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Review Article

OriPro 2.0: a low-glycemic, high-protein peptide-based nutritional supplement for clinical nutrition support – current evidence and future perspectives

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ABSTRACT

Disease related malnutrition remains a major problem in hospitalized and critical patients, contributing significantly to prolonged hospitalization; prone to susceptibility to infections, delayed wound healing, muscle wasting, and increased mortality. Optimizing nutritional therapy has therefore become an important component of multidisciplinary clinical care. High-protein, peptide based nutritional supplements have gained an attention because they are designed to improve nutrient absorption rate, preserve lean body mass, support gastrointestinal tolerance, and enhance metabolic recovery. Among these specialized formula supplementation, OriPro 2.0 is a high calorie, high protein, peptide based oral and enteral supplement formulated with whey protein hydrolysate, concentrated whey protein, medium-chain triglycerides, dietary fiber, prebiotics, vitamins and minerals. This review summarizes current scientific evidence regarding the nutritional composition, physiological function, glycemic characteristics, and potential clinical applications of OriPro 2.0. Particular importance is placed on the role of peptide based nutrition in critically ill patients, individuals with gastrointestinal dysfunction, postoperative patients, geriatrics with sarcopenia, and patients experiencing disease-related malnutrition. Available evidence indicates that peptide-based formulations improve protein digestion, amino acid absorption, nitrogen balance, and gastrointestinal tolerance compared with conventional polymeric formulas in particular patient populations. Furthermore, the glycemic index study of OriPro 2.0 showed a low GI value (36±5), suggesting that the formulation may contribute to improved postprandial glucose control while maintaining adequate caloric and protein intake. The combination of derived peptides from whey, complex carbohydrates, medium chain triglycerides, soluble fiber, and micronutrients provides strong physiological functions for its use in medical nutrition therapy. However, despite promising nutritional characteristics, direct clinical evidence evaluating OriPro 2.0 remains limited. Most available data supporting peptide-based nutrition originate from studies evaluating similar formulations rather than OriPro 2.0 itself. Large multicenter randomized controlled trials are therefore required to establish its efficacy, safety, cost effectiveness, and prolong clinical outcomes across varieties of patients. Overall, OriPro 2.0 represents a promising specialized nutritional supplement with potential applications in metabolic support and clinical nutrition. Future evidence-based investigations should determine its effectiveness in improving nutritional status, glycemic control, gastrointestinal tolerance, inflammatory responses, and functional recovery.

Keywords: Enteral nutrition, Glycemic index, Medium chain triglycerides, Medical nutrition therapy, OriPro 2.0, Peptide-based nutrition, Whey protein hydrolysate

INTRODUCTION

Malnutrition due to disease is increasingly recognized as a major contributor to poor clinical outcomes worldwide. Approximately one-third to half of hospitalized patients are either malnourished or significantly nutritional risk during admission, with prevalence rates rising further among critically ill patients, older adults, oncology patients, and individuals with chronic gastrointestinal disorders. Malnutrition is associated with impaired immune function, delayed wound healing, reduced skeletal muscle mass, prolonged mechanical ventilation, increased infection rates, extended hospital stay, high costs healthcare, and increased mortality.[1-3]

Critical illness induces profound metabolic alterations characterized by inflammation, accelerated protein catabolism, insulin resistance, oxidative stress, and increased energy expenditure. These metabolic disturbances rapidly deplete lean body mass, compromise immune competence, and impair functional recovery if adequate nutritional support is not initiated early.[2,4] Consequently, international organizations including the Society of Critical Care Medicine (SCCM), the American Society for Parenteral and Enteral Nutrition (ASPEN), and the European Society for Clinical Nutrition and Metabolism (ESPEN) recommend early individualized nutrition support as a cornerstone of comprehensive patient management.[2,5,6]

Enteral nutrition is generally preferred followed by parenteral nutrition whenever gastrointestinal function is preserved because it maintains intestinal integrity, preserves mucosal immunity, reduces bacterial translocation, and is associated with fewer infections.[5,6] Conventional polymeric enteral formulas contain intact proteins, long-chain triglycerides, and complex carbohydrates. Although these formulas are suitable for many patients, they may be poorly tolerated in individuals with impaired digestion, pancreatic insufficiency, inflammatory bowel disease, short bowel syndrome, and gastrointestinal surgery.[7]

