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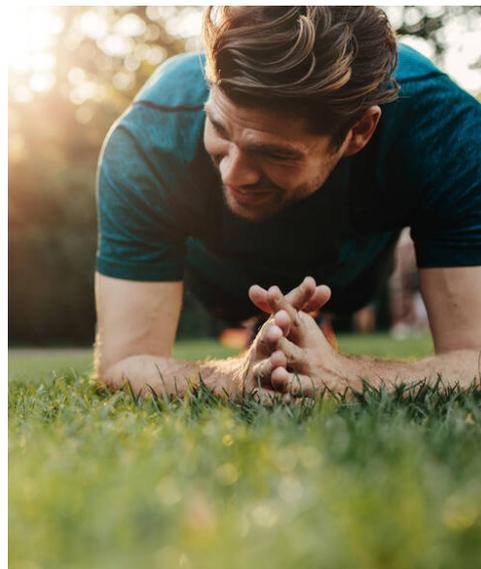
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The new **active**  
41 ingredients that power performance



November 2024

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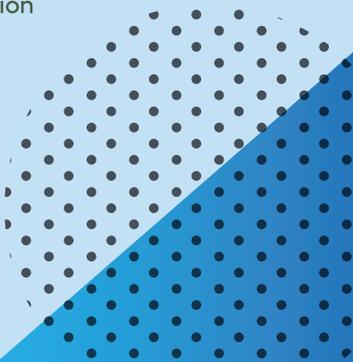


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## Who's the poster child for active nutrition?

**A** couple categories have gotten so expansive that they are riding cultural macro trends and making for outsized success in the market.

Active nutrition is one. It used to be the tidier sports nutrition pursuit, which meant supporting muscles for bodybuilders – the whey protein powder in plastic tubs. The always-innovative sports nutrition sector also brought us creatine, beta-alanine and HMB (hydroxymethylbutyrate). Nutrition Business Journal links sports nutrition with weight loss, under the thinking that if you want to lose weight, there's got to be an element of exercise in your plan.

One way sports nutrition has morphed into the much larger active nutrition category is by embracing plant proteins – even Tom Brady's TB12 line of protein uses pea protein.

Which got me to thinking ... is Tom Brady the poster child for active nutrition?

I'm thinking no – he's too GOAT (greatest of all time).

How about Gwyneth Paltrow? Her goop lifestyle brand is all that. Maybe a bit too much of all that – I went into a goop store, saw a nice cardigan, price tag \$700, and was like yeah no, a bit unapproachable for most.

How about The Rock? He's a pitchman for the Zoa functional beverage line. A bit too muscular, I'm thinking.

Active nutrition is more than sports. It's also about doing more in the office. Not just endless cups of coffee either. What to do about the post-lunch dip?

Half a lifetime ago, I honeymooned in Tuscany, Italy, and we stopped in the town of Deruta for some ceramics. But it was about 1



o'clock in the afternoon and they were shutting down the shop. I was like, what? They said it's siesta, see you at 5. I was like, what? So very un-American.

Today, I'm 50-something and I bike the paths and I hike the hills and I'm healthy and active – but after the high-protein biosludge shake I make in the morning (and a fistful of supplements) and then my lunch, my productivity is liable to crash in the late afternoon.

Siesta – I get it, at long last I get it! I need nutritional support to support my active lifestyle.

Turns out that maybe the poster child for active nutrition might be ... me?

**Todd Runestad**  
CONTENT DIRECTOR



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## You go, **girl**

The female demographic is pushing the active nutrition category to strong double-digit gains. Here are 11 functional ingredients that can help power that surge.

by Shara Rutberg

**M**ore than half of the people who go to gyms are women, according to the Health & Fitness Association's [2023 IHRSA Global Report](#). Yet despite vast physiological differences between men and women, only [2.5% of sports nutrition](#) products are targeted to female consumers. Opportunity in this space is knocking louder than the Metallica bassline in a Peloton Metal Ride soundtrack.

