What if nutrition were therapy?
Grade A clinical evidence supports nutritional therapy with IMPACT® formula

Only IMPACT formula has 80+ published articles supporting its clinical outcomes and economic benefits vs. standard formulas*

IMPACT formula has positive outcome data across multiple patient types*:
- Surgical – elective and emergency
- Trauma – head injury, burns, blunt and penetrating trauma
- Medical – critically ill, cardiac failure, mechanically-ventilated, pneumonia, mild to moderate sepsis, wounds

* Data vs. control including standard formulas, total parenteral nutrition (TPN) and nothing by mouth (NPO).
For more information on IMPACT trials, or to speak with a Nestlé healthcare specialist call 1-800-422-ASK2 (2752).
IMPACT® nutritional therapy improves clinical outcomes and helps reduce surgical complications¹⁻⁸

**IMPACT formula reduces the incidence of nosocomial infection**¹⁺

**IMPACT formula decreases days on ventilator**⁵⁻⁶

**IMPACT formula reduces antibiotic use**²⁻⁴⁻¹⁻§

**IMPACT formula decreases length of hospital stay (LOS)**¹⁻⁶⁻£

In addition, IMPACT nutritional therapy has been shown to significantly reduce incidence of complications including:

- Pneumonia & UTI by 50%¹⁺
- Wound complications by 77%⁷⁻⁸⁻Ω⁻§
- Abdominal abscesses by 60%¹⁺
- Anastomotic leaks by 50%¹⁺

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¹ Versus standard formula. Review of 17 randomized trials to determine the relationship between postsurgical outcomes and pre-, peri- and postoperative nutritional support in patients undergoing elective surgery; n=2,305.

‡ Prospective, randomized, double-blind clinical trial assessing perioperative administration of enteral formula to reduce infections vs. standard formulas; n=206.

§ Randomized clinical trial assessing effects of perioperative oral supplementation on length of hospital stay and postoperative complications in malnourished GI surgical cancer patients; n=150.

¶ Versus standard formula; p=0.007. Prospective, randomized, double-blind, controlled trial investigating median duration of mechanical ventilation days required.

£ Results from a prospective, randomized, multicenter, controlled trial; patients received standard formula. Infections included UTI, SSI and pneumonia. IMPACT formula reduced patients’ median of stay; n=296.

Ω Prospective, randomized trial evaluating wound complications in major abdominal surgical patients; n=60.

* Based on IMPACT nutritional therapy and standard formula. Results are shown as a percentage decrease from baseline.

**IMPACT®**

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Positive outcomes are supported by IMPACT® formula’s mechanism of action

**Improves immune response:**\(^7\text{--}11\)
- \(\uparrow\) IgG & IgM
- \(\uparrow\) Total Lymphocyte Count
- \(\uparrow\) T-Lymphocyte Count

**Modulates inflammatory response:**\(^2,12\text{--}15\)
- \(\downarrow\) C-Reactive Protein
- \(\downarrow\) Fibrinogen
- \(\downarrow\) IL-2, \(\downarrow\) IL-6, \(\downarrow\) IL-8

**Enhances tissue repair:**\(^2,7\)
- \(\uparrow\) Colonic microperfusion
- \(\uparrow\) Gut oxygenation
- \(\uparrow\) Hydroxyproline levels

Only IMPACT formula contains a patented blend of immune-modulating nutrients including arginine, omega-3 fatty acids and dietary nucleotides that help enhance immune response

<table>
<thead>
<tr>
<th>L-Arginine(^7,17\text{--}21)</th>
<th>Glutamine(^24)</th>
</tr>
</thead>
</table>
| - A nitrogen-rich amino acid; indispensable in stressed states  
  - A precursor of polyamines and a regulator of nucleic acid synthesis  
  - Supports T-cell replication and growth to enhance immune function  
  - Promotes wound healing and reduces infectious complications | - amino acid; indispensable in stressed states  
  - The preferred oxidative fuel required for rapidly dividing cells, including GI mucosal cells & immune cells  
  - Improves GALT, mucosal integrity, and nitrogen transport to promote nutrient absorption |

<table>
<thead>
<tr>
<th>Omega-3 Fatty Acids(^22)</th>
<th>Protein(^25)</th>
</tr>
</thead>
</table>
| - Increase immune response by enhancing lymphocyte function  
  - Minimize inflammatory response by decreasing production of inflammatory mediators | - High levels support increased demand caused by catabolism during the stress response  
  - Supports wound healing, strengthens immune function and promotes anabolism |

<table>
<thead>
<tr>
<th>Dietary nucleotides(^23)</th>
<th>Zinc(^26)</th>
</tr>
</thead>
</table>
| - building blocks for DNA and RNA; indispensable in stressed states  
  - Required for almost all cell activities & growth  
  - Essential for rapidly replicating cells to help support immune function | - Stabilizes RNA and DNA structure  
  - Deficiency associated with delayed wound healing |
Nutritional therapy with IMPACT® formula is cost effective – for hospitals and patients\textsuperscript{27-31}

IMPACT formula is a cost effective therapy for managing the risk for infection and length of hospital stay in critically ill patients\textsuperscript{27}

