



# IMPACT® Formulas

Proven to Reduce the Risk of Post-Surgical Infectious Complications







## A closer look at surgical complications:

Inadequate nutrition intervention negatively affects outcomes,<sup>1,2</sup> and healthcare related quality and safety scores, while placing significant healthcare dollars at risk.<sup>3</sup>



## Infectious complications are costly for patients and providers.



### PRONE TO INFECTION

**1 in 5** GI cancer surgery patients experience a postoperative infection<sup>1</sup>



### LONGER HOSPITAL STAYS

Infectious complications increase length of stay (LOS) by an average of **3-11 days**.<sup>2-5</sup>



### INCREASED READMISSIONS

Patients who experience a postoperative complication at home are **4 times** more likely to be readmitted.<sup>6</sup>



### QUALITY MEASURES AFFECT REIMBURSEMENT

Providers are being measured on improving quality of care while **effectively using resources**.<sup>7</sup>



Health Systems are focused on achieving the **Triple Aim**.<sup>8</sup>



Surgical complications are a costly problem, putting even well-nourished patients at risk.<sup>9</sup>

1. Marimuthu K et al. *Ann Surg* 2012;255:1060-1068. 2. Drover JW et al. *JACS* 2011;212(3):385-399. 3. U.S. Efforts to Reduce Hospital-Associated Infections. U.S. Department of Health and Human Services. [www.hhs.gov/asl/testify/2013/09/t20130924.html](http://www.hhs.gov/asl/testify/2013/09/t20130924.html). Date accessed: 5/5/2016. 4. Mangano DT et al. *J Cardiothorac Vasc Anesth* 2004;18:1-6. 5. Astaganeau P et al. *J Hosp Infect* 2001;48:267-274. 6. Kirkland KB et al. *Infect Control Hosp Epidemiol* 1999;20:725-730. 7. Engemann JJ et al. *Clin Infect Dis* 2003;36:592-7. 8. Kazaure HS et al. *Arch Surg* 2012;147(11):1000-7. 9. deLissovoy G et al. *Am J Infect Control* 2009;37(5):387-97.

1. Healthcare Cost and Utilization Project. [www.hcup-us.ahrq.gov/nisoverview.jsp](http://www.hcup-us.ahrq.gov/nisoverview.jsp). Accessed November 5, 2012. 2. Bratzler DW et al. *Clin Infect Dis* 2006;43:322-330. 3. Fleischmann KE et al. *Am J Med* 2003;115:515-520. 4. Dimick JB et al. *J Am Coll Surg* 2003;196:671-678. 5. Shepard J et al. *JAMA Surg* 2013;148(10):907-914. 6. Kassir MT et al. *J Am Coll Surg* 2012;215:322-330. 7. Centers for Medicare & Medicaid Services; 2016. [www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-MIPS-and-APMs.html](http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-MIPS-and-APMs.html). 8. Triple Aim for Populations. [www.ihl.org/Topics/TripleAim](http://www.ihl.org/Topics/TripleAim). Accessed 5/25/2016. 9. Braga M et al. *Surg* 2002;132:805-814.

