How can the nutraceutical industry take advantage of consumers’ growing awareness of the importance of a healthy, active lifestyle? This whitepaper examines the developing sports nutrition market, as it expands from a group of core users to a wider range of casual users, and the increasing market value of supplements for sports nutrition. It explores the results of recent scientific studies that confirm the benefits of Peptan’s collagen peptides for muscle recovery after intensive exercise.

By Frank Engel, Global Market Development Manager, Rousselot Health & Nutrition, November 2018
A CULTURE OF EFFICIENCY AND TIRELESS ENERGY

Living in the 21st century is to be a part of a constantly developing, fast-paced world. To be successful is to be tireless, efficient and energetic. Health and fitness have become a vital part of our lives, and as health education levels rise, increasing numbers of consumers recognize the importance of a healthy lifestyle. Global health and wellness trends are growing in popularity: apps, smart devices, and supplements are becoming part of the daily routine of today’s active consumer.

Although sports nutrition products have been around for many years, the market is hugely benefiting from these health and fitness trends. One result is that the sports nutrition market has grown beyond its core category of sports nutrition users, such as athletes and bodybuilders, to gain a far broader consumer base of casual users seeking products that will support their lifestyle goals.

RAPID AND SUSTAINED GROWTH

This growth of the sports nutrition market is both substantial and sustained. Currently, sports nutrition is the fastest growing category in the consumer health market, rising in value from 9.8 billion USD in 2013 to 15.7 billion USD in 2018 and there are no signs of any slowing down. Euromonitor forecasts a 10.6% compound annual growth rate (CAGR) for this market between 2018 and 20231 (Figure 1).

INTRODUCING FRANK ENGEL

Frank Engel holds a BSc. in Health Sciences and a Msc. in Health Food Innovation Management. He has several years of experience in multiple commercial, analytical and technical sales roles in the Food and Ingredients business before he joined Rousselot in 2018. In his role as Global Market Development Manager, Frank supports Rousselot’s customers in any matter regarding Peptan products. This involves support on both technical and commercial level, and during first implementation and expanding phases.
EXCITING OPPORTUNITIES AND A MAJOR CHALLENGE

As international trends continue to fuel active lifestyles and increasing numbers of consumers begin to devote serious time towards their fitness, we can safely predict demand for sports nutrition products will continue to rise globally. This presents a unique, exciting opportunity for providers of nutraceutical products to expand their product range and grab a share of this prospering market. The big challenge these manufacturers face is how to identify the most valuable product range and ingredients for a spreading consumer base.

On a global level, sports nutrition continues to expand, growing not only among core users, but also by benefiting from global health and wellness trends.

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Within today’s growing group of sports nutrition consumers, new subgroups are emerging, each with different expectations for products to match their lifestyles. By examining the different subsets, we can gain more understanding of the varied range of expectations and demands for sports nutrition products.

**THE CORE GROUP: ATHLETES AND BODYBUILDERS**
- Have long been aware of the importance of sports nutrition
- Will continue to use sports nutrition products
- Are increasingly well-informed and critical of formulations, without demanding clean label
- Use high volumes, consistent buying
- Have a high brand loyalty

**LIFESTYLE USERS**
- Young, affluent professionals
- Including a growing number of female users
- Willing to invest heavily in fitness as a fundamental aspect of their high-performance lifestyles
- Demand high functionality and clean label
- Unwilling to sacrifice the health and wellness benefits that drive their sports nutrition purchases
- Require scientific proof of product claims
- Willing to spend more on convenience formats and natural ingredients

**HEALTHY AGERS**
- A consistently strong category with high demand for food supplements contributing to healthy aging
- Health aging is one of the top three most important health benefit areas for nutraceutical companies, along with digestive health and general wellbeing
- Healthy agers are looking for products that will help them remain active as they grow older
- Drawn to trusted brand names and recognizable, natural ingredients
- Driving demand for natural products targeting joint and bone issues
- Purchase their products in traditional grocery and convenience channels
- Especially interested in solutions they can use regularly with less risk of side effects than they would have using conventional medicines

**A CLOSER LOOK AT THE MAIN CASUAL USER GROUPS**
Casual users represent the largest growth opportunity. Let’s take a closer look at some of the main casual user groups and some of their characteristics.
Engage in sports and exercise for recreational purposes
Less sophisticated than the core group, drawn to trusted brand names and recognizable ingredients
High demand for wholefood ingredients
Tendency to follow top social media fitness influencers
Purchase their products in traditional grocery and convenience channels