To overcome these limitations, peptide-based nutritional formulations have been developed. These formulations contain partially hydrolyzed proteins, predominantly di and tripeptides, that require minimal enzymatic digestion before intestinal absorption. Peptide transport through the proton-coupled oligopeptide transporter is highly efficient, enabling rapid amino acid delivery even when digestive capacity is compromised. Consequently, peptide-based formulas have demonstrated improved gastrointestinal tolerance, enhanced protein absorption, reduced diarrhea, improved nitrogen balance, and better nutrient utilization in selected patient populations.[7-10]

High-quality whey protein hydrolysate has become an important component of many specialized medical nutrition products because of its excellent digestibility, complete essential amino acid profile, and high leucine concentration, which stimulates muscle protein synthesis through activation of the mammalian target of rapamycin signaling pathway.[11,12] Preservation of skeletal muscle mass is particularly important during critical illness because muscle wasting develops rapidly and contributes to prolonged rehabilitation, functional disability, and increased mortality.

Beyond protein quality, the carbohydrate characteristics of enteral formulas have received increasing attention. Hyperglycemia frequently develops during critical illness owing to stress-induced hormonal responses, inflammatory cytokines, insulin resistance, corticosteroid therapy, and exogenous glucose administration. Stress hyperglycemia has consistently been associated with adverse clinical outcomes, including increased infection rates, organ dysfunction, prolonged intensive care unit stay, and mortality irrespective of pre-existing diabetes status.[13,14] Therefore, glycemic management has become an essential component of medical nutrition therapy.

The glycemic index provides a standardized measure of the postprandial blood glucose response produced by carbohydrate-containing foods relative to glucose. Low GI formulations produce slower glucose absorption, lower postprandial glycemic excursions, improved insulin sensitivity, reduced inflammatory responses, and improved metabolic control.[15,16] Specialized low GI nutritional formulas are increasingly incorporated into nutritional strategies for hospitalized patients with diabetes, stress hyperglycemia, metabolic syndrome, and critical illness.

OriPro 2.0 is a specialized high-calorie, high-protein peptide-based nutritional supplement developed for oral or enteral administration in patients requiring enhanced nutritional support. The formulation incorporates whey protein concentrate, whey protein hydrolysate, medium-chain triglycerides, resistant maltodextrin, inulin, fructo oligosaccharides, complex carbohydrates, essential fatty acids, vitamins, minerals, and trace elements. According to the available glycemic index study conducted in healthy volunteers, the formulation demonstrated a low GI value of 36±5, classifying it as a low-glycemic nutritional supplement. The product was designed to provide approximately 490 kcal and 36 g protein per 100 g, together with dietary fiber and multiple micronutrients that may support glycemic control and nutritional rehabilitation.

Although peptide-based nutritional formulations have been investigated extensively, evidence specifically evaluating OriPro 2.0 remains limited. Most available information consists of formulation characteristics and glycemic index assessment rather than randomized clinical outcome studies. Therefore, a comprehensive synthesis of current evidence is warranted to place OriPro 2.0 within the broader context of peptide-based clinical nutrition.

The objective of this review is to critically evaluate the scientific evidence regarding the nutritional composition, physiological mechanisms, glycemic characteristics, potential clinical applications, safety profile, and future research priorities of OriPro 2.0. By integrating findings from peptide-based nutrition research, glycemic management studies, and medical nutrition therapy guidelines, this review aims to provide clinicians, dietitians, and researchers with an evidence-based perspective on the potential role of OriPro 2.0 in contemporary clinical nutrition practice.

Composition and nutritional characteristics of OriPro 2.0

Medical nutrition therapy has evolved beyond simply meeting caloric requirements to delivering disease-specific formulations that optimize metabolism, preserve lean body mass, maintain gastrointestinal integrity, and improve clinical outcomes.[17,18] Modern enteral nutritional supplements are therefore formulated with carefully selected macronutrients and micronutrients that enhance nutrient utilization while minimizing metabolic complications such as hyperglycemia, feeding intolerance, and gastrointestinal dysfunction.[19] OriPro 2.0 represents one such specialized peptide-based nutritional formulation designed for oral and enteral nutrition support in patients with increased nutritional requirements or impaired gastrointestinal function.[4]

OriPro 2.0 is formulated as a high-calorie (approximately 2.0 kcal/ml when reconstituted), high-protein nutritional supplement containing a balanced combination of whey protein concentrate, whey protein hydrolysate, medium-chain triglycerides (MCTs), complex carbohydrates, dietary fiber, prebiotics, vitamins, minerals, and conditionally essential nutrients such as taurine and L-carnitine.[20,21] Product information indicates that the formulation is sugar-free, gluten free, and enriched with dietary fiber and fructo oligosaccharides (FOS), making it suitable for patients requiring specialized nutrition support.[22]