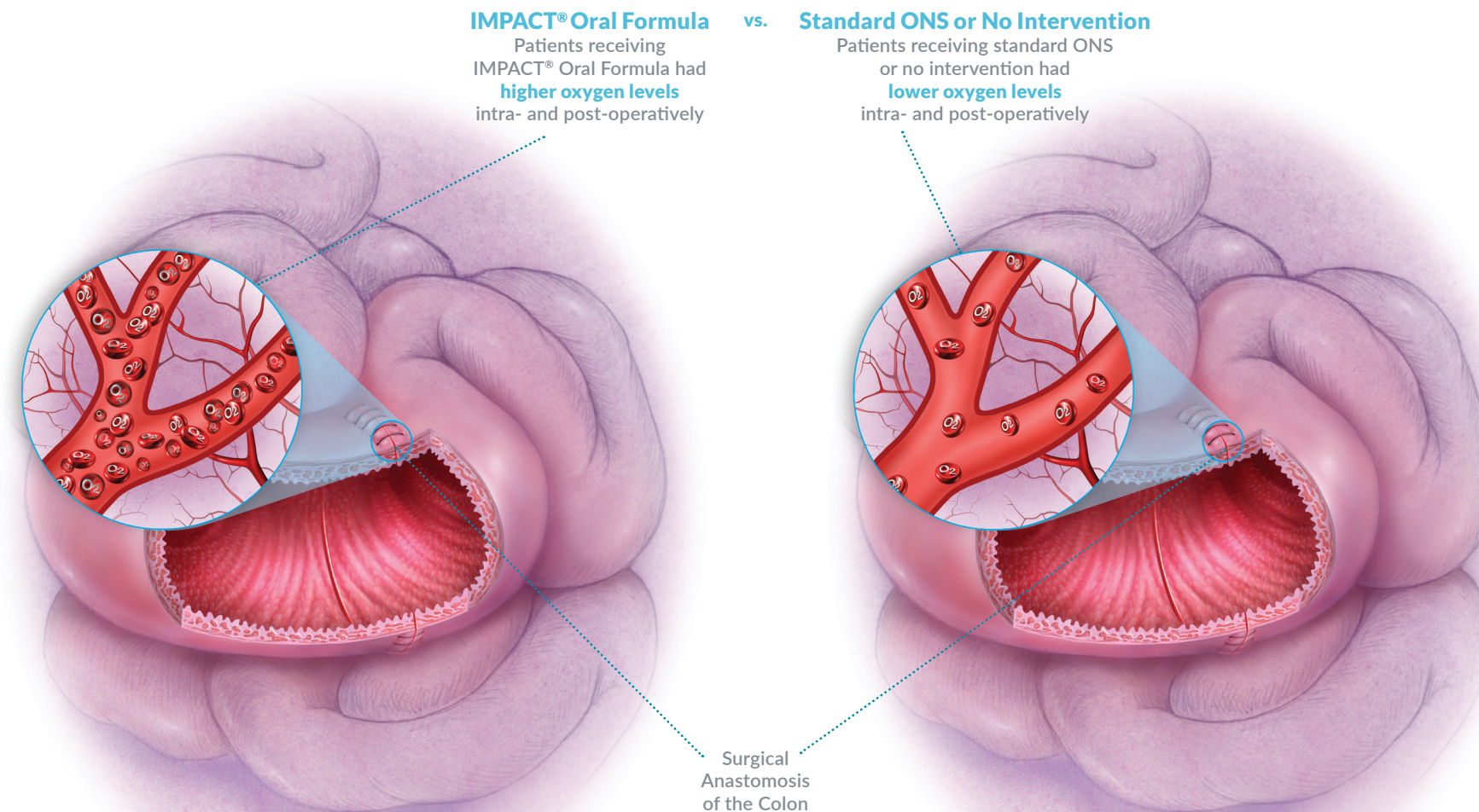
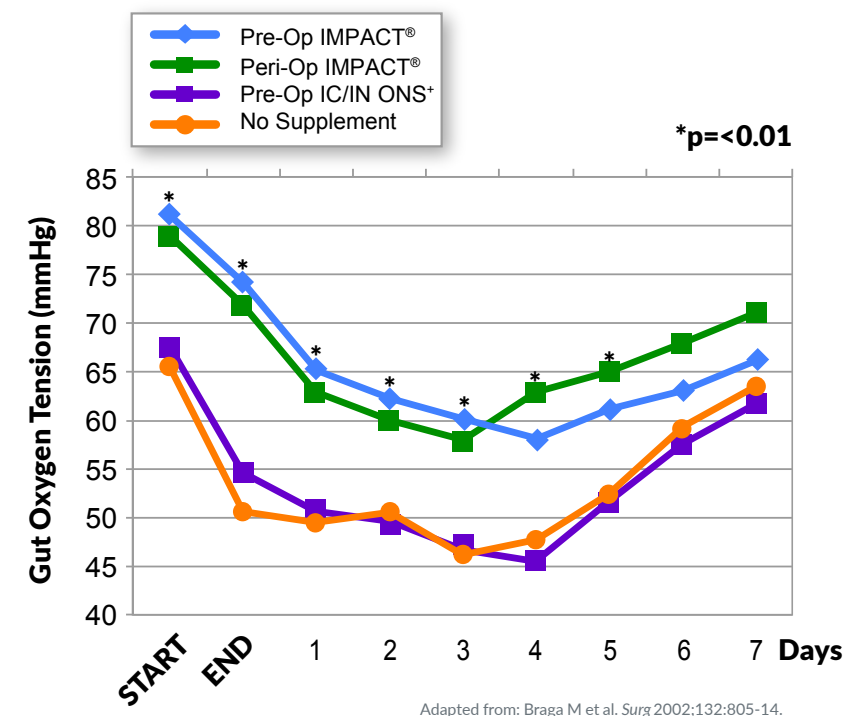




