

Efficacy of early enteral nutrition in patients traumatic brain injury: a systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION**Support** - Funded by the Natural Science Foundation of Fujian Province (2023J01820).**Review Stage at time of this submission** - Completed but not published.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202610081**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 January 2026 and was last updated on 24 January 2026.**INTRODUCTION**

Review question / Objective To address this evidence gap, we aimed to conduct a meta-analysis focused on patients with TBI, comparing clinical outcomes between early (defined as initiation within 48 hours) and late EN.

Condition being studied Condition being studied The research team comes from the Department of Critical Care Medicine of a tertiary hospital in China, and all the team members have perfect clinical experience in critical care and resuscitation. Moreover, our team members have published more than 40 meta-analyses, which can guarantee the successful completion of the current research.

METHODS

Participant or population Patients with traumatic brain injury.

Intervention Initiation of EN within 48 hours of injury, regardless of combined PN therapy, nutrition route, and EN formula.

Comparator Initiation of EN at least 48 hours after injury, regardless of PN combination, nutrition route, and formula.

Study designs to be included Not limited.

Eligibility criteria We systematically searched the PubMed, Embase, Web of Science, and Cochrane Library databases through December 25, 2025, for studies comparing EEN with delayed enteral nutrition (DEN) in adults with TBI.

Information sources PubMed, Embase, Web of Science, and the Cochrane Library.

Main outcome(s) Outcomes included clinical outcomes, nutrition status, and complications.

Quality assessment / Risk of bias analysis Study quality was assessed using the Newcastle-Ottawa Scale tool and the Cochrane risk of bias tool.

Strategy of data synthesis Meta-analysis.

Subgroup analysis RCT or observational studies.

Sensitivity analysis pooled the studies limited to (1) RCTs; (2) EEN is not combined with PN; (3) published after 2000; (4) sample size > 100 to test the robustness of the outcomes.

Country(ies) involved China.

Keywords traumatic brain injury, early enteral nutrition, mortality, complication, meta-analysis.sivelestat; cardiac surgery; partial pressure of oxygen/fraction of inspiration oxygen; mortality; meta-analysis.

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