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How to Win in the Sports Supplement Arena

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Sports Nutrition

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The sports and fitness supplement market is thriving—here’s how you can be a major player.

On any nice day, anywhere, you can see many people walking, running, cycling. At the same time, gyms and yoga studios are hosting people whose common goal is to get fit and healthy. Athletes are not the only ones seeking supplements to enhance performance.

Sports nutrition is no longer only about huge containers of whey protein and creatine, emphasized Denis Alimonti, director of U.S. nutrition, Maypro, New York. Sports nutrition today, he described, is about improving all aspects of nutrition that support pre-workout, workout and recovery, and including improving the head game, joint health, energy levels and fatigue fighting.

The sports nutrition market is indeed heating up. “Following explosive growth in recent decades, the sports and active nutrition market is set to continue its upward trajectory,” reported Lindsey Toth, director of global marketing, Lonza Capsules & Health Ingredients, New Jersey. According to 2021 research from Euromonitor, the market grew by 190 percent between 2004 and 2018, at a CAGR of 7.9 percent. In 2020, the global active nutrition category was already valued at more than \$23 billion in retail value and is expected to return a healthy growth rate of 6.1 percent CAGR through 2026.

Diversity is the name of the new sports nutrition game and this is where the market is headed. “The segment continues to expand to include budding athletes, regular gym-goers, and even those with physically demanding jobs,” Toth observed. The active nutrition space is expanding into emerging categories, such as esports. Like traditional athletes, esports athletes and casual gamers work hard to achieve peak mental and physical performance, creating a new, fast-growing demographic looking for nutrition products to help them achieve their goals. With the esports market poised to hit \$1.8 billion in global revenue this year, according to NewZoo market research, brands can tailor their nutrition solutions in this growing category, she suggested.

In agreement is Angie Rimel, marketing communications manager, GELITA (Germany), who observed, “Athletes and active consumers spanning a range of traditional sports to gaming and esports enthusiasts to active seniors are looking for products that deliver benefits that are relevant to them. The goal for the sports and active lifestyle consumers is ‘performance’ on all levels and maintaining mobility.”

Mainstreaming is not new in sports nutrition but it is showing signs of a firm normal. According to Mathias Toft Vangsoe, sales development manager, Arla Foods Ingredients, Denmark, “The big story in sports nutrition has been evolution into the mainstream consumer segment. However, not every mainstream consumer is the same and in a growing market you have to be able to segment audiences according to their attitudes to exercise, nutrition and key ingredients,” he advised.

Arla Foods Ingredients commissioned a survey exploring how consumers buy into the sports nutrition market and perceive healthy living. Its “Mainstream Exercise and Nutritional Global Consumer Segments Report” (August 2021) identified three distinct consumer types, each with different attitudes to exercise and nutrition. The first group, “Enthusiasts,” exercise strenuously and regularly, and often choose food and beverages to support their athletic performance. The second, “Easy Health,” follow a relatively active lifestyle, balanced with an interest in nutrition and are likely to respond positively to popular health trends. Like Enthusiasts, they choose protein-rich foods to help with areas such as sports recovery. Those in the third segment, “Healthy FeelGoods,” do not prioritize exercise but are strongly focused on the way their diet impacts on their health.

Likewise, New Jersey-based Lycored surveyed 508 physically active consumers. (“Inner Support for Outdoors Types” 2021). Surprisingly, avoiding skin damage while exercising outdoors was a concern for nearly two-thirds of them (63 percent) ahead of avoiding muscular injury (53 percent) and immune health/avoiding illness (51 percent). Further, 70 percent had experienced damage to their skin, such as sunburn, at some point.

“A more diverse consumer base has meant a greater range of consumer needs,” said Caroline Schroeder, Lycored’s marketing communications manager. “Sports nutrition is no longer just about muscle-building and recovery—it now encompasses areas like immunity and skin protection.”