Improved outcomes  
in over  
**80 publications**  
in major elective surgeries,  
including: upper GI,  
lower GI, cardiac,  
head and neck, bladder cancer,  
gyn-oncology, orthopedic,  
thoracic cancer and  
ventral hernia repair.

## IMPACT® formulas increase oxygenation to the surgical wound versus standard oral nutrition or no intervention.<sup>1</sup>

The figure below shows gut oxygen tension measured during surgery and throughout the first postoperative week. The risk of hypoxia and ischemia increases as oxygen tension falls at the surgical anastomosis.<sup>2</sup>



IMPACT® has more clinical evidence and more positive outcomes than any other immunonutrition formula.

\*Key to above abbreviations: IC=Isocaloric, IN=Isonitrogenous, ONS=Oral Nutrition Supplement  
1. Braga M et al. Surg 2002;132:805-14. 2. Sheridan WG et al. Dis Colon Rectum 1987;30:867-871.

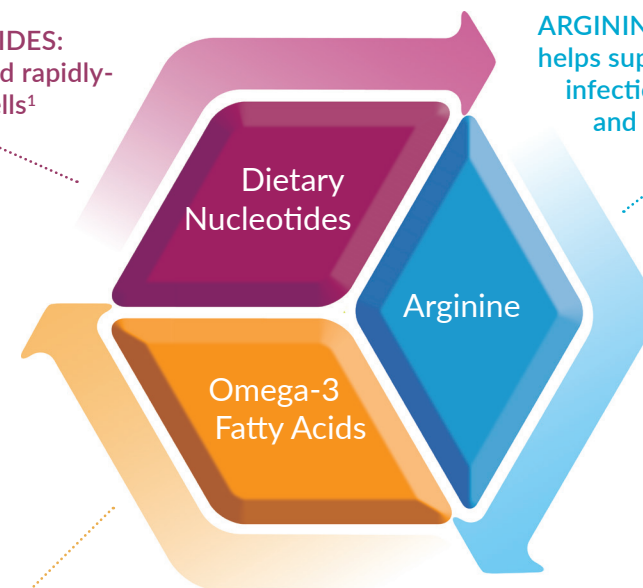


## Only IMPACT®: Unique ingredients. Uniquely versatile.

IMPACT®  
is supported  
by  
**over 40**  
randomized  
controlled  
trials.

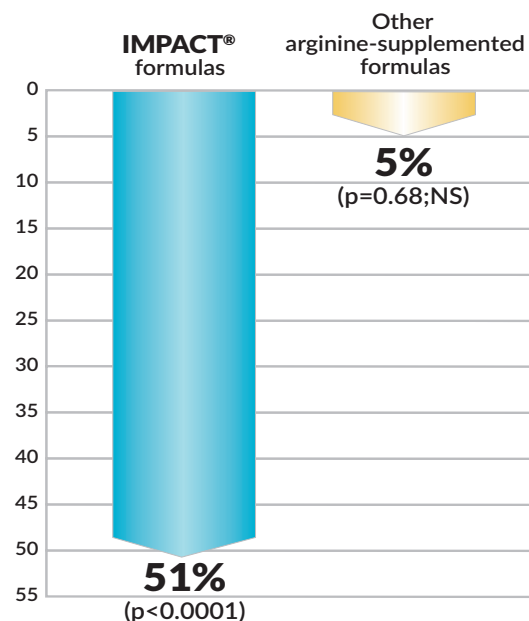
DIETARY  
NUCLEOTIDES:  
help rebuild rapidly-  
dividing cells<sup>1</sup>