Macronutrient composition

The nutritional design of OriPro 2.0 aims to provide adequate energy while maintaining a favorable macronutrient distribution for clinical nutrition.[23] Per 100 g of powder, the formulation provides approximately 450–490 kcal, 34.7–36 g of protein, 43–46 g of carbohydrate, 16–17.5 g of fat, and 3–9 g of dietary fiber, depending on the marketed formulation.[24,25] The high protein content contributes approximately 30% of total energy, considerably exceeding that of conventional nutritional beverages.[26] This protein density is particularly valuable for critically ill patients, older adults, postoperative patients, and individuals with protein-energy malnutrition, who often exhibit accelerated muscle protein breakdown and increased nitrogen losses.[17,18,26] Higher protein delivery has been associated with preservation of lean body mass, improved wound healing, enhanced immune function, and better functional recovery.[27,28]

The carbohydrate fraction is primarily composed of complex carbohydrates and slowly digestible carbohydrate sources rather than rapidly absorbed simple sugars.[29,30] Ingredients such as resistant maltodextrin and corn-derived carbohydrates are incorporated to provide sustained energy release while limiting excessive postprandial glycemic excursions.[19,31] The fat component includes medium-chain triglycerides together with essential fatty acids, providing a concentrated energy source that is readily absorbed even in patients with impaired fat digestion.[32,33]

Protein quality

Protein quality is one of the distinguishing characteristics of OriPro 2.0.[34] Rather than relying solely on intact proteins, the formulation combines whey protein concentrate (WPC) with whey protein hydrolysate (WPH).[4,11] Whey proteins possess one of the highest biological values among dietary proteins and contain all essential amino acids in proportions that closely match human requirements.[35] Whey proteins are particularly rich in branched-chain amino acids (BCAAs), especially leucine, which plays a central role in stimulating skeletal muscle protein synthesis through activation of the mammalian target of rapamycin (mTOR) signaling pathway.[36,37]

Hydrolysis of whey protein generates small peptides that require minimal enzymatic digestion before absorption.[38,39] These peptides are transported efficiently across the intestinal epithelium via peptide transporter-1 (PepT1), resulting in faster amino acid delivery than intact proteins.[14] Consequently, peptide-based formulations are often better tolerated in patients with gastrointestinal dysfunction and may improve nitrogen balance and protein utilization.

Carbohydrate profile

Unlike conventional high-calorie supplements that frequently contain substantial quantities of rapidly digestible carbohydrates, OriPro 2.0 emphasizes carbohydrate quality in addition to carbohydrate quantity.[4,8] Resistant maltodextrin contributes soluble dietary fiber while simultaneously reducing the glycemic impact of the formulation.[17,40] Inulin and fructooligosaccharides further modulate carbohydrate digestion by slowing gastric emptying and promoting fermentation within the colon.[40,41]

This carbohydrate design is reflected in the product's low glycemic response.[11] In a glycemic index study conducted in healthy volunteers according to ISO and FAO/WHO protocols, the formulation demonstrated a glycemic index of 36±5, classifying it as a low-glycemic food.[11,42,43] The low GI is likely attributable to the combined effects of high-quality protein, dietary fiber, complex carbohydrates,

and MCTs, all of which delay glucose absorption and attenuate postprandial glycemia.[11,41,44]

Lipid composition

Approximately one-third of the total caloric content of OriPro 2.0 is derived from fat, with medium-chain triglycerides serving as an important lipid source.[11] MCTs differ substantially from long-chain triglycerides because they do not require bile salts for emulsification and are transported directly to the liver via the portal circulation.[14,15] Consequently, they provide rapidly available energy while reducing the digestive burden on patients with pancreatic insufficiency, biliary disorders, or intestinal malabsorption.[11-13]

In addition to MCTs, the formulation supplies essential polyunsaturated fatty acids that support membrane integrity, immune regulation, and inflammatory homeostasis.[45] This balanced lipid composition contributes to the high energy density of the supplement without substantially increasing gastrointestinal intolerance.[11]

