
What's the Benefit of Enteral Nutrition? Updated Review

PN vs EN

Gunnar Elke, MD, of the Department of Anaesthesiology and Intensive Care Medicine, University Medical Center Schleswig-Holstein and colleagues have published an updated systematic review and meta-analysis of randomised controlled trials (RCTs) of enteral compared to parenteral nutrition in critically ill patients. The review includes the data from the CALORIES trial ([Harvey et al. 2014](#)).

The literature search spanned 1980 to 2016, with 18 RCTs (3347) meeting inclusion criteria (1681 patients were treated with EN, and 1666 patients with PN). The primary outcome was overall mortality; secondary outcomes included infectious complications, length of stay (LOS) and mechanical ventilation. The researchers found no effect on overall mortality. Enteral nutrition (EN) was associated with a significant reduction in infectious complications compared to parenteral nutrition (PN), more pronounced in the subgroup of RCTs where patients received significantly more calories, but not in groups that received similar calories via PN or EN.

See Also: [Nutrition Therapy - ASPEN/SCCM Updated Guidelines](#)

They conclude that the use of EN as compared to PN has no effect on overall mortality but decreases infectious complications and ICU LOS. However, they suggest that this may be explained by the benefit of reduced macronutrient intake rather than the enteral route itself. They also note that funnel plot analysis revealed evidence for significant publication bias for the trials reporting on infectious complications. In addition they were not able to further explore the treatment effect of nutritional adequacy nor hyperglycemia on infectious complications in more detail due to the reporting of the included trials.

They recommend that EN still be considered first-line therapy for critically ill patients.

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