

Indications for Enteral Nutrition in Patients with Critical Illness: ASPEN Recommendations

Enteral nutrition (EN) is a vital component of nutrition for patients with critical illness and allows for delivery of nutrients when oral intake is contraindicated or inadequate. Based on the ASPEN evidence-based consensus recommendations¹, this practice tool addresses key questions regarding the indications for, the initiation timing of, and other considerations for EN for patients with critical illness.



When should early EN be initiated in hemodynamically unstable patients?

Therapy	Considerations for Concomitant EN Administration	Timing of EN Initiation	Preferred Route of EN Delivery	Type of EN Formula	Monitoring
Vasopressor Administration	<p>Vasopressor administration is not a contraindication to providing early EN with careful monitoring.</p> <p>Consider the following factors:</p> <ul style="list-style-type: none"> • Type of vasopressor agent • Vasopressor equivalent dosage (VDE)* <i>Consider trophic only or holding EN if VDE is >12</i> • Timing of EN • Feeding Location <p>EN may be administered in adults if the mean arterial pressure (MAP) is ≥ 60 mmHg but should be held with the MAP < 50 mmHg.</p>	<p>Within 48 hours of vasopressor initiation depending on dosage.</p>	<p>Gastric feeding is preferred.</p>	<p>When feeding with vasopressors, use a 1.0–1.2 kcal/ml, higher-protein, low-fiber formula. Both semi-elemental and polymeric formulas are tolerated.</p>	<p>Insufficient data exist to use lactate levels as a monitoring parameter for EN tolerance.</p> <p>Routine monitoring of gastric residual volumes (GRVs) is not recommended in critical illness. If GRVs are measured, it would be reasonable to hold EN in adults if GRVs > 300 ml based on limited, low-quality evidence.</p>
Extracorporeal Membrane Oxygenation (ECMO)	<p>Develop and implement clear and comprehensive guidelines for initiation and maintenance of EN support for patients on venous arterial (VA) or veno-venous (VV) ECMO.</p> <p>Continue to provide EN infusion if patients on venous arterial (VA) or veno-venous (VV) ECMO are placed in prone position.</p>	<p>Within the first 24 hours of ECMO support.</p>	<p>Initiate EN as continuous intragastric feeding at trophic rate of 10–20 ml/h and increase rate every 4 h over 24–36 h to target rate.</p>		

*For more specific information on Vasopressor Equivalent Dosage (VDE) see pages 1488-1489 of *JPEN* 2022; 46: 1470-1496.

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Can patients be fed when undergoing paralytic therapy?

Therapy	Considerations for Concomitant EN Administration
Paralytic Therapy	Do not hold or delay EN in patients undergoing paralytic therapy.

Can patients be fed while on bilevel positive airway pressure (BiPAP) and/or other noninvasive ventilation (NIV) treatments?

Therapy	Considerations for Concomitant EN Administration	Preferred Route of EN Delivery
BiPaP/NIV	<p>The decision to start EN in adults requiring NIV should be multidisciplinary and made on a case-by-case basis, with careful consideration of the patient's overall medical and nutrition status.</p> <p>Placement of an EN tube with a standard NIV mask will cause an additional air leak. If the additional leak is unable to be compensated for, it is recommended to look into a mask with an adaptor or sealing pad.</p>	<p>If choosing to enterally feed a patient who is on noninvasive ventilation, postpyloric placement would be preferred because of the likely increased aspiration risk.</p>

What are the indications and strategies to use for “catch-up” feedings?

Therapy	Considerations for Concomitant EN Administration
“Catch-Up” Feedings	<p>Consider use of a volume-based feeding protocol to improve the likelihood that the full amount of prescribed EN is received.</p> <p>Consider patient condition factors in formulating the feeding regimen to promote tolerance and meet energy, protein, and fluid needs safely.</p>

Reference:

1. Bechtold ML, Brown PM, Escuro A, et al. [When is enteral nutrition indicated?](#) *JPEN J Parenter Enteral Nutr.* 2022; 46:1470-1496.

Resources:

- Compher C, Bingham AL, McCall M, et al. [Guidelines for the provision of nutrition support therapy in the adult critically ill patient.](#) *JPEN J Parenter Enteral Nutr.* 2022;46(1):12-41.
- Mehta NM, Skillman HE, Irving SY, et al. [Guidelines for the provision and assessment of nutrition support therapy in the pediatric critically ill patient: Society of Critical Care Medicine and American Society for Parenteral and Enteral Nutrition.](#) *JPEN J Parenter Enteral Nutr.* 2017;41:706-742.
- ASPEN Enteral Nutrition Care Pathway for Critically Ill Adult Patients

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