ARGININE:  
helps support the body's defenses against  
infection, increases gut oxygenation  
and colonic microperfusion<sup>2,3</sup>



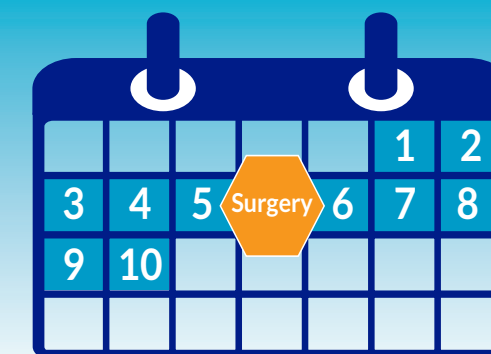
OMEGA-3 FATTY ACIDS (EPA and DHA):  
help manage inflammation<sup>4</sup>

Only IMPACT® formulas **reduced the risk of infectious complications 51%** vs. standard nutrition formulas. Other arginine-supplemented formulas showed a 5% reduction versus standard nutrition.<sup>5</sup>



## It's a simple protocol:

Consume for 5 days before surgery and at least 5 days after surgery.



**3 Cartons per day  
or 1 UltraPak® per day**  
for at least 5 days **BEFORE**  
and **AFTER** surgery\*

Successfully used in conjunction  
with Enhanced Recovery Protocols (ERPs)<sup>1-5</sup>

\*Initiate IMPACT® or IMPACT® Peptide 1.5 tube feeding in  
an open or closed system and advance to ≥ 1000 calories/day

## Resources to support your immunonutrition protocol

**Critical Care Nutrition Guidelines<sup>6</sup>**  
support immune-modulating ingredients  
provided in IMPACT® formulas\*\*

- For perioperative use in the surgical ICU
- For patients with severe trauma
- For patients with traumatic brain injuries

## IMPACT® formulas meet Strong for Surgery Criteria

Quality improvement initiatives, such as Strong for Surgery, advocate use of evidence-based immune-modulating supplementation. Strong for Surgery is supported by the American College of Surgeons and utilizes a preoperative nutrition checklist.<sup>7</sup>



## ENact™ QI Initiatives and Nutrition Protocols

ENact Tools are available to help clinicians begin a surgical nutrition protocol  
Visit [www.enactnutrition.com](http://www.enactnutrition.com) to download your Implementation Tools.

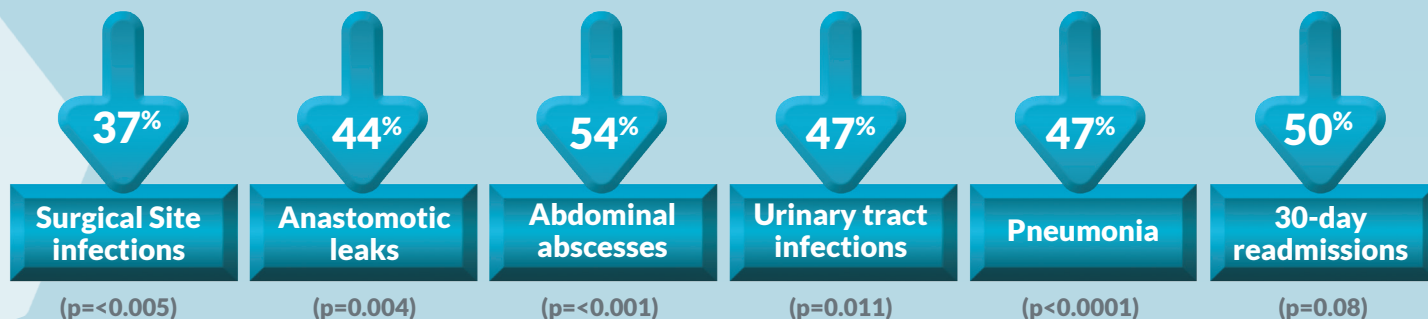
# Prepare your patients for surgery with IMPACT® — the proven protocol.