And, noted Jim Roza, chief scientific officer, Layn Natural Ingredients, California, sports nutrition increasingly encompasses supporting sustained mental performance. He characterized the new and increasing emphasis on brain function as “a remarkable shift in the sports nutrition/active nutrition space.” He noted that the global nootropic supplement market is expected to have a CAGR of 14.7 percent from 2022 to 2027, and “a good portion of that growth can be attributed to the rise of nootropic ingredients in sports supplements. Although data is still emerging regarding its share of the market, it is clear that cognition is commanding more attention in sports supplementation, evidenced by increased usage of ingredients that emphasize cognition, brain health and focus in pre- and post-workout formulas.”

Nootropics in sports formulas include rhodiola, which Roza said supports healthy norepinephrine, serotonin and dopamine levels; goji berry, which helps increase neuroplasticity and provides neuroprotection; and rosemary extracts, which increase acetylcholine, which is important for neurotransmission.

What Active Consumers Want

In the sports nutrition market, said Vangsoe, goals and purchasing habits vary considerably by audience segment. Referring to Arla’s research, “Enthusiasts” score above average in many areas—for example, most have a very high interest in protein and actively search for added-protein sports nutrition products. They commonly choose food to improve their athletic performance and are willing to sacrifice great taste and convenience because, for them, it’s all about functionality.

“While ‘Easy Health’ consumers agree that an active lifestyle is very important in contributing to overall health, they’re far less likely to compromise on taste or mouthfeel,” he commented. Manufacturers therefore need to target them differently, prioritizing sensory appeal. Meanwhile, “Healthy FeelGoods” tend to be highly receptive to documented health claims, so focusing on the proven benefits of ingredients is a good strategy for manufacturers.

Lycored’s active consumer research, stated Schroeder, is transparent: “one thing we do know is that there’s a clear demand for ingestible sun care in sports nutrition.” The survey found that nine in 10 (89 percent) active consumers liked the idea of a supplement that could promote a healthier relationship between their skin and the sun, with 44 percent finding it very appealing. “There was an even more positive response to the idea of a hybrid supplement combining skin support with other benefits, such as antioxidation,” she revealed. “Over nine in 10 (91 percent) of the respondents said such a product would appeal to them.”

Where once protein, creatine and high stimulant-based pre-workout formulations were relied upon as the way to perceived athletic and gym-session success, now the athletic/fitness consumer wants multiple options when looking for a protein source, as well as nootropics and digestive support, according to Brian Kaufman, vice president of global sales, Entera Health, Iowa.

Roza sees some market distinctions. He explained, “In the highly competitive arena of sports, increasing your reaction time by a fraction of a second or maximizing your VO2 max (aerobic capacity) by increasing your oxygen utilization by a point or two can mean the difference between winning or losing. Active consumers who are not athletes want to be energized, look and feel fit, and age in a healthy manner so they can continue their favorite activities as they grow older.”

Brian Zapp, marketing director, Applied Food Sciences, Colorado, said he also has observed notable differences in how consumers approach supplementation for “sports nutrition” compared to “active nutrition.” The primary factor is a specified plan and targeted usage levels. Using caffeine as an example, Zapp stated that athletes tend to have a supplement regimen with a pre-workout that targets around 275-300 mg of active caffeine, while typical active consumers likely don’t have a pre-workout supplement plan, nor would they be likely to invest in a premium pre-workout supplement. “Instead, the active nutrition consumer would likely be more attracted to a RTD (ready-to-drink), stick pack or regular coffee to add a little boost to their exercise. Most of these products net around 80-150 mg of caffeine (about the equivalent to 1-2 cups of coffee).”

Empowering Ingredients

There are several key facets to active/sports nutrition. But chiefly, they are endurance/energy support, muscle and strength building, and quicker recovery.

No sports nutrition is complete without touching on the king of protein—whey. According to Vangsoe, dairy proteins are well known for their high-quality, primary amino acid content and rapid absorption, making them one of the most in-demand ingredients for athletes and gymgoers. The Arla Foods Ingredients sports nutrition range includes numerous whey protein isolates, concentrates and hydrolysates, together with native organic milk proteins.

