

Table 8 Summary of AHRQ Safety Program for Improving Surgical Care and Enhanced Recovery after Bariatric Surgery (ERABS) ^a	
Protocol Component/Intervention	Outcome
Immediate Pre-operative	
Carbohydrate loading	Decrease insulin resistance Decrease protein catabolism, LOS Faster return of bowel function
Reduced fasting	No adverse outcomes
Multimodal pre-anesthesia medication	Decreased pain, PONV, opioid use
Intra-operative	
Standard intra-operative anesthesia pathway	Decreased pain, PONV, opioid use
Protective ventilation strategies	Decreased pulmonary complications
Goal-directed fluid management	Decrease morbidity, LOS
Postoperative nausea and vomiting prophylaxis	Decreased PONV
Regional block	Decreased pain, opioid use
Postoperative	
Standard multimodal analgesia regimen	Decreased pain, PONV, opioid use
Early ambulation	Decreased VTE
Early return of oral intake	Easier return of bowel function
Abbreviations: AHRQ = Agency for Healthcare Research and Quality; LOS = length of stay; PONV = postoperative nausea and vomiting; VTE = venous thromboembolism. ^a Based on information included in Grant et al. <i>Anesth Analg.</i> 2018 (855); Thorell et al. <i>World J Surg.</i> 2016;40:2065-2083 (568); Ljungqvist et al. <i>JAMA.</i> 2017;152:292-298 (856); Alvarez et al. <i>Curr Opin Anaesthesiol.</i> 2017;30:133-139 (593); and Bellamy et al. <i>Perioper Med (Lond).</i> 2013;2:12 (549).	

ing at least 5 daily servings of fresh fruits and vegetables (**Grade D**). Protein intake should be individualized, assessed, and guided by an RD, regarding gender, age, and weight (**Grade D**). A minimal protein intake of 60 g/d and up to 1.5 g/kg ideal body weight per day should be adequate; higher amounts of protein intake—up to 2.1 g/kg ideal body weight per day—need to be assessed on an individualized basis (**Grade D**). Concentrated sweets should be eliminated from the diet after Roux-en-Y gastric bypass to minimize symptoms of the dumping syndrome, as well as after any bariatric procedure to reduce caloric intake (**Grade D**). Crushed or liquid rapid-release medications should be used instead of extended-release medications to maximize absorption in the immediate post-procedure period (**Grade D**).

R39. (2019*). After consideration of pre-procedure deficiency states, as well as risks and benefits in the early (<5 days) post-procedure period, patients with, or at risk for, demonstrable micronutrient insufficiencies or deficiencies must be treated with the respective micronutrient, and then adjusted based on recommendations for the late post-procedure period (Tables 9, 11, and 12) (**Grade A, BEL 2, upgraded by consensus**). Minimal daily nutritional supplementation for patients with biliopancreatic diversion with/without duodenal switch, Roux-en-Y gastric bypass, and sleeve gastrectomy should be in chewable

form initially, and as 2 adult multivitamins plus minerals (each containing iron, folic acid, and thiamine) (**Grade B, BEL 2**), elemental calcium (1,200 to 1,500 mg/d for sleeve gastrectomy and Roux-en-Y gastric bypass and 1,800 to 2,400 mg/d for biliopancreatic diversion with duodenal switch in diet and as citrated supplement in divided doses) (**Grade B, BEL 2**), at least 2,000 to 3,000 international units of vitamin D (titrated to therapeutic 25-hydroxyvitamin D levels >30 ng/mL) (**Grade A, BEL 1**), total iron as 18 to 60 mg via multivitamins and additional supplements (**Grade A, BEL 1**), and vitamin B12 (parenterally as sublingual, subcutaneous, or intramuscular preparations, or orally, if determined to be adequately absorbed) (**Grade B; BEL 2**). Minimal daily nutritional supplementation for patients with laparoscopic adjustable gastric banding should include 1 adult multivitamin plus minerals (including iron, folic acid, and thiamine) (**Grade B, BEL 2**), 1,200 to 1,500 mg/d of elemental calcium (in diet and as citrated supplement in divided doses), and at least 2,000 to 3,000 international units of vitamin D (titrated to therapeutic 25-dihydroxyvitamin D levels) (**Grade B, BEL 2**). Additional recommendations to prevent micronutrient deficiencies are included in Tables 9, 11, and 12.

R40. (2019*). Goal-directed intra- and early post-procedure fluid management should be guided by continuous noninvasive measurements to avoid over- and underhydra-