While a huge uptick has taken place in new products addressing needs at different ages, “There is so much more to women’s health than just the obvious female life stages, and active nutrition is an area where we can do better than just rebranding or redosing products basically designed for men and offering them to women,” Jennifer Cooper, industry expert and director of Leadpoint Solutions, said. “Products that don’t actually formulate specifically for women are missing a tremendous opportunity to validate and address the important physiological differences unique to women.”

The category of active nutrition for females delivers solutions for both women’s health and sports nutrition. A more expansive kind of sports nutrition, this focus targets not only ladies whose lives are shaped by their Strava stats, but also weekend warriors and those who squeeze in a few pickleball games every week.

[click to go!](#)



Obvious solutions include protein and joint health ingredients – but additional considerations range bone health, brain health and sleep support options for a more holistic approach to keeping women moving.

Abbie Smith-Ryan, Ph.D., an exercise physiology and sports nutrition expert, said science is lagging when it comes to strong direct data around ingredients and products for women. The associate chair for research for the Department of Exercise and Sport Science, director of the Applied Physiology Laboratory, and co-director of the Human Performance

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†The Non-GMO Project Verified. Who Is the Natural Shopper in 2024?. Published January 2024.  
<https://www.nongmoproject.org/blog/who-is-the-natural-shopper-in-2024/>



Active nutrition is an area where **we can do better** than just rebranding or redosing products basically designed for men and offering them to women.

– Jennifer Cooper, Leadpoint Solutions

Center at the University of North Carolina Chapel Hill, continued, “I don’t think we need to replicate all of the research, but there are very key physiological differences between males and females. And, when you add exercise, there’s another element to consider.”

Despite this gaping dearth of female-focused data, suppliers are innovating in the space. Here’s a look at a few of these consumers’ needs and how the industry is meeting them.

### Protein

Olympic rugby star Ilona Maher may have been on the cover of the Sports Illustrated swimsuit issue, but Sue Kleiner, Ph.D., RD – expert on peak performance, owner of High Performance Nutrition and co-founder of the International Society of Sports Nutrition – said women are still restricting their protein intakes, worried about taking in too many calories. Ironically, as women age and as they exercise, they need even more protein.

“It’s harder for muscle cells to synthesize new protein as we age, so you need to put the pedal to the metal and take in more to allow for muscle protein synthesis (MPS),” Kleiner explained [see her [“7 nonnegotiable](#)

[ingredients for women’s peak performance”](#)].

Many traditional protein products, however, don’t always play nicely with the female digestive system. Smith-Ryan suggested women tend to have more GI (gastrointestinal) issues than men. For example, she said a traditional whey protein shake “might not sit as well with a middle-aged female as it would with a male because of the GI distress.”



**FerriUp** from Glanbia Nutritionals is a newer whey protein concentrate especially for women. Rachel Schreck, associate product strategic manager at Glanbia, said it contains higher levels of lactoferrin and colostrum than standard whey protein concentrate. She explained, “The high lactoferrin content supports iron utilization, which is critical for active women because women

require more iron than men, and it is critical to energy production and respiration in the body.” The ingredient also features naturally abundant levels of vitamin B12.

Cooper added, “I love the new technology around ‘clear’ plant proteins. They’re a very exciting option for vegans and vegetarians who are seeking a more refreshing protein beverage option.”

## Marketing insights

**Yestein**, from Nura USA, is a vegan, gluten-free, fermented yeast protein that research has shown promotes MPS.

### Digestive health

Kleiner and Smith-Ryan both maintained that none of these ingredients – including the ones that follow – can work to their full potential if a woman's gut is inflamed.

**Pronulife Effenergy**, a probiotic developed by Glac Biotech that supports muscle health and reduces fatigue in women, was formulated from the gut bacteria of a female Olympic athlete.

