

Immunoenhancing Enteral and Parenteral Nutrition for Gastrointestinal Surgery

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Objective

To evaluate which kind of nutrition--standard enteral (SEN), standard parenteral (SPN), immunoenhancing parenteral (IMPN), or immunoenhancing enteral (IMEN) -- is best at reducing complications after gastrointestinal (GI) surgery.

Methods

A multiple treatments meta-analysis on 74 RCTs (n=7572) was completed using a Bayesian framework to calculate the odds ratio between each type of nutrition and rank order. Supplementary tables are available at <http://links.lww.com/SLA/A628>

-IMEN formulas contained various combinations and amounts of supplemental arginine, glutamine, n-3 fatty acids (EPA + DHA) and nucleotides. 24/36 studies involving IMEN utilized IMPACT[®] Formula containing arginine, n-3 and nucleotides.

-IMPN formulas contained coconut oil/ MCT, olive oil, fish oil or various combinations and amounts of two or three of these oils.

Results

- IMEN was ranked first for reducing the incidence of 7 complications after GI surgery:
 - Any infection
 - Overall complications
 - Mortality
 - Wound infection
 - Intra-abdominal abscess
 - Anastomotic leak
 - Sepsis
- IMEN was ranked second for reducing the incidence of pneumonia and urinary tract infection (UTI), whereas IMPN was ranked first for pneumonia and UTI.
- SPN performed least well for almost all outcomes when compared to the other three types of nutrition.

Conclusion

Authors conclude their study results suggest immunoenhancing enteral nutrition (IMEN) outperformed other types of nutrition in the reduction of complications and should be considered the best available option for use in gastrointestinal surgery.

Summary prepared by Nestlé HealthCare Nutrition, Inc. The complete study can be accessed online at: <http://www.ncbi.nlm.nih.gov/pubmed/25405556>