<table>
<thead>
<tr>
<th>Investment</th>
<th>Potential Savings*</th>
</tr>
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<tbody>
<tr>
<td>Population</td>
<td>IMPACT formula</td>
</tr>
<tr>
<td>Surgical</td>
<td>$152</td>
</tr>
<tr>
<td>Trauma</td>
<td>$107</td>
</tr>
<tr>
<td>Medical</td>
<td>$107</td>
</tr>
</tbody>
</table>

Reduced incidence of nosocomial infection and hospital LOS with IMPACT formula results in net cost savings, as demonstrated in a study by Farber MS et al., 2005\textsuperscript{29,30}

14 day course x 17 critically ill ICU patients\textsuperscript{30}

- IMPACT ......................................................... $11,662
- PROMOTE\textsuperscript{®} ........................................ $1,012
- Additional cost for IMPACT .............................. $10,650

ICU savings with reduced LOS\textsuperscript{31}

- 5 days x 17 patients ........................................ $204,000

Net Savings ....................................................... $193,350

* IMPACT has been associated with reduced cost of hospital care despite its higher purchase price vs. standard formulas. Savings are on a per patient basis, based on illness category and at a low baseline infection rate (10%). These results were derived from a national database of over 1 million patients in a variety of health care facilities across the US.

† Average cost of a perioperative oral regimen in the U.S. is $220 (1 L/d for 5 consecutive days preoperatively plus 2000 kcal/d enterally for 7 consecutive days postoperatively). Average cost of a post-admission regimen (2000 kcal/d for 1 consecutive day) for medical ICU or trauma patients is $175. The average cost of a standard high nitrogen formula (2000 kcal/d for 7 consecutive days) is $68. Pricing not guaranteed and varies per customer.

‡ Incidence of nosocomial infections, mortality and the consumption of multiple ICU resources were examined to determine the cost effectiveness of this proprietary immunonutrition enteral formula.\textsuperscript{29}

§ Assumes patients receive 8 cans/day of IMPACT 1.5 formula or PROMOTE. Patients with significant, severe illness. Pricing not guaranteed and varies per customer.

¶ Assuming cost of incremental care $2400/day in ICU.\textsuperscript{31}
Make nutritional therapy with IMPACT® formula an important part of your treatment protocols

Immune-modulating formulas are appropriate for multiple patient types:20,32*

- Major elective GI surgery
- Trauma (abdominal trauma index score >20)
- Burns (total body surface area >30%)
- Head and neck cancer
- Critically ill on mechanical ventilation (not severely septic)

IMPACT formula recommended administration:†

- Deliver enterally or PO: enterally via gastric or jejunal tube33 (IMPACT formulas) –or– orally with IMPACT Advanced Recovery® Advanced Nutrition Drink
- Initiate early: within 24–48 hours after injury/surgery or as soon as safe to feed20
- Start slowly: 10–30 mL/hour and advance towards goal over next 48–72 hours34,35
- Duration: after achieving ≥50% of caloric goal, feed for ≥5 days34,36‡
- Continue until the risk of infectious complications is significantly reduced20
- Transition to high-nitrogen standard formula or wean from enteral feeding

“…IMPACT [has] been shown in clinical studies to improve patient outcome, principally by reducing infections and improving wound healing. Other formulas have not been prospectively studied and are dissimilar enough from the tested formulas that no conclusions can be made about their use in trauma patients …”


* Contraindicated where immunosuppression is desired. Caution is required in patients with severe sepsis.
† Feed IMPACT formula only to those patients who are hemodynamically stable and where enteral feeding is appropriate.
‡ Patients may not receive maximum benefit if used fewer than 5 days and less than 0.5–1 L/day of IMPACT formula.13
Make an IMPACT® – with your choice of nutritional therapy

Extensive evidence and positive clinical outcomes support the unique formulation found in all IMPACT formulas

<table>
<thead>
<tr>
<th>IMPACT 1.0</th>
<th>For patients requiring a high-protein, 1.0 kcal/mL immune-modulating formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPACT 1.5</td>
<td>For patients with fluid sensitivity requiring a calorically dense (1.5 kcal/mL), high-protein, immune-modulating formula</td>
</tr>
<tr>
<td>IMPACT with fiber</td>
<td>For patients requiring a high-protein, 1.0 kcal/mL immune-modulating formula with added fiber to help support normal bowel function</td>
</tr>
<tr>
<td>IMPACT Glutamine</td>
<td>For patients requiring a high-protein, calorically dense (1.3 kcal/mL) immune-modulating formula with high levels of glutamine (15g/L) and added fiber</td>
</tr>
<tr>
<td>IMPACT Advanced Recovery®</td>
<td>For patients requiring a high-protein, calorically dense (1.4 kcal/mL) immune-modulating nutritional beverage – for use peri-operatively to help decrease incidence of infection and support colonic health</td>
</tr>
</tbody>
</table>
Make an IMPACT® with nutritional therapy in your ICU

Reduced risk for infection
Up to 61%¹

Fewer ventilator days,
Less antibiotic use
Decreased surgical wound complications
Up to 4.5 days⁶
Up to 60%²⁻⁴
Up to 77%⁷

Shorter length of stay
On average 3.1 days¹

Lower cost of care
Hospital savings over $190,000²⁹

Higher standard of patient care
Across multiple patient types

Contact Nestlé Nutrition at 1-800-422-ASK2 for more information, or visit www.nestlenutrition.com/us


PROMOTE® is a registered trademark of Abbott Laboratories.