

## Enteral Nutrition Practices in ICU Patients With Circulatory Shock



Approximately one-third of patients admitted to the ICU are in circulatory shock, which increases the risk of mortality. Death from circulatory shock is preceded by multiple organ dysfunction syndrome with a high mortality rate of over 80%. Loss of gut epithelial barrier function contributes to gut-derived proinflammatory immune responses that contribute to multiple organ dysfunction.

Studies show that early enteral nutrition preserves epithelial barrier function. However, data is limited. The Society of Critical Care Medicine (SCCM) and American Society for Parenteral and Enteral Nutrition (ASPEN) 2016 Critical Care Nutrition Guidelines recommend initiating enteral nutrition in ICU patients cautiously when patients are stable and vasopressor doses are low. The guidelines recommend withholding enteral nutrition with escalating vasopressor dose or enteral feeding intolerance. However, there is insufficient evidence on the timing and efficacy of enteral nutrition practices in ICU patients with circulatory shock.

In this study, the researchers hypothesised that early nutrition is associated with improved clinical outcomes compared to delayed nutrition in mechanically ventilated patients with circulatory shock. They analysed a dataset from an international, multicenter clinical trial evaluating protein dose in ICU patients. Early enteral nutrition was defined as initiating < 48 h from ICU admission, and delayed enteral nutrition was defined as > 48 h. The goal was to evaluate the association between the timing and clinical outcomes.

The study included 662 patients from 52 ICUs in 14 countries. The median age of the patients was 60 years. 55% of the patients had septic shock. 99% of the patients received norepinephrine alone, 91% received enteral nutrition alone, and 50.3% received the usual protein dose.

Results of the study show that 42% of patients with early enteral nutrition had persistent organ dysfunction syndrome plus death at day 28, compared to 53% in the delayed enteral nutrition group. Early enteral nutrition was associated with more ICU-free days, more days alive and free of vasopressors, and a shorter duration of mechanical ventilation. No differences were observed in ICU/60-day mortality or feeding intolerance rates between the two groups.

These findings show that in mechanically ventilated patients with circulatory shock, early enteral nutrition is associated with improved outcomes compared to delayed enteral nutrition, but no longer when adjusting for illness severity.

Source: [Critical Care](#)

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