
CARBERY
WHEY PROTEIN SOLUTIONS
for Clinical Nutrition
carbery.com/nutrition

MARKET MOTIVATIONS

Nutrition tailored for patient needs

Whey protein hydrolysates have shown positive nutritional benefits in specific conditions and need states.

PROTEIN MALNUTRITION

Protein-energy malnutrition is a common problem in hospital patients. Studies have reported up to 51% of patients admitted to hospital to be malnourished. Nutritional support leads to improved nutritional status and clinical outcomes in patients.

Whey protein is considered one of the highest quality dietary proteins. Whey protein hydrolysates have a faster absorption rate compared to intact protein and free amino acids and are therefore very suitable to help prevent protein malnutrition. [7]

CRITICAL CARE

Whey proteins are recognised as high nutritional quality proteins that support nutritional status in patients and help speed up recovery after illness. Prolonged bed rest decreases skeletal muscle and whole body protein synthesis. Whey protein hydrolysates may improve nutritional status in specific patient groups and help prevent loss of lean body mass during hospitalisation and shorten hospital stays. [7]

GASTROINTESTINAL DISORDERS

Protein-energy malnutrition is common in gastrointestinal disease, affecting up to 75% of patients with active inflammatory bowel disease. Impaired intake and absorption of nutrients can contribute to muscle loss, reduced strength and poorer clinical outcomes. Hydrolysed proteins are digested and absorbed more rapidly than intact protein, and are ideal for patients who experience digestive discomfort due to a sensitivity or poor tolerance of proteins. [2,3]

TYPE 2 DIABETES

Several clinical studies indicate that a high intake of milk and dairy products may reduce the risk of developing Type 2 diabetes, obesity and cardiovascular disease, with a possible protective mechanism ascribed to the protein fraction. Whey protein hydrolysates may also help improve blood glucose control in persons with the metabolic syndrome or type 2 diabetes due to a superior insulintropic effect compared to intact proteins. [6]

SARCOPENIA

Based on the benefits observed in older adults with sarcopenia, foods and enteral nutrition products formulated with whey protein can help support muscle mass, physical performance and functional independence. Whey protein supplementation has been shown to improve appendicular skeletal muscle mass and gait speed, while the greatest improvements in muscle strength were seen when whey protein was combined with resistance exercise. [4]

SCIENCE

Why protein choice matters more in clinical nutrition

A whey protein hydrolysate is produced when whey protein has been enzymatically broken into shorter chains called peptides. This makes the whey protein more easily absorbed by the body and may reduce the potential for allergic reactions.

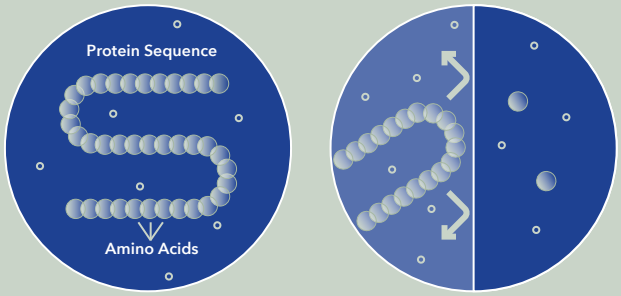
PROTEIN HYDROLYSATES OFFER THREE MAIN BENEFITS:

- Reduced allergenic potential compared to intact proteins
- Easier digestion compared to intact protein and free amino acids
- Faster absorption compared to intact proteins

Enzymatic hydrolysis is similar to the natural breakdown of proteins that takes place in the gastrointestinal system during digestion of a protein meal. For this reason, hydrolysed protein is seen as 'pre-digested' and a more rapidly absorbed source of protein for the human body.[2]

PROTEIN ABSORPTION

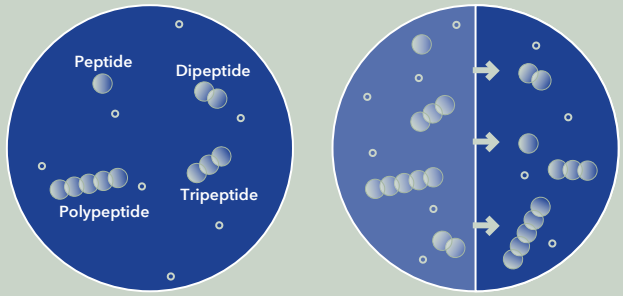
WITHOUT HYDROLYSIS



Primary protein structure is a chain of Amino Acids

Impaired digestion, absorption and malnutrition

AFTER HYDROLYSIS Optipep®



Primary protein structure is broken down into protein hydrolysates

Protein hydrolysates are more easily absorbed while maintaining nutritional quality

SCIENCE

Why protein choice matters more in clinical nutrition

The provision of timely and sufficient nutritional support is of utmost importance in patients with acute and chronic diseases to secure optimal body functions, improved outcome and fast recovery. The digestion and absorption of nutrients, especially protein, can be impaired in such patients to a varying degree.

