

Critical Care Nutrition Guidelines¹

A summary for Adult Critically Ill Patients

INITIATION OF FEEDING		
FORM	Nutrition support therapy in the form of Enteral Nutrition (EN) should be initiated in the critically ill patient who is unable to maintain volitional intake. Section A2	Grade C
ROUTE	EN is the preferred route of feeding over parenteral nutrition (PN) for the critically ill patient who requires nutrition support therapy. Section A3	Grade B
TIMING	Enteral feeding should be started early within the first 24–48 hours following admission. The feedings should be advanced toward goal over the next 48–72 hours. Section A4	Grade C Grade E
DOSING OF ENTERAL FEEDING		
CALORIES	Efforts to provide >50–65% of goal calories should be made in order to achieve the clinical benefit of EN provided during the first week of hospitalization. Section C2	Grade C
PROTEIN	In patients with body mass index (BMI) <30, protein requirements should be in the range of 1.2–2.0 g/kg actual body weight per day (NPC:N ratio 70:1–100:1), and may likely be even higher in burn or multi-trauma patients. Section C4 Patients receiving hemodialysis or continuous renal replacement therapy (CRRT) should receive increased protein, up to a maximum of 2.5 g/kg/d. Protein should not be restricted in patients with renal insufficiency as a means to avoid or delay initiation of dialysis therapy. Section I2	Grade E Grade C
OBESITY	For all classes of obesity where BMI is >30, the goal of the EN regimen should not exceed 60–70% of target energy requirements (22–25 kcal/kg ideal body weight). Protein should be provided in a range of ≥ 2.0 g/kg (BMI 31–40) to ≥ 2.5 g/kg (BMI > 40) ideal body weight. Section C5	Grade D
SELECTION OF APPROPRIATE FORMULA		
IMMUNE MODULATING	Immune-modulating enteral formulations (supplemented with agents such as arginine, glutamine, nucleic acid, omega-3 fatty acids, and antioxidants) should be used for the appropriate patient population (major elective surgery, trauma, burns, head and neck cancer, and critically ill patients on mechanical ventilation), being cautious in patients with severe sepsis. Section E1	Grade A: Surgical ICU Grade B: Medical ICU
ARDS/ALI	Patients with ARDS and severe acute lung injury (ALI) should be placed on an enteral formulation characterized by an anti-inflammatory lipid profile (i.e., omega-3 fish oils, borage oil) and antioxidants. Section E2	Grade A
TOLERANCE	If there is evidence of diarrhea, soluble fiber-containing or small peptide formulations may be utilized. Section E4	Grade E
ADJUNCTIVE THERAPY		
GLUTAMINE	The addition of enteral glutamine to an EN regimen (not already containing supplemental glutamine) should be considered in burn, trauma, and mixed ICU patients. Section F3	Grade B
FIBER	Soluble fiber may be beneficial for the fully resuscitated, hemodynamically stable critically ill patient receiving EN who develops diarrhea. Insoluble fiber should be avoided in all critically ill patients. Both soluble and insoluble fiber should be avoided in patients at high risk for bowel ischemia or severe dysmotility. Section F4	Grade C
SEVERE ACUTE PANCREATITIS		
SEVERE GI IMPAIRMENT/MALABSORPTION	Tolerance to EN in patients with severe acute pancreatitis may be enhanced by changing the content of the EN delivered to small peptides and medium-chain triglycerides or a nearly fat-free elemental formulation. Section K4	Grade E

Grade of Recommendation supported by:
 A At least two Level I investigations
 B One Level I investigation
 C Level II investigations only
 D At least two Level III investigations
 E Level IV or Level V evidence

Level of Evidence:
 I Large, randomized trials with clear-cut results
 II Small, randomized trials with uncertain results
 III Non-randomized, contemporaneous controls
 IV Non-randomized, historical controls
 V Case series, uncontrolled studies, and expert opinion

¹ Guidelines summarized from McClave SA, Martindale RG, et al. Guidelines for the Provision and Assessment of Nutrition Support Therapy in the Adult Critically Ill Patient: Society of Critical Care Medicine (SCCM) and American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.). JPEN 2009;33(3):277–316.

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