PN.

Nutrition therapy for critically ill patients across the Asia-Pacific and Middle East regions: A consensus statement³



ENERGY REQUIREMENTS



International critical care guidelines and recommendations for energy targets^{1-3, 6, 7}

Guidelines all support use of indirect calorimetry over predictive equations. Mechanically ventilated patients can use calculations based on oxygen consumption and carbon dioxide expulsion measured by the ventilators to calculate a patients precise energy needs.

Recommendations:

SCCM/ASPEN, 2016

ENERGY TARGET:

BMI < 30: 22-25 kcal/kg
BMI > 30: 11-14 kcal/kg

Guidelines for the Provision and Assessment of Nutrition Support Therapy in the Adult Critically Ill Patient 2016²



ESPEN, 2006

ENERGY TARGET:

Initial phase: 20-25 kcal/kg
Recovery phase: 25-30 kcal/kg
Malnourished: 25-30 kcal/kg

Guideline on clinical nutrition in the intensive care unit 2006⁵



Asia-Pacific and Middle East regions

ENERGY TARGET:

25-30 kcal/kg

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ESPEN, 2019

If predictive equations are used, hypocaloric nutrition (below 70% estimated needs) should be preferred over isocaloric nutrition in the early phase of acute illness.

Guideline on clinical nutrition in the intensive care unit 2019¹



International Protein Summit, 2017

ENERGY TARGET:

Initial phase: 80-90% of target
Recovery phase: Increase energy provision to reach target

Summary Protein and Consensus Recommendations from the International Protein Summit 2017⁷



PROTEIN REQUIREMENTS



International critical care guidelines and recommendations for protein intakes^{1-3,7}

Recommended protein intakes on average between 1.2-2.2g protein/kg BW/day

Recommendations:

ESPEN, 2019

1.3 g/kg BW/d

Guideline on clinical nutrition in the intensive care unit 2019¹



SCCM/ASPEN, 2016

1.2-2.0 g/kg BW/d

Guidelines for the Provision and Assessment of Nutrition Support Therapy in the Adult Critically Ill Patient 2016²



International Protein Summit, 2017

>1.2 g/kg BW/d

Summary Protein and Consensus Recommendations from the International Protein Summit 2017⁷



Asia-Pacific and Middle East regions

1.2-2.2 g/kg BW/d

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TYPE OF PROTEIN



Overview of recommendations regarding the use of polymeric/whole protein feeds for patients in a critical care setting^{1-4, 6}

Recommendations:

ASPEN/SCCM, 2018

Based on expert consensus, we suggest using a standard polymeric formula when initiating EN in the ICU setting.

Acute pancreatitis: We suggest using a standard polymeric formula to initiate EN in the patient with severe acute pancreatitis.

ASPEN/SCCM 2016²



ESPEN, 2006/2019

Whole protein formulae are appropriate in most patients because no clinical advantage of peptide based formulae could be shown

ESPEN 2006⁵/2019¹



Asia-Pacific and Middle East regions, 2018

Standardized high-protein polymeric formulas are the preferred choice for most patients. Routine use of disease-specific formulas is not recommended for initiation

Asia-Pacific and Middle East consensus statement 2018³



Canadian clinical practice guidelines, 2015

When initiating enteral feeds, the use of whole protein formulas (polymeric) should be considered.

Canadian clinical practice guidelines 2015⁴



References:

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4. Dhaliwal R, Cahill N, Lemieux M, et al. The Canadian Critical Care Nutrition Guidelines in 2013: An Update on Current Recommendations and Implementation Strategies. *Nutrition in Clinical Practice*. 2014;29:29-43
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6. Kreymann KG, Berger MM, Deutz NE, et al. ESPEN Guidelines on Enteral Nutrition: Intensive care. *Clinical nutrition (Edinburgh, Scotland)* 2006; 25(2): 210-23.
7. Hurt RT, McClave SA, Martindale RG, et al. Summary Points and Consensus Recommendations From the International Protein Summit. *Nutrition in clinical practice : official publication of the American Society for Parenteral and Enteral Nutrition* 2017; 32(1_suppl): 142s-51s.