There are several underlying causes of this pathologically induced protein maldigestion and malabsorption (inadequate assimilation of protein due to defects in digestion, absorption, or transport.) However, both conditions compromise nutritional status and patient outcome.

Critical illness dramatically increases muscle proteolysis, making free amino acids available for new protein synthesis at sites of tissue injury and at other locations in the body to regulate inflammatory and immune responses, and more than doubles the dietary protein requirement.[1]

Daily protein intakes of at least 1.0-1.2 g/kg body weight are recommended for older adults due to age-related anabolic resistance and increased risk of sarcopenia. In critically ill individuals, guideline recommendations range from 1.2-2.0 g/kg/day, with a minimum target of 1.3 g/kg/day suggested by ESPEN.[8]

Enteral nutrition products are designed to feed patients with specific diseases, disorders or medical conditions, and who have nutritional needs that cannot be met by consuming standard foods.

It has been suggested that proteins in the form of peptides provide an advantage for certain critically ill patient groups with increased protein and energy requirements, with/or at risk of maldigestion and malabsorption, and impaired digestive function.



QUALITY YOU CAN TRUST

Quality & Safety

At Carbery, quality and safety are at the core of everything we do. Our whey protein is produced using carefully controlled processes to ensure consistently high standards for clinical nutrition applications.

From raw material selection through to final product, every stage is rigorously monitored. Our hydrolysates are specifically designed and tested for critical quality attributes including antigenicity, molecular weight distribution, degree of hydrolysis, and sensory profile to ensure reliability for even the most sensitive patient groups.

We apply advanced enzymatic hydrolysis processes that mirror natural digestion, helping to deliver products that are both nutritionally effective and safe for patients with compromised digestive function.

Through continuous research, innovation, and collaboration with global partners, we remain committed to delivering safe, high-quality nutritional solutions that healthcare professionals and patients can trust.

Our manufacturing facilities operate under strict quality management systems, delivering:

- Consistent product performance and uniform quality
- Excellent microbiological standards
- Full traceability and control throughout the supply chain
- Compliance with relevant food safety and regulatory requirements

PRODUCTS

Optipep®

Hydrolysed whey protein for specialist performance applications

Our dedicated range of Optipep hydrolysed whey proteins for clinical nutrition are specifically designed and tested for important quality parameters such as antigenicity, molecular weight distribution, degree of hydrolysis and taste to ensure a consistent quality for this sensitive consumer group.

NUTRITIONAL BENEFITS

- Superior whey protein source
- Enhanced digestibility
- Rich source of essential amino acids (EAAs)
- Naturally high in BCAAs: Leucine, Isoleucine and Valine
- Optimised peptide profile for enhanced bioactivity
- Fast gastric emptying and rapid absorption
- Insulinotropic effect
- Stimulation of muscle protein synthesis that helps prevent muscle disuse atrophy

FUNCTIONAL BENEFITS IN APPLICATIONS

- Multiple application possibilities for high protein formulas (>20% Energy)
- Suitable for various applications such as UHT drinks (milky beverages), shots, tube-feeds and powders
- Lower osmolarity compared to free amino acid formulas
- Heat stable
- Kosher & Halal certification
- Hormone and antibiotic free

FORMAT SPOTLIGHT

Oral Nutritional Supplements

Industry proven concept: All whey RTD beverage for compact clinical nutrition using Optipep RTD

NUTRITIONAL BENEFITS

- Great tasting 100% whey protein ingredient that can withstand pasteurisation, UHT treatment and a shelf life of up to 12 months.
- Can deliver 12.5g hydrolysed protein per serving in a compact ONS application
- Superior source of protein & excellent biological value
- Rapid Absorption: Optimal concentrations of di- and tripeptides and amino acids transported to the blood stream
- Protein contributes to a growth in muscle mass.
- Protein contributes to the maintenance of normal bones
- Easily digested protein source



Concept only to demonstrate ingredient functionality

CARBERY

PARTNERS IN PROGRESS

Clinical Application Expertise

Deep knowledge of clinical nutrition formats, supporting brands in selecting high-quality protein and ingredient solutions that align with specific medical conditions, patient needs, and product design briefs.

Formulation Confidence

Guidance in selecting ingredients that balance targeted nutrition delivery, digestibility, tolerance, and sensory performance, while meeting clinical evidence standards and regulatory requirements.

Portfolio Building Support

Support in developing tailored solutions across a range of clinical nutrition applications, including oral nutritional supplements (ONS), RTD's, medical nutrition, and condition-specific formulations.

Commercial Reliability

Consistent quality, secure supply and expert technical support to help brands develop safe, effective, and compliant clinical nutrition products with confidence.

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Research references available on request.

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