“Our portfolio of whey protein isolates for high-protein clear mixing shakes and RTDs products have seen substantial growth in the last couple of years,” he reported. The company also recently launched a new ingredient, Lacprodan BLG-100, a beta-lactoglobulin derived from whey. It is unique in that it contains 45 percent more natural leucine than standard whey. Leucine is known to trigger the protein synthesis required for post-exercise muscle recovery.

Currently, one of Arla’s main focus areas is clear protein RTDs and shakes, what Vangsoe described as a “hugely popular” sports nutrition segment but one where producers have historically faced challenges with taste and dry mouthfeel. Lacprodan ISO.Water and ISO.Water/Shake 100 percent whey protein isolate ingredients overcome these challenges.

Montana-based TSI Group’s myHMB: (Calcium β-Hydroxy-β-methylbutyrate or HMB), is a muscle health ingredient that can increase muscle protein synthesis while simultaneously reducing muscle protein breakdown, according to Shawn Baier, MS, MBA, TSI vice president of business development. He commented, “myHMB supports exercise-related strength improvements and muscle mass gains. myHMB supplementation uniquely helps people use the protein they consume. Supplementing with myHMB helps athletes train harder, recover more quickly, as well as reduce soreness and muscle damage after workouts. This can lead to increases in strength, power and endurance.”

And, according to Baier, the ingredient has synergistic benefits for increasing muscle mass, strength and function in combination with ingredients like PEAK ATP and vitamin D as well as optimizes the benefits of protein and amino acids consumed.

TSI Group’s PEAK ATP is a patented form of adenosine 5'-triphosphate (ATP) disodium that Baier noted is identical in structure to the ATP produced and used by the human body. “PEAK ATP provides non-stimulant functional energy and potentiates the role of ATP in the body, particularly in combination with exercise, it allows users to do more and achieve more, with less fatigue,” he described. “Depending on the training program, users can expect to see changes in body composition by six to eight weeks, measurable changes in strength and fatigue resistance as soon as two weeks.”

TSI Group research has shown that PEAK ATP significantly increased training-induced gains in lean body mass and thickness by 100 percent compared to placebo. And it significantly increased training-induced gains in strength by 147 percent when compared to placebo. PEAK ATP resulted in a 30 percent increase in vertical jump power over placebo.

GELITA (BCP) BODYBALANCE is for body toning and increased muscle strength, according to Rimel. She explained, “Achieving optimal lean body mass is important for every athlete, in a sports modality.” Supplementing with BODYBALANCE, alongside a resistance exercise program, has been shown to improve muscle strength, body mass and fat-free mass. A total of six randomized controlled trials, that included nearly 500 men and women of all ages and fitness levels, consistently demonstrate the benefits of BODYBALANCE, she said.

Research shows that the probiotic strain, Bacillus subtilis DE111, from Georgia-based ADM/Deerland Probiotics & Enzymes, can also help promote favorable body composition for female athletes. In one study, 25 Division 1 male baseball athletes supplemented with either DE111 or placebo while training in the off-season for 12 weeks. Analysis showed that those in the probiotic group showed quicker tissue recovery, and lower levels of pro-inflammatory TNF-α.

Maypro’s PurpleForce is a Kenyan purple tea extract that works to improve exercise performance and reduce fatigue, according to Alimonti. Purple tea is rich in polyphenolic compounds, such as GHG, that help inhibit lipid and fat absorption while also boosting fat metabolism. It also activates AMPK, an enzyme involved in the homeostasis of the energy cell, promoting energy levels and glucose absorption in the skeletal muscle. In a double-blind placebo-controlled human study, participants who took PurpleForce reported more leg extension and bench press repetitions, decreased bioimpedance and a stronger will to exercise compared to the placebo group. Results also found PurpleForce could help improve muscle recovery while also improving overall fat metabolism.