1. Hess JR and Greenberg NA. NCP 2012;27(2):281-294. 2. Wu G et al. Amino Acids 2009;37:153-168. 3. Lovett JE et al. Ann Plast Surg 2001;46:269-274. 4. Calder PC. BBA 2015;1851:469-484. 5. Drover JW et al. J Am Col Surg 2011;212:385-399.

\*\*The above statement does not constitute an endorsement of IMPACT® Formulas or any other Nestlé HealthCare Nutrition product by SCCM or A.S.P.E.N. Strong for Surgery is a Quality Program of the American College of Surgeons. The American College of Surgeons and Strong for Surgery do not endorse IMPACT® formulas or any other product. 1. Lassen K et al. Clin Nutr 2012;31:817-830. 2. Alito Aprelino M and de Aguiar-Nascimento JE. Nutr J 2016;15:1-7. 3. Hamilton-Reeves JM et al. Euro Urol 2016;69(3):389-392. 4. Majumder A et al. J Am Coll Surg 2016;222:1106-1115. 5. Kavanaugh E et al. ERAS-USA 2018. 6. Taylor BE et al. CCM 2016;44(2):390-438. 7. <https://www.facs.org/quality-programs/strong-for-surgery> Accessed February 7, 2017.



**Clinical outcomes<sup>1-3</sup> with IMPACT<sup>®</sup> formulas include decreases in:**



## ORDERING INFORMATION

	PRODUCT CODE	UPC (GTIN)	PACKAGING	NDC FORMAT NUMBER
IMPACT <sup>®</sup> UNFLAVORED	35810000	10043900358106	24-250mL cartons/case	43900-0358-10
IMPACT <sup>®</sup> ULTRAPAK <sup>®</sup> SYSTEM	35810800	10043900358182	6-1000mL bags/case	43900-0358-18
IMPACT <sup>®</sup> PEPTIDE 1.5 UNFLAVORED	4390097400	10043900974009	24-250mL cartons/case	43900-0973-99
IMPACT <sup>®</sup> PEPTIDE 1.5 ULTRAPAK <sup>®</sup> SYSTEM	4390097371	10043900973712	6-1000mL bags/case	43900-0973-70
IMPACT Advanced Recovery <sup>®</sup> VANILLA	4390099291	00043900992914	15-178mL cartons/case	43900-0992-90

### IMPACT<sup>®</sup> PEPTIDE 1.5 Peptide-Based, Complete Nutrition for Immune Support

Shown in a retrospective chart review of 113 patients to be better tolerated than Pivot<sup>®</sup> 1.5 Cal; less diarrhea and need for rectal tubes.<sup>2</sup>

### IMPACT<sup>®</sup> Immunonutrition for Surgical and Trauma Patients

Improving surgical outcomes for over 20 years.

### IMPACT ADVANCED RECOVERY<sup>®</sup>

Immunonutrition Drink

First and only oral immunonutrition formula in the U.S. to contain a unique blend of supplemental arginine, omega-3 fatty acids from fish oil and dietary nucleotides.



# IMPACT<sup>®</sup> Formulas Proven to Reduce the Risk of Post-Surgical Infectious Complications

## USE UNDER MEDICAL SUPERVISION

Pivot is a registered trademark of Abbott Laboratories.

1. Waitzberg DL et al. *World J Surg* 2006;30:1592-1604. 2. Rumberger L et al. *JPEN* 2014;38:20-22. 3. Banerjee S et al. *Nutr* 2017;42:106-13. Unless otherwise noted, all trademarks are owned by Société des Produits Nestlé S.A., Vevey, Switzerland. © 2018 Nestlé. All rights reserved. Bridgewater, NJ 08807 U.S.A. IPCT-11249-1218