

Invited Commentary

Early Postoperative Supplementary Parenteral Nutrition

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Perioperative nutritional therapy has been a key, albeit somewhat neglected, aspect of perioperative care ever since Studley¹ showed that patients with a preoperative weight loss of more than 20% had a 10-fold greater mortality after an operation



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for perforated peptic ulcer than those with a weight loss of less than 20%. Although many other studies have linked malnutrition with adverse postoperative outcome, perioperative nutritional optimization is still far from universal. Enhanced Recovery After Surgery programs recommend early oral nutrition, but this is dependent on early recovery of gastrointestinal function, which is in turn dependent on implementation of multimodal interventions aimed at aiding postoperative recovery.² Even with ideal preoperative and intraoperative care, optimal early oral nutrition may not be possible in all patients, especially those undergoing major upper gastrointestinal or pancreatic operations.

Enteral nutrition has been proposed as a viable alternative when oral nutrition is not feasible, but it may take up to 5 postoperative days to achieve the desired protein and calorie intake.³ The European Society for Clinical Nutrition and Metabolism (ESPEN) guidelines on perioperative nutrition state, "If the energy and nutrient requirements cannot be met by oral and enteral intake alone (<50% of caloric requirement) for more than seven days, a combination of enteral and parenteral nutrition is recommended."⁴(p4747-4748)

In a randomized clinical trial of 230 participants, Gao and colleagues⁵ have shown that early initiation of supplemental parenteral nutrition on postoperative day 3 in participants with a high nutritional risk and poor tolerance to enteral nutrition after major abdominal surgery resulted in significantly fewer nosocomial infections than in those in whom supplemental parenteral nutrition was commenced on postoperative day 8. There was no difference in the secondary outcomes, which included total adverse events, length of hospital stay, and costs of hospitalization.

Although this study is well conducted, it does not inform the reader about other aspects of perioperative care that also affect outcome. This information is essential for the accurate interpretation of the results, especially because a hospital stay of 17 days is more prolonged than that seen in Enhanced Recovery After Surgery programs.⁶ There is some importance in making patients a partner in the surgical pathway and allowing them to drive their own recovery by the process of education, preoperative optimization (physical, nutritional, and psychological), and compliance with postoperative recommendations, such as early mobilization and early oral nutrition. Future studies on perioperative care interventions should report on the overall package-of-care checklist⁷ so that readers may contextualize the importance of the intervention being studied. Incorporation of this information in the reporting of trials on perioperative care will help the translation of trial interventions into clinical practice at a more rapid pace.

ARTICLE INFORMATION

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Published Online: March 16, 2022.
doi:10.1001/jamasurg.2022.0266

Conflict of Interest Disclosures: Dr Ljungqvist reported that he founded and owns stock in Encare

AB; has received honoraria for advice from Nutricia and honoraria for travel and speaking from Nutricia, Medtronic, Encare, and Pharmacosmos; honoraria for speaking from Fresenius-Kabi, BBraun, and Vitaflow; has previously held a now-expired patent for a preoperative carbohydrate drink; and is cofounder and chairman of the Enhanced Recovery After Surgery Society. No other disclosures were reported.

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