LJ100 Tongkat Ali (Eurycoma longifolia), from HP Ingredients, Florida, is known to support testosterone production in aging males as well as to reduce cortisol, creating a more favorable anabolic state. One study looked at LJ100 supplementation in young males who are typically at their peak of testosterone production.

In the placebo-controlled, double-blind study, 32 healthy young men (average age 24.4 years) consumed either 600 mg LJ100 or placebo daily for two weeks. The main findings were that LJ100 was able to increase testosterone even in healthy young men, when consumed in high doses—significant increases in testosterone (14 percent) and free testosterone (34 percent) were recorded after two weeks.

“The study authors found that supplementing with Eurycoma longifolia for two weeks provided steroidogenic effects in young men and that the effects were dose-related,” explained Annie Eng, CEO of HP Ingredients. “Consequently, the raised testosterone following Eurycoma longifolia supplementations could benefit muscle and strength gain in young adults.”

Post-performance/Workout Recovery

“One thing hardcore athletes and active consumers have in common is the desire to recover faster from strenuous activity,” commented Melanie Bush, vice president of science and research, Artemis International, Indiana. “Products that can target the painful inflammation and muscle soreness and fatigue that follow a long run are welcomed by all active nutrition consumers. For sports performance, they should be prioritized just as highly as protein and energy supplements.”

Tart cherry may be a lesser-known sports performance/recovery ingredient, but according to Bush, it is gaining validation as a post-workout supplement. One study evaluated whether tart cherry had a protective effect to reduce muscle damage and pain during a strenuous long distance relay race. While both groups reported increased pain after the race, the cherry juice group reported a significantly smaller increase in pain compared to the placebo group. “The authors concluded that ingesting tart cherry juice for seven days prior to and during a strenuous running event can minimize post-run muscle pain,” Bush reported.

Another study helped to discern the mechanism of action, finding that tart cherry enhanced recovery following strenuous exercise by “increasing total antioxidative capacity, reducing inflammation, lipid peroxidation and so aiding in the recovery of muscle function.”

Artemis International’s CherryCraft is the subject of ongoing studies in the sports performance and recovery categories and formulates easily into a variety of applications and delivery formats.

Maypro’s VAsoDrive-AP is, described Alimonti, derived from milk protein through a proprietary enzymatic process that releases two key tripeptides, Valyl-Prolyl-Proline (VPP) and Isoleucyl-Prolyl-Proline (IPP), that are not practical to obtain through dairy products. VasoDrive-AP reduces muscle soreness after high-intensity exercise, reduces mild exercise-related fatigue, and boosts exercise performance by improving recovery and sustaining endothelial function throughout training cycles.

SophorOx from Layn Natural Ingredients is a potent antioxidant with several recovery enhancement properties, according to Roza. Research has shown that 500 mg SophorOx significantly reduced oxidative stress and inflammation markers associated with high-intensity exercise. Specifically, SophorOx was shown to inhibit pro-inflammatory compounds and reactive molecules that cause oxidative stress.

He explained, “When muscles work and burn calories, free radicals and other reactive oxygen species (ROS) are formed as a by-product. An excess of free radicals can cause a variety of problems within the body, including damaging muscles and lowering their ability to function properly. Antioxidants also help promote a healthy and rapid recovery after exercise by increasing blood circulation. This in turn, increases red blood cells that help nourish and heal the muscles.”

TSI Group’s myHMB reduces muscle soreness post exercise and optimizes the benefits of protein and amino acids consumed post workout, according to Baier. myHMB supports recovery from intense training by simultaneously promoting muscle protein synthesis and decreasing muscle protein breakdown. Additionally, PEAK ATP reduces muscle damage (muscle protein degradation) and increases anabolic signaling during a resistance training protocol.

New from Applied Food Sciences is PurHP-75 organic hemp seed protein “to help inspire plant-based recovery,” commented Zapp. “Because we only use the white inner heart of the hemp seed, PurHP-75 has a creamy flavor and exceptional emulsification properties for a smoother sensory experience across many applications. Post-workout recovery products benefit from the 75 percent protein, complete with all nine essential amino acids, but the neutral flavor and complementary functional attributes set this plant protein apart.”