A newly emerging category of digitally engaged consumers
Continuously tracking their fitness, wellness and health performance through wearable smart devices and apps
Increasingly want personalization options
Often keen to sign up for membership services if they value a company

Past assumptions
I fight against elevated BMI and obesity
I buy sports nutrition to build more muscles

Today
I am aware of my weight and fitness
I buy sports nutrition if it matches my lifestyle

Future reality
I monitor my weight and fitness
I buy sports nutrition due to fitness trends, lifestyle goals and to avoid sarcopenia

(Euromonitor Sports Nutrition: Drivers and Prospects, July 2017)

Key focal points in catering to a diverse consumer group
Developing a product that can cater to these diverse demands is a major challenge. Key points to focus on for all subgroups include:

- Health benefits that are backed by science
- Safe and natural ingredients
- Trusted, recognizable branding

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3 www.cbi.eu/market-information/natural-ingredients-health-products/trends, August 2018
4 Euromonitor Sports Nutrition: Drivers and Prospects, July 2017
CASUAL CONSUMERS UNDERESTIMATE THE IMPORTANCE OF SPORTS RECOVERY

Sports is all about maintaining, or improving, one’s level of performance and fitness. In order to do this, all these physically active individuals must keep their bodies in good condition in terms of strength and muscle mass. They are unaware, for example, that an intensive training programme with short recovery times raises the risk of injury, while strengthening the overall musculoskeletal system – which includes not just muscles, but also joints, bones, tendons and ligaments – can prevent injury. This means that in their sports routines, athletes must include enough time to recover and/or look for methods to accelerate recovery. High-performance athletes and body-builders are well aware of these challenges. For the growing number of recreational sportspeople, understanding the vital importance of sports recovery is just as important.

UNDERSTANDING AND MANAGING SPORTS RECOVERY FOR OPTIMUM RESULTS

Exercise challenges our musculoskeletal system, and primarily, our muscles. The smallest muscle unit, the muscle cell, has specialized proteins that generate movement. These cells together form thin muscle fibers, which are wrapped into bigger muscle bundles by a sheath of extracellular matrix, or ECM. Increasingly, this matrix is being recognized as a functional tissue, rather than just an envelope. While the muscle cell performs the actual muscle contraction, the ECM wrapping ensures that the combined force of all the muscle cells is transmitted to the ligaments and tendons in the form of movement. During intense exercise, both the muscle cells and the ECM suffer microscopic damage. The resulting swelling, pain, and reduced power and strength negatively affect athletic performance. They can even make simple activities such as climbing or descending stairs difficult. 5,6,7

In professional athletes, the level of muscle damage determines the time of recovery between intensive training sessions – and automatically impacts the training load in the next session. Among amateurs, the pain caused by intense exercise can easily disrupt the fitness program. This is why sports recovery deserves wide recognition as an important aspect of a healthy and fit lifestyle – not just for the high-performance athlete, but for the growing market of casual users, too.

THE LATEST SPORTS SCIENCE OFFERS MANUFACTURERS EXCITING OPPORTUNITIES

With scientific advances, new and exciting supplements are emerging in the field of sports nutrition. Products with the right micronutrients and ingredients can reduce inflammation and support muscle repair and recovery, thereby shortening overall recovery time. 6 The result for professionals is that they can increase their training load, while casual users will succeed more easily in sticking to a fitness program at all. 8

These scientific developments place a vital tool in the hands of the nutraceutical industry for helping to spread awareness of the importance of sports recovery, and allowing professional athletes and recreational consumers to maximize their health and fitness in a sustainable way. In order to take full advantage of this opportunity, it is of great importance for the industry to provide products that can effectively alleviate the issues that emerge from an active lifestyle, allowing athletes to improve their performance and casual consumers to maintain acceptable fitness and health levels. For manufacturers planning to develop a recovery supplement, the choice of ingredients is a crucial decision. Collagen, already having diverse proven health benefits, emerge as an ideal choice for sports nutrition. 9

7 Paulsen, G. et al., 2012. Leucocytes, cytokines and satellite cells: what role do they play in muscle damage and regeneration following eccentric exercise? Exercise Immunology Review: 1;18
A recent study, published in the peer-reviewed journal *Amino Acids*, performed by the highly reputable Newcastle University, United Kingdom, is the very first to bring to light the benefits of collagen peptides for sports recovery. It underscores the value of collagen supplements for health and fitness, suggesting that collagen contributes to more rapid post-exercise recovery and performance improvement. Collagen thus emerges as a valuable contributor to maintaining a healthy lifestyle.

