

Perioperative Enteral Feeding Guideline for TACS, Ortho Trauma and Burn Patients in the Intensive Care Unit

Nutritional support is exceedingly important for the burned, injured, and critically ill patient. Benefits of enteral nutrition include improved morbidity through enhanced wound healing, decreased incidence of hospital acquired infections (intra-abdominal, pneumonia), and decreased rates of stress gastritis and GI bleeding.

Published data in critically ill patients receiving enteral nutrition demonstrates the safety and efficacy of uninterrupted perioperative treatment. (Bengmark, Andersson, and Mangiante 2001; Visser et al. 2011; Jenkins, Gottschlich, and Warden 1994) Data from all published studies to date demonstrates safety of continuing tube feeds in patients with a protected airway.

To improve outcomes and adherence to evidenced-based practice for enteral nutrition in critically ill patients, the following guideline will be implemented for TACS and Burn patients in the intensive care unit:

Tube feeds will be held 6 hours prior to scheduled operating room time, or at 130am (if no time scheduled) for operative procedures that include:

- Anesthesia Airway Management (including placement or manipulation of ETT or tracheostomy tube)
- Surgery on the Airway/Aerodigestive/Upper Intestinal Tract

Tube feeds will be continued peri-operatively (including intraoperative) for procedures that include:

- No Changes to a Secured Airway (cuffed ETT or cuffed tracheostomy tube)
- Documented tolerance to enteral nutrition (via residual volumes, abdominal exam, etc.)
- Surgery Not Involving the Airway/Aerodigestive/Intestinal Tract
- Includes Lateral/Prone Positioning

Glucose Management:

- As per current standard of care, the anesthesia team should discuss most recent blood glucose level and insulin administration with the intensivist team or bedside ICU nurse prior to transport to the OR, intraoperative blood glucose levels should be monitored accordingly

Post-Surgical Management:

- For patients with held nutrition, tube feeds to be resumed immediately postoperatively at the previously tolerated rate unless specifically discontinued by the surgical team.

Bengmark, S, R Andersson, and G Mangiante. 2001. "Uninterrupted Perioperative Enteral Nutrition.." *Clinical Nutrition (Edinburgh, Scotland)* 20 (1): 11–19. doi:10.1054/clnu.2000.0111.

Jenkins, M E, M M Gottschlich, and G D Warden. 1994. "Enteral Feeding During Operative Procedures in Thermal Injuries.." *The Journal of Burn Care & Rehabilitation* 15 (2): 199–205.

Visser, Marlieke, Mariska Davids, Hein J Verberne, Wouter E M Kok, Hans W M Niessen, Lenny M W van Venrooij, Riccardo Cocchieri, Willem Wisselink, Bas A J M de Mol, and Paul A M van Leeuwen. 2011. "Rationale and Design of a Proof-of-Concept Trial Investigating the Effect of Uninterrupted Perioperative (Par)Enteral Nutrition on Amino Acid Profile, Cardiomyocytes Structure, and Cardiac Perfusion and Metabolism of Patients Undergoing Coronary Artery Bypass Grafting.." *Journal of Cardiothoracic Surgery* 6: 36. doi:10.1186/1749-8090-6-36.