

# The Majority of Critically Ill Adult Patients in the ICU Require Nutritional Support, Regardless of Underlying Disease<sup>1</sup>

## Malnutrition in Hospitalized Patients Results in Poorer Outcomes and Higher Treatment Costs



Almost 50% of all patients are malnourished at the time of hospital admission<sup>2</sup>



4 to 6 days longer hospital length of stay<sup>3,4</sup>



54% higher likelihood of hospital 30-day readmissions<sup>5</sup>



Up to 300% increase in hospital costs<sup>4</sup>

### Clinical Value of RELiZORB<sup>6,7</sup>

- The only FDA-cleared digestive enzyme product to hydrolyze fats in enteral nutrition
- Clinical evidence in enterally fed patients
- Designed for continuous feeding
- Allows use of low-cost enteral formulas

**RELiZORB**<sup>®</sup>   
(IMMOBILIZED LIPASE) CARTRIDGE



RELiZORB is a first-of-its-kind digestive enzyme cartridge designed to mimic the function of pancreatic lipase. RELiZORB is indicated for use in pediatric patients (ages 5 years and above) and adult patients to hydrolyze fats in enteral formula.

Characterized by a deficiency in pancreatic enzymes—(including lipase, the enzyme responsible for fat digestion)—exocrine pancreatic insufficiency (EPI) can lead to significant malnutrition and fat malabsorption<sup>8</sup>

### Conditions commonly associated with fat malabsorption<sup>9</sup>:

- Acute or chronic pancreatitis
- Pancreatic cancer and other cancers
- Pancreatectomy
- Cystic fibrosis
- Short bowel syndrome

### More than 50% of critically ill patients without pre-existing pancreatic diseases have EPI<sup>8,10</sup> - including those with:

- Abdominal surgery
- Chronic liver disease
- Trauma/critical care
- Crohn's disease
- Celiac disease

Fat malabsorption is associated with poor outcomes that can impact digestive symptoms, nutritional status, physical functioning, treatment burden, body image, and pain<sup>11-13</sup>

# Consider RELiZORB in Your Critically Ill Patients with Fat Malabsorption Who Require Nutrition Support



## Meet Jack\*

**A 62-year-old male admitted to the ICU for septic shock, who continues to experience frequent loose stools despite the use of enteral nutrition (EN) with a hydrolyzed protein formula.**

\*Fictional patient based on actual patient experience. The information presented is for illustrative purposes only, and not intended, nor implied, to be a substitute for professional medical advice. Individual patient profiles may vary.

### Clinical Presentation

- Frequent loose stools with fecal weight of 385 g/day
- Abdominal distention
- Mechanical ventilation
- Physical findings:
  - Temperature 100.8°F
  - Blood pressure 90/62 mmHg
  - Tachycardia
- Lab workup:
  - WBC of  $12.0 \times 10^3/\mu\text{L}$
  - Serum lactate 2.6 mmol/L
  - Stool negative for *Clostridium difficile*

### Relevant History

- Recent ICU admission for septic shock from pneumonia
- Recent antibiotic and vasopressor treatment
- Recent intubation
- Type 2 diabetes mellitus and obesity

### Diagnosis

- Ongoing septic shock
- Feeding intolerance with inability to meet caloric goals
- Persistent diarrhea with fecal weight of 385 g/day

### Nutrition Treatment

- EN was changed to Peptamen AF®, but attempts to titrate the volume of enteral feeding to goal did not result in a decrease in stool frequency or output
- Fiber supplementation was initiated, but diarrhea continued with fecal weight of 375 g/day
- RELiZORB was added to EN and stool frequency and output improved within 24 hours
- Goal feeds were achieved 2 days later, and diarrhea resolved with fecal weight decreasing to 310 g/day

RELiZORB is for use with enteral feeding only; do not connect to intravenous or other medical tubing. Medications should not be administered through RELiZORB. Please see Instructions For Use for full safety information at [www.relizorb.com](http://www.relizorb.com).

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**References:** **1.** Singer P, Blaser AR, Berger MM, et al. *Clin Nutr.* 2019;38:48-79. **2.** Kirkland LL, Kashiwagi DT, Brantley S, Scheurer D, Varkey P. *J Hosp Med.* 2013;8:52-58; **3.** Barker LA, Gout BS, Crowe TC. *Int J Environ Res Public Health.* 2011;8:514-527; **4.** Correia MI, Waitzberg DL. *Clin Nutr.* 2003;22:235-239; **5.** Fingar KR, Weiss AJ, Barrett ML, et al. Agency for Healthcare Research and Quality, Rockville, MD; **6.** RELiZORB Instructions for Use; **7.** RELiZORB Compatible Formulas & Pumps; **8.** Wang S, Ma L, Zhuang Y, Jiang B, Zhang X. *Crit Care.* 2013;17:R171; **9.** Singh VK, Haupt ME, Geller DE, Hall JA, Diez PMQ. *World J Gastroenterol.* 2017;23:7059-7076. **10.** MedLinePlus Website. <https://medlineplus.gov/ency/article/000299.htm>; **11.** Turck D, Braegger CP, Colombo C, et al. *Clin Nutr.* 2016;35:557-577; **12.** Bodnar R, Kadar L, Holics K, et al. *Ital J Pediatr.* 2014;40:50; **13.** Sawicki GS, Rasouliyan L, McMullen AH, et al. *Pediatr Pulmonol.* 2011;46:36-44.