The probiotic DE111 also has been shown to help support post-exercise recovery. In the study of 23 female Division 1 athletes who consumed either DE111 or placebo, the probiotic was found to positively impact body composition favorable for achieving performance goals, such as reduced body fat percentage. The DE111 group also exhibited improved performance in deadlifting compared to the women in the placebo group.

“There is evidence that carotenoids can provide benefits in areas like muscle health and recovery,” Schroeder said. “In one study, endurance runners consumed a supplement rich in lycopene, phytoene, and phytofluene, or a placebo, for four weeks. Levels of the muscle damage biomarker myoglobin were lower in subjects who took the tomato complex post-exercise.”

Sports-adjacent Supplementation: A New Arena

As active nutrition continues to expand beyond muscle growth, endurance enhancement and swifter recovery, new related areas are fertile for formulation.

Gut health helps ensure recovery is a smooth process, and this is a compelling sub-category for sports and fitness nutrition. Entera Health’s ImmunoLin, Kaufman described, “is packed with concentrated antibodies to remove bacterial toxins in the gut that can ruin a workout by causing intestinal inflammation. By shoring up the gut, more water, protein and nutrients can be absorbed by the body, creating a utopia for recovery from workouts and overall well-being. ImmunoLin has more than 40 human clinical trials to back label claims.”

Toth agreed, observing that performance athletes, casual gymgoers and esports athletes all share the desire to perform at their best and seek solutions that support optimal performance and recovery; these groups are also increasingly turning to gut health solutions, like probiotics, to support those goals.

Lonza’s Lactobacillus plantarum strain, TWK10, sports probiotic, is, she noted, the first probiotic formulated to address the health, performance and endurance needs of athletes of all levels. Sourced from Taiwanese kimchi, TWK10 sports probiotic is clinically proven to enhance exercise endurance by up to 75 percent, as well as improve body composition and energy levels. In clinical trials, participants who consumed TWK10 daily for six weeks demonstrated increased activity levels. “Further, TWK10 has also been shown to reduce exercise-induced muscle damage and supports the growth of native Bifidobacteria, which have a number of beneficial effects on the body, such as supporting the digestion of fiber and the production of essential vitamins,” she said.

Many competitions (such as charity runs, soccer, softball, hiking, skiing), are done outdoors, and skin health is a concern for individuals who prefer to play and exercise outdoors, according to Schroeder. Lycored’s Lycoderm is a proprietary complex of tomato phytonutrients and rosemary leaf that delivers high concentrations of lycopene, phytoene and phytofluene, as well as carnosic acid and vitamins A and E, which have been shown to boost skin’s resilience to environmental factors.

Esports athletes tend to rely on caffeine for the necessary sustained mental energy, but they don’t want the jitters. There’s a solution, according to Zapp—the Amazonian guayusa leaf contains a unique combination of caffeine and antioxidants chlorogenic acids, rutin and several other polyphenolic compounds.

Applied Food Sciences’ new AmaTea Max organic guayusa extract may help improve physical and cognitive performance by increasing mental focus, stamina, and reaction time with fewer jitters than other forms of caffeine. “Fewer jitters do not mean less energy,” he stated. “In fact, during gameplay, nearly two-thirds of the participants consuming AmaTea Max reported an increase in vigor—defined as sensations of energy, effort, and enthusiasm.”

The good news is that sports nutrition is now a winning player in the mainstream supplement market. The better news is that it will likely remain a top contender with the accelerated rate of ingredient research and development. You got to be in it to win it! NIE

For More Information:

- ADM/Deerland, www.deerland.com
- Applied Food Sciences, www.appliedfoods.com
- Arla Foods Ingredients, www.arlafoodsingredients.com
- Artemis International, www.artemis-international.com
- Entera Health, www.enterahealth.com
- GELITA, www.gelita.com
- HP Ingredients, www.hpingredients.com
- Layn Natural Ingredients, USA, www.layncorp.com
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