**CONFIRMING PEPTAN® COLLAGEN PEPTIDES AS A SPORTS RECOVERY SOLUTION**

In the study Peptan collagen peptides were used, provided by Rousselot. Peptan is currently the world’s leading brand for collagen peptides. Rousselot, the developer behind Peptan, recognizes that fast recovery is of primary importance to athletes, both in a demanding training schedule and during high-level performance seasons. Already having established that Peptan has a pain-alleviating and anti-inflammatory effect, Rousselot, in this study, decided to focus research on the impact of Peptan collagen peptides on recovery after exercise. For this purpose the potential symptom-alleviating effect of Peptan was investigated in an established model for muscle damage induced by intense physical activity. In particular, two approved indicators of exercise-induced muscle damage were investigated: muscle soreness and function. The outcomes of the research have broad practical relevance to all active populations, including casual consumers.

**NINE DAYS OF PEPTAN, 20G PER DAY**

The study was designed as a double-blind, randomized, placebo-controlled trial, involving 24 active young men. The tested daily dosage was a total of 20g Peptan or placebo taken in two servings: 10g in the morning and 10g in the evening.

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The results were very clear. Supplementation with Peptan collagen peptides clearly lowered the perceived muscle soreness at all time points after the intense muscle-damaging exercise (Figure 2). Even more strikingly, the Peptan-supplemented participants demonstrated an improved performance with the effect reaching statistical significance at 48h post exercise (Figure 3). This positive outcome indicates that Peptan helps to accelerate the process of recovery from muscle damage induced by intense exercise. Since collagen is a key component of the extracellular matrix sheath that enwraps the muscle fibers, it is conceivable that Peptan supplementation might either prevent damage to the sheath or allow it to repair more quickly.

**GOOD NEWS FOR ATHLETES AS WELL AS CASUAL USERS**

While awareness of the positive effects of collagen has been growing for some time, this study is the first to prove that collagen peptides can reduce the recovery time after physical activity. The outcome clearly indicates that athletes can use Peptan to maintain a high level of performance after a period of activity. This data is also highly valuable for the new casual users of sports nutrition products, showing that the difficulties of sustaining a consistent exercise regimen can be reduced, and supporting the lifestyle of this new, broad consumer base.

In our study, the supplementation with Peptan clearly alleviated muscle soreness and enhanced the recovery of counter movement jump performance after the intense exercise bout. To our knowledge, this is the first study to suggest that collagen peptides might reduce recovery time after physical activity. We speculate that this could be due to an accelerated repair of the extracellular matrix.

By Dr Tom Clifford, Researcher in Sports and Exercise Nutrition at Newcastle University and leading scientist of the study.
In a recent literature review, the International Olympic Committee (IOC) included hydrolyzed collagen peptides in its statement regarding the benefits of sports supplements. Based on scientific literature, it suggests that hydrolysed collagen may increase collagen production and decrease joint pain. This recognition by a sporting body of the IOC's stature highlights the possibilities of collagen peptides. Manufacturers aiming to tap into this burgeoning market may consider collagen peptides an ideal ingredient for sports nutrition and recovery.

**REDUCED KNEE DISCOMFORT AMONG PROFESSIONAL ATHLETES**

Another recent Rousselot study confirms the value of collagen peptide supplements for athletes. In this study, a group of young, talented athletes training to be professionals, took 15g per day of Peptan collagen peptides in orange juice for a period of 24 weeks. The resulting data shows a trend for a decrease in joint pain, especially in the knees, but also in the arms, shoulders, and hands during and after physical activity. Participants also reported an increase in the quality of life. These findings clearly align with the benefits for sports recovery observed in the first study, suggesting that Peptan collagen peptide supplementation can offer benefits in injury prevention, tissue repair, and muscle recovery.

