

A Comparison of IMPACT Advanced Recovery® Immunonutrition Drink vs. Ensure® Surgery Immunonutrition Shake

Per Serving



Product	IMPACT Advanced Recovery® Drink	Ensure® Surgery Shake	IMPACT Advanced Recovery® Drink Attributes
Company	Nestlé Health Science	Abbott Nutrition	
Serving Size	8.45 fl oz (250 mL)	8 oz (237 mL)	
Application	Evidence-based blend of immunonutrients: arginine, omega-3 fatty acids (EPA + DHA from fish oil) and nucleotides, clinically proven to reduce the risk of infectious complications and length of stay (LOS) after major elective surgery. ^{1,2}	Nutrition with added arginine and omega-3 fatty acids to support immune health and recovery from surgery.	<ul style="list-style-type: none"> In a meta-analysis of 28 RCTs of immunonutrition formulas, only IMPACT® formulas containing arginine, omega-3 fatty acids and nucleotides showed a significantly reduced risk of infectious complications vs. standard nutrition after major elective surgery. Other arginine supplemented formulas vs. standard nutrition did not make a significant difference in outcomes.¹ No studies of Ensure® Surgery were found in the peer-reviewed published literature.
Recommended Intake	2 cartons per day for 5 days before and/or after surgery, or as directed by a healthcare provider	2-3 shakes/day for 5-7 days before and after surgery	<ul style="list-style-type: none"> When a 5-day surgical protocol is considered, fewer servings per day may help support compliance. The difference in volume per day is 211 mL less when comparing 2 cartons of IMPACT Advanced Recovery® Drink with 3 cartons of Ensure® Surgery Shake.
Calories (kcal/mL)	1.1	1.4	
Calories (kcal)	280	330	
Protein (g)	26 (37% of total kcal)	18 (22% of total kcal)	<ul style="list-style-type: none"> On a per calorie basis, IMPACT Advanced Recovery® contains 44% more protein than Ensure® Surgery.
Protein Source	Calcium caseinate (milk), sodium caseinate (milk), 6.3 g supplemental L-arginine	Milk protein concentrate, sodium caseinate, 4.2 g supplemental L-arginine	<ul style="list-style-type: none"> Critical care guidelines suggest formulations that include arginine with other agents (including EPA/DHA, glutamine, nucleic acid) for perioperative use in SICU patients.*³

Product	IMPACT Advanced Recovery® Drink	Ensure® Surgery Shake	IMPACT Advanced Recovery® Drink Attributes
Supplemental Nucleotides (mg)	645	0	<ul style="list-style-type: none"> IMPACT Advanced Recovery® Drink provides dietary nucleotides, a source of purine and pyrimidine bases for DNA/RNA synthesis, which support replication of the rapidly dividing cells of the immune system, (i.e. T-lymphocytes and gut associated lymphoid tissue).^{4,6} In a meta-analysis of 28 studies of immunonutrition formulas, only IMPACT® formulas containing supplemental arginine, omega-3 fatty acids and nucleotides showed a significantly reduced risk of infectious complications vs. standard nutrition after major elective surgery. Other arginine supplemented formulas compared with standard nutrition were not supplemented with nucleotides, and demonstrated no significant difference in outcomes.¹ Nucleotides are preferentially synthesized under stress by the more efficient salvage pathway vs. <i>de novo</i> synthesis from amino acid precursors. The rate limiting factor in the salvage pathway is the supply of pyrimidine and purine bases, aided by supplementation of nucleotides.⁵
Fat (g)	8 (35% of total kcal)	9 (25% of total kcal)	
Fat Source	Refined fish oil (anchovy, sardine), corn oil, MCT	Fish oil (anchovy, cod, menhaden, pollock, salmon, sardine, tuna), canola oil, MCT	
n6:n3 ratio	1.1:1	N/A	<ul style="list-style-type: none"> IMPACT Advanced Recovery® Drink provides a low n6:n3 ratio to help support modulation of proinflammatory mediators.⁶
EPA + DHA (g)	1.65	1.1	
Carbohydrate (g) (% of total Kcal)	20 (28)	45 (55)	<ul style="list-style-type: none"> Carbohydrate is controlled to 20 g/svg in IMPACT Advanced Recovery® Drink to help with blood glucose management. Postoperative hyperglycemia greatly increases the risk of infection for people with and without diabetes. As many as 30% of postop hyperglycemic episodes were found in patients without diabetes.¹⁸ IMPACT Advanced Recovery® has 49% less carbohydrate on a per calorie basis than Ensure® Surgery. Guidelines recommend perioperative glycemic control targeting blood glucose <200 mg/dL regardless of diabetes diagnosis.⁹
Carbohydrate Source	Sugar	Corn syrup, sugar, dietary fiber	
Sugars (g)	18	19	
Dietary Fiber (g) Fiber Source	No added fiber	3 scFOS®	<ul style="list-style-type: none"> IMPACT Advanced Recovery® Drink contains no added fiber to combine with a transitional oral diet following GI surgery.¹⁰
Flavor	Vanilla	Vanilla	<ul style="list-style-type: none"> IMPACT Advanced Recovery® Drink recipes and flavoring tips available at www.NestleMedHub.com

The IMPACT® Family of Formulas Provide PROVEN Surgical Nutrition

IMPACT Advanced Recovery® Drink:

- Contains the most evidence-based blend of immunonutrients; studied in more RCTs, in more patients, in more types of surgery, and with more positive outcomes than any other.^{1,2,11,14}
- Studied as an important part of Enhanced Recovery Protocols¹² to help decrease:
 - Infection¹³⁻¹⁵
 - LOS^{13, 16, 17}
 - Readmissions^{18,19}
 - Patient Safety Indicator Score¹⁴
- Designed with carbohydrate control to help support blood glucose management.



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*This statement does not constitute an endorsement of IMPACT Advanced Recovery® Drink or any other Nestlé Health Science Nutrition products by SCCM or A.S.P.E.N.

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