







# CANADIAN GUIDELINES FOR **Achieving Best Practice** CRITICAL CARE NUTRITION

Moving key Canadian critical care guidelines for nutrition therapy from current practice to best practice

-  **Initiate enteral nutrition within 24-48 hours of admission to ICU**
-  **Use a feeding protocol and a glycemic control protocol**
-  **Use promotility agents for patients who experience feed intolerance and use small bowel feedings where feasible**
-  **Elevate the head of the bed to 45°\***

\*Unless contraindicated

Nutrition therapy modulates the underlying disease process and impacts patient outcomes.

## Nutrition therapy in the critically ill can:

- improve wound healing
- decrease catabolic response to injury
- improve GI structure and function
- reduce complication rates
- shorten length of stay
- result in cost savings and improved clinical outcomes



### Early enteral nutrition

**Recommendation:** Initiate enteral nutrition within 24-48 hours of admission to ICU.

Early enteral nutrition is recommended for all mechanically ventilated patients (medical, surgical, trauma, etc.), who are adequately resuscitated and hemodynamically stable.

Benefits of early vs. delayed enteral nutrition:

- improved calorie and protein intake resulting in higher percentage of goal achieved
- reduced infectious complications
- reduced mortality



### Feeding and glycemic control protocols

**Recommendation:** A feeding protocol that incorporates prokinetics at initiation and a higher gastric residual volume (250 mL) and the use of post-pyloric feeding tubes should be considered as a strategy to optimize delivery of enteral nutrition. Hyperglycemia (blood glucose > 10 mmol/L) should be avoided by minimizing intravenous dextrose and using insulin administration when necessary.

Benefits of using a feeding protocol:

- fewer interruptions and therefore better delivery of enteral nutrition
- less time taken to reach goal rate of feeding

Benefits of using a glycemic control protocol:

- lower incidence of sepsis
- reduction in ventilator days and reduced hospital mortality

## Promotility agents and small bowel feedings

**Recommendation:** In patients who experience feed intolerance (high gastric residuals, emesis), the use of a promotility agent is recommended. In units where obtaining small bowel access is feasible, this should be used routinely.

Benefits of promotility agents:

- improved GI motility
- improved tolerance to enteral nutrition

Benefits of small bowel feeding:

- reduction in incidence of pneumonia
- reach goal rate of feeding sooner

## Elevate head of the bed to 45°


**Recommendation:** Critically ill patients receiving enteral nutrition should have the head of the bed elevated to 45°. Where this is not feasible, attempts to raise the head of the bed as much as possible should be considered.

Benefit of head of bed elevation to 45°:

- significant reduction in incidence of ventilator-associated pneumonia (VAP)

A minimum of 30° will benefit the patient who cannot tolerate the higher elevation.





## Moving key Canadian critical care guidelines for nutrition therapy from current practice to best practice: strategies for success

— **AWARE** – become familiar with the guidelines for nutrition therapy

— **ADOPT** – guidelines for daily practice

— **ADAPT** – to work best within your ICU

— **IMPLEMENT** – daily as your ICU's best practice

— **OUTCOME** – improved outcomes = decreased morbidity and mortality

— **AUDIT** – your current nutrition practice  
visit [www.criticalcarenutrition.com](http://www.criticalcarenutrition.com) to learn how

Tools for the ICU: Help to reinforce and implement these key clinical practice guidelines to optimize patient care and outcomes

- Poster of key clinical practice guidelines for display in the ICU
- Computer screensaver reminder
- Head of bed elevation reminder
- Pre-printed orders sample

Access the full Canadian Clinical Practice Guidelines for Nutrition Support with supporting evidence at [criticalcarenutrition.com](http://criticalcarenutrition.com)

Heyland D et al. Canadian Clinical Practice Guidelines for Nutrition Support in Mechanically Ventilated, Critically Ill Adult Patients. *JPEN* 2003;27:355–73.