**PEPTAN’S BENEFITS GO EVEN FURTHER**

In addition to accelerating sports recovery, collagen peptides have also been proven to support overall musculoskeletal health. Many studies have indicated that collagen improves overall joint and bone strength, allowing for better mobility and thus supporting another vital aspect of an active lifestyle.

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19 Rousselot, unpublished data, 2018
AN EXCITING PROPOSITION
The market for sports recovery supplement continues to grow. There is huge potential to develop new concepts for the amateur market, while building on the core market of high-performance athletes and bodybuilders. The benefits of nutritional supplements are well known to this core target group of athletes and experts. The expanding user base brings within reach a whole new group of consumers aiming to improve their recovery times and reduce discomfort from of exercise, supporting their fitter, healthier, and more active lifestyles.

COLLAGEN PEPTIDES DESERVE A STARRING ROLE IN SPORTS RECOVERY SOLUTIONS
The studies explored in this whitepaper highlight the benefits of collagen peptides as a recovery supplement. The scientific evidence suggests that choosing collagen as the main ingredient in a sports recovery supplement may well be a decisive choice in this rapidly growing market. Before acting on this knowledge, manufacturers face two more questions: how do you select a manufacturer of collagen peptides? And how do you maximize impact by choosing an ingredient that satisfies the diverse desires across this large market?

A great collaboration in the field of sport and nutrition.”
Rousselot is the collagen peptides supplier to professional athletes training at High Performance Centre Papendal in the Netherlands since 2019. Founded in 1971, Papendal is the largest elite sports center in the Netherlands. It hosts around 550 top athletes, providing them with everything they need in order to train for, and compete in, national and international competitions.

Dr Jeroen Wouters, Innovation Manager Sports & Nutrition at Papendal

With my intensive training program I must keep my body in good condition. An important part of my daily routine is Peptan collagen peptides. I use Peptan every day and since I started with it, 2 years ago, it has been very important to boost my performance and my recovery after games.

Bjorn Kellerman, Professional hockey player, Kampong and Dutch National team
As the world's leading collagen peptides brand, Peptan has developed a reputation for being able to fulfil the many different demands that are essential for succeeding in the sports recovery supplement market. For this and other reasons, many manufacturers around the globe have found Peptan to be an ideal partner to work with.

**WHY PEPTAN PRODUCTS ARE LIKELY TO SUCCEED IN THE DIVERSE SPORTS RECOVERY MARKET**

- The overall high quality of Peptan products will satisfy all users, from high-performance athletes working with nutritional specialists to recreational users.

- Professionals athletes can increase their training load, thanks to accelerated muscle repair and shorter recovery times.

- Young consumers, such as the lifestyle and mConsumer users who require scientific evidence for health and fitness claims, will feel secure in the knowledge that Peptan is a scientifically-backed, high-quality product.

- Lifestyle and casual users will be satisfied by Peptan's use of clean label ingredients, and by trusting in a globally respected brand.

- For healthy agers looking to maintain an active lifestyle as they grow older, Peptan collagen peptides can promote musculoskeletal health.

- Peptan collagen peptides are highly soluble and neutral in taste, so manufacturers can tailor each product’s formulation and branding carefully to allow for maximum taste, enjoyment, and popularity, whether targeting traditional grocery channels or specialist networks.
ADDITIONAL REASONS FOR PARTNERING WITH US

✔️ Working with us offers you a unique opportunity for developing new ideas for the market. Innovation is a core principle of Rousselot Health & Nutrition. Through collaboration, we aim to continually explore new ways forward in the field.

✔️ Rousselot Health & Nutrition provides its customers with the utmost care. You will benefit from outstanding formulation support. Our industry experts are equipped to help you create the perfect solution for your products: with Peptan, you will get the product you want.

Customers using Peptan have the reassurance of working with a globally recognized brand, known and respected by both the industry and consumers.

✔️ Peptan neither contains nor processes substances prohibited by the World Anti-Doping Agency (WADA). This confirms our prioritization of safety – a choice further emphasized by our use of premium, safe, and 100% traceable ingredients.

At Rousselot, we are meticulous in our aim to satisfy both the client and the consumer with the highest-quality products and services that are on offer. For these reasons, it may be clear that Peptan is the ideal partner for success in the sports recovery supplement market.

Lisette van Lith, Global Director, Rousselot Health & Nutrition

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