Dietary fiber and prebiotics

Dietary fiber is increasingly recognized as an essential component of specialized enteral nutrition.[46] OriPro 2.0 incorporates both soluble dietary fiber and prebiotic compounds, including inulin and fructooligosaccharides (FOS).[11,12,47] These ingredients are fermented by beneficial intestinal microorganisms to produce short-chain fatty acids (SCFAs), including acetate, propionate, and butyrate, which serve as important energy substrates for colonocytes and contribute to intestinal barrier integrity.[11,48]

Fiber-containing enteral formulas have been associated with improved bowel function, reduced incidence of antibiotic-associated diarrhea, enhanced microbial diversity, and better gastrointestinal tolerance compared with fiber-free formulations.[45,49] The inclusion of prebiotics fibers may therefore provide benefits extending beyond simple nutrient delivery by supporting the intestinal micro biome and mucosal immune function.[47,50]

Micronutrients

OriPro 2.0 provides a comprehensive spectrum of vitamins, minerals, and trace elements required for metabolic homeostasis.[7] Product information indicates inclusion of vitamins A, C, D, E, K, and the B-complex vitamins together with calcium, phosphorus, magnesium, potassium, sodium, iron, zinc, selenium, copper, chromium, iodine, manganese, and molybdenum.[7]

These micronutrients participate in numerous physiological processes, including antioxidant defense, collagen synthesis, immune regulation, oxygen transport, glucose metabolism, electrolyte balance, and cellular energy production.[51] Adequate micronutrient provision is particularly important in hospitalized patients because deficiencies frequently coexist with protein-energy malnutrition and may delay clinical recovery.[49,50]

Functional ingredients

Beyond conventional nutrients, OriPro 2.0 contains several functional ingredients intended to support metabolic recovery.[7] L-carnitine facilitates mitochondrial transport of long-chain fatty acids, thereby contributing to energy metabolism, whereas taurine participates in bile acid conjugation, membrane stabilization, antioxidant defense, and modulation of inflammatory responses.[45,48] Choline is included as a precursor for phospholipid synthesis and neurotransmitter production, supporting hepatic and neurological function.[50]

Nutritional design and clinical relevance

The overall nutritional architecture of OriPro 2.0 reflects current principles of medical nutrition therapy.[11,12] Rather than maximizing a single nutrient, the formulation combines high-quality protein, slowly digestible carbohydrates, energy-dense lipids, dietary fiber, prebiotics, and comprehensive micronutrient supplementation in a balanced composition intended to address the complex nutritional needs of hospitalized patients.[5,6]

The peptide-based protein system supports efficient digestion and amino acid absorption, while the carbohydrate profile contributes to low postprandial glycemic responses.[43,44] MCTs provide readily available energy with minimal digestive requirements, and the inclusion of prebiotic fibers may improve gastrointestinal tolerance and gut microbial health.[47,48] Collectively, these characteristics suggest that OriPro 2.0 is well suited for use in patients with increased protein requirements, disease-related malnutrition, postoperative recovery, gastrointestinal dysfunction, or critical illness.[44,49] Nevertheless, it is important to recognize that, although the formulation has demonstrated a low glycemic index in healthy volunteers, robust randomized clinical trials directly evaluating OriPro 2.0 in hospitalized patient populations remain limited.[11] Therefore, many of its anticipated clinical benefits are extrapolated from broader evidence on peptide-based enteral nutrition and should be confirmed through future high-quality clinical research.[31,50]

FIBER/PREBIOTIC-ENRICHED ENTERAL NUTRITION FORMULAS

Dietary fiber and prebiotics have become important functional components of enteral nutrition formulas because of their beneficial effects on gastrointestinal function, intestinal microbiota, immune modulation, and metabolic regulation. Contemporary clinical nutrition guidelines increasingly recommend the use of fiber-containing enteral formulas in hemodynamically stable patients, particularly those receiving prolonged enteral

nutrition, owing to their potential to reduce gastrointestinal complications without increasing adverse events.[31-33]

One of the largest systematic reviews evaluating fiber-containing enteral nutrition was conducted by Cara et al, who analyzed 19 clinical studies involving critically ill hospitalized adults. Their meta-analysis demonstrated that fiber-containing enteral formulas significantly reduced diarrhea severity and decreased the overall risk of gastrointestinal complications by approximately 39% compared with fiber-free formulas. Importantly, fiber supplementation was not associated with increased mortality, longer intensive care unit (ICU) stay, or additional adverse events, suggesting that fiber-enriched formulas are safe for critically ill patients. However, the authors concluded that further high-quality randomized controlled trials are necessary to strengthen the evidence base.[49]

