

# METABOLIC STABILIZATION & WEIGHT RECOVERY WITH PEPTAMEN JUNIOR® HP in Pediatric Patients with Traumatic Brain Injury (TBI)\*



## STUDY FOCUS



**INTRODUCTION:** Nutritional support is critical in the management of critically ill children, particularly those at high risk of malnutrition due to hypermetabolic and catabolic states.<sup>1,2</sup> Traumatically injured children often face profound metabolic disturbances and increased energy needs that are difficult to meet early in the hospitalization. In the Pediatric Intensive Care Unit (PICU), early enteral nutrition has been associated with improved clinical outcomes and enhanced recovery.<sup>3</sup>

**BACKGROUND:** A 9-year-old boy was admitted to the PICU with multiple injuries, including a severe traumatic brain injury. Enteral nutrition (EN) was started 60 hours post-admission with a high-protein, peptide-based formula (Peptamen Junior® HP). His course included 15 days of mechanical ventilation, tracheostomy and gastrostomy tube placement on day 11, and surgical repair of other injuries. PICU length of stay (LOS) was 18 days; total hospital LOS was 46 days.

## RESULTS achieved during PICU stay through use of Peptamen Junior® HP



### METABOLIC STABILIZATION

MEASURED RESTING ENERGY EXPENDITURE VIA INDIRECT CALORIMETRY

**1,198** kcals  
DAY 5

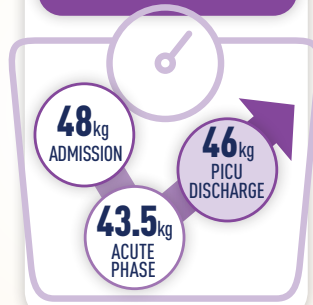
**1,156** kcals  
DAY 11

OPTIMAL RESPIRATORY QUOTIENT (RQ)

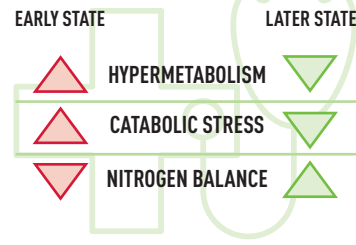
**0.8 - 0.9**  
optimal range for critically ill patients

→ **0.86**  
achieved

### WEIGHT RECOVERY



### CLINICAL IMPROVEMENT



## CONCLUSION



### PATIENT LEFT THE PICU WITHOUT A DIAGNOSIS OF MALNUTRITION

Early initiation of Peptamen Junior® HP:

- Supported metabolic stabilization
- Mitigated excessive loss of lean body mass
- Contributed to partial weight recovery

Indirect calorimetry findings confirmed efficient nutrient utilization and appropriate caloric provision without evidence of overfeeding.

**Peptamen Junior® HP was well tolerated and provided balanced macronutrient support.**

# Peptamen JUNIOR®

Peptamen Junior® HP, which contains **100% whey protein, small peptides, and a high percentage of MCT**, is designed to enhance digestibility and absorption and is well-tolerated by critically ill children.



**100% Whey Protein**  
Empties more quickly from the stomach than casein



**Smaller Peptides**  
More efficiently absorbed than larger peptides and intact proteins



**60% MCT**  
Easily absorbed and provides a quick energy source



**16% Calories from Protein**  
Designed for pediatric patients with increased protein needs

\* The complete publication may be accessed online: Boukas K, Nguyen JN, Caminos C et al. High-Protein Enteral Nutrition in a Pediatric Patient with Severe Traumatic Brain Injury. *JPEN*. 2026; 50(S1): S226-S227.

#### REFERENCES:

1. Kratochvíl M, Klučka J, Klabusayová E, et al. Nutrition in Pediatric Intensive Care: A Narrative Review. *Children (Basel)*. 2022;9(7):1031. Published 2022 Jul 11. doi:10.3390/children9071031.
2. Tedeschi-Jockers F, Reinhold S, Hollinger A, et al. A new high protein-to-energy enteral formula with a whey protein hydrolysate to achieve protein targets in critically ill patients: a prospective observational tolerability study. *Eur J Clin Nutr*. 2022;76(3):419-427. doi:10.1038/s41430-021-00956-9.

3. Srinivasan V, Hasbani NR, Mehta NM, et al. Early Enteral Nutrition Is Associated With Improved Clinical Outcomes in Critically Ill Children: A Secondary Analysis of Nutrition Support in the Heart and Lung Failure-Pediatric Insulin Titration Trial. *Pediatr Crit Care Med*. 2020;21(3):213-221. doi:10.1097/PCC.0000000000002135.