Similarly, Liu et al performed a systematic review and meta-analysis investigating the effects of dietary fiber on gut barrier function, gut microbiota, short-chain fatty acid (SCFA) production, inflammatory biomarkers, and clinical outcomes in critically ill patients. The analysis demonstrated that dietary fiber supplementation significantly increased fecal SCFA concentrations, improved intestinal barrier integrity, promoted beneficial microbial populations, and reduced inflammatory responses. Fiber-enriched nutrition was also associated with lower rates of diarrhea and improved gastrointestinal tolerance, highlighting the importance of dietary fiber in preserving intestinal homeostasis during critical illness.[50]

Earlier evidence synthesized by Zaman et al further demonstrated that fiber and prebiotic supplementation improve bowel function and reduce enteral feeding-associated diarrhea in hospitalized patients. Their systematic review included both critically ill and non-critically ill populations and concluded that soluble fiber supplementation is particularly effective in reducing gastrointestinal complications while maintaining adequate nutritional delivery.[51]

Prebiotic fibers such as inulin and fructooligosaccharides (FOS) have attracted increasing attention because they selectively stimulate the growth of beneficial intestinal microorganisms, particularly *Bifidobacterium* and *Lactobacillus*. These microorganisms ferment dietary fibers into SCFAs, including acetate, propionate, and butyrate, which provide energy for colonocytes, strengthen epithelial tight junctions, reduce intestinal permeability, and regulate immune responses. A systematic review by So et al concluded that inulin-type fructans consistently exhibit prebiotic activity and are associated with improved intestinal barrier function, enhanced mineral absorption, increased insulin sensitivity, and favorable modulation of gut microbial composition.[44]

Dietary fiber also influences glucose metabolism. Soluble fibers increase the viscosity of gastrointestinal contents, delay gastric emptying, reduce glucose diffusion across the intestinal mucosa, and attenuate postprandial glycemic excursions. In a meta-analysis of randomized controlled trials, Xie et al reported that soluble fiber supplementation significantly improved fasting blood glucose, glycated hemoglobin (HbA1c), and insulin sensitivity in adults with type 2 diabetes mellitus. These findings support the inclusion of soluble fiber in specialized nutritional formulas designed for patients with diabetes and stress-induced hyperglycemia.[51]

Collectively, the available literature indicates that fiber- and prebiotic-enriched enteral nutrition formulations confer multiple physiological benefits beyond simple nutrient delivery. They contribute to improved gastrointestinal tolerance, maintenance of intestinal barrier integrity, modulation of gut microbiota, reduced inflammation, improved glycemic control, and enhanced nutrient absorption. Consequently, incorporation of soluble dietary fibers and prebiotics has become an important strategy in the formulation of disease-specific nutritional supplements.

EVIDENCE ON ORIPRO 2.0

Compared with the extensive literature available for peptide-based enteral nutrition and fiber-enriched formulas, published evidence specifically evaluating OriPro 2.0 remains limited. At present, the only peer-reviewed publication directly investigating the formulation is the glycemic index study conducted by Singh and Benjamin.[47]

In this prospective glycemic index study, healthy adult volunteers consumed OriPro 2.0 providing 25 g of available carbohydrate, while glucose served as the reference food. Blood glucose concentrations were measured over a 120-minute period according to internationally accepted FAO/WHO and ISO glycemic index methodologies. The study demonstrated that OriPro 2.0 had a glycemic index (GI) of 36±5, classifying it as a low-glycemic-index nutritional formulation. The investigators attributed the favorable glycemic response to the formulation's balanced nutritional composition, including whey protein concentrate, whey protein hydrolysate, resistant maltodextrin, medium-chain triglycerides, inulin, fructo oligosaccharides, and dietary fiber.[48]

The authors proposed that the combination of peptide-based proteins, slowly digestible carbohydrates, and soluble dietary fiber may help attenuate postprandial glucose excursions while simultaneously providing high-quality protein and adequate caloric density. They further suggested that the formulation may be suitable for nutritional management of critically ill patients, including those with diabetes or stress-induced hyperglycemia. However, these proposed clinical applications remain theoretical because the study was conducted exclusively in healthy volunteers rather than hospitalized patients.[49]

An additional strength of the study is that glycemic index testing followed internationally standardized methodology, including repeated glucose reference testing, incremental area-under-the-curve (iAUC) calculations, and standardized statistical analysis. These methodological features increase confidence in the reported GI value. Nevertheless, several limitations should be acknowledged. The study enrolled a relatively small number of healthy participants, did not evaluate clinical endpoints such as nutritional status, muscle mass, inflammatory markers, hospital length of stay, or mortality, and therefore cannot establish clinical efficacy in critically ill populations.[51]

Accordingly, current evidence supports OriPro 2.0 as a low-glycemic, peptide-based nutritional formulation, but there is insufficient direct clinical evidence to conclude that it improves outcomes such as glycemic control in hospitalized patients, preservation of lean body mass, reduction in infections, or accelerated recovery. These hypotheses are biologically plausible and consistent with broader evidence on peptide-based enteral nutrition, yet they require confirmation through adequately powered randomized controlled trials.

CONCLUSION

OriPro 2.0 is a specialized high-calorie, high-protein, peptide-based nutritional supplement designed to address the complex nutritional requirements of patients with disease-related malnutrition, critical illness, postoperative recovery, gastrointestinal dysfunction, and other conditions associated with increased metabolic stress. Its formulation combines whey protein concentrate, whey protein hydrolysate, medium-chain triglycerides (MCTs), complex carbohydrates, dietary fiber, prebiotics, and a comprehensive spectrum of vitamins and minerals, providing a balanced nutritional profile that supports energy provision, preservation of lean body mass, and gastrointestinal function. The peptide-based protein system is expected to facilitate efficient digestion and absorption, particularly in patients with compromised gastrointestinal function, while the inclusion of MCTs and soluble dietary fiber may enhance nutrient utilization and gastrointestinal tolerance.

One of the distinguishing features of OriPro 2.0 is its low glycemic index (GI=36±5), demonstrated in a standardized glycemic index study conducted in healthy adults. This finding suggests that the formulation produces a slower postprandial glucose response than conventional carbohydrate-rich nutritional supplements, making it a potentially useful option for patients with diabetes, stress-induced hyperglycemia, or those requiring careful glycemic management during hospitalization. Broader evidence also supports the use of diabetes-specific or low-glycemic oral nutritional supplements for improving postprandial glucose control compared with standard formulas.

The anticipated clinical benefits of OriPro 2.0 are supported by a substantial body of evidence on peptide-based enteral nutrition rather than by direct clinical trials of the product itself. Published studies of peptide-based nutritional supplements have demonstrated improvements in gastrointestinal tolerance, protein intake, nutritional status, and serum prealbumin in patients with maldigestion and malabsorption. Similarly, fiber- and prebiotic-enriched enteral formulas have been associated with reduced diarrhea, improved intestinal barrier function, enhanced gut microbial composition, and better gastrointestinal tolerance in hospitalized patients. These findings provide a strong biological rationale for the design of OriPro 2.0, although they should not be interpreted as direct evidence of its clinical efficacy.

From a clinical perspective, OriPro 2.0 may be considered a promising nutritional intervention for patients who require high-protein, energy-dense nutrition but have difficulty tolerating conventional polymeric formulas. Potential applications include critically ill patients, postoperative patients, individuals with gastrointestinal disorders associated with malabsorption, older adults with sarcopenia, oncology patients at nutritional risk, and patients requiring oral or enteral nutritional support. Its balanced composition may contribute to preservation of lean body mass, improved nutritional status, maintenance of gastrointestinal integrity, and better metabolic control when incorporated into individualized medical nutrition therapy.

Nevertheless, an important limitation of the current evidence is that only one published study has directly evaluated OriPro 2.0, and that study assessed glycemic index in healthy volunteers rather than clinical outcomes in patients. Therefore, claims regarding improvements in hospital length of stay, infection rates, wound healing, muscle mass preservation, mortality, or quality of life cannot currently be attributed specifically to OriPro 2.0. Such benefits remain hypothesis-generating, based on evidence from similar peptide-based formulations and specialized enteral nutrition products.

Future research should prioritize well-designed, multicenter randomized controlled trials evaluating OriPro 2.0 in clinically relevant populations. These studies should investigate its effects on nutritional status, body composition, glycemic control, inflammatory biomarkers, gastrointestinal tolerance, functional recovery, hospital length of stay, and patient-centered outcomes. Comparative effectiveness studies against standard polymeric formulas and other disease-specific nutritional supplements would also help define its role in evidence-based clinical nutrition practice.

Overall, the currently available evidence suggests that OriPro 2.0 is a scientifically formulated peptide-based nutritional supplement with favorable nutritional characteristics and a demonstrated low glycemic index.

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