A [2019 study](#) that showed gut bacteria from marathon runners significantly boosted the running endurance and distance of mice when introduced into their systems sparked Glac researchers' interest, according to Tsai Shin-Yu.

She said they chose an Olympic weightlifter, as "weightlifting uniquely combines strength and precision, making an Olympic-level athlete the perfect reference for evaluating the impact of gut bacteria on athletic performance."

### Energy

After more than 30 years of sales (mostly to "swole"-seeking gym rats) and accumulating research supporting its safety and efficacy, [creatine sales have skyrocketed](#) – spreading from hard-core weight benches to the wider world of active nutrition.



**Creatine** sales this year are up 47%, [according to SPINS](#).

Kleiner mused, "Women have finally been getting the creatine message and the message is getting louder." She sits on the Global Creatine Health Scientific Advisory Board (a research initiative of creatine pioneer Alzchem,



read

**Active now!**

The shift from sports to active nutrition is an important idea for marketers and product developers to keep in mind.

3 m read



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## Marketing insights

manufacturer of Creapure and Creavitalis), as does Smith-Ryan, whose research includes [this review](#) of creatine's extensive benefits for women across their lifetime. (Disclosure: Smith-Ryan is an advisor to supplement brand Create Wellness, manufacturer of creatine gummies.)

Those benefits include enhancements in strength, exercise performance, bone, mood, cognition, [hypertrophy](#) (increased muscle mass), [energy](#), memory and even fertility, Smith-Ryan noted. Creatine plays a [critical role](#) in energy metabolism in every single cell in the body, and women have 70-80% lower endogenous intramuscular creatine stores than men and consume considerably lower amounts of dietary creatine.

### Bone

A [recent study](#) found that creatine may help maintain or increase bone benefits in older women who do resistance training. "Can that happen in perimenopause for middle aged women? I don't see why not," Smith-Ryan said. "I think the impact on bone is really unique."

**Vitamin K2** has shown to [improve bone mineral density](#) in women, per a meta-analysis that looked at studies ranging intakes of 180 to 375 mcg/day. At a dose of 180 mcg/day for three years, the MenaQ7 brand vitamin K2 by Gnosis by Lesaffre significantly [improved arterial flexibility](#) in women as well. According to the company, the ingredient is backed by 21 additional published human studies.

**PhaeOptim** by French company Microphyt is a clinically supported microalgae-based solution that has been shown in a [women-](#)

## By the numbers

**W**hat do you get when you combine two of the five supplement trends driving a really strong industry?

### Mega opportunity

**+ 8.5%**

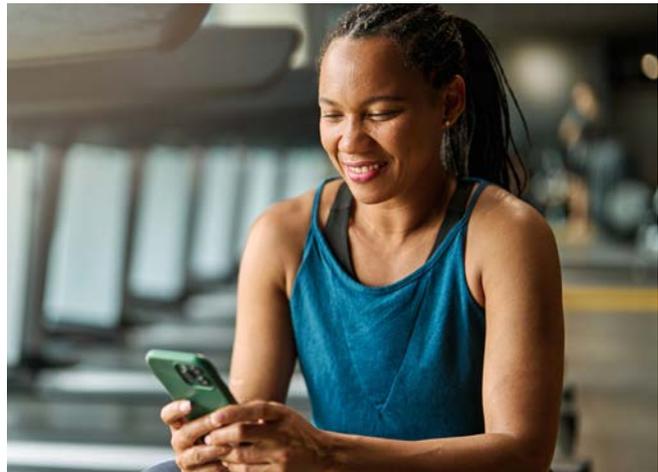
**Sports nutrition grew by 8.5% in 2023**, and Nutrition Business Journal [analysts forecast](#) it will **grow by more than 7% through 2024**. Sports nutrition ingredients taken for general health are gaining steam like Simone Biles heading to the vaulting horse, **growing at 37.5%**.

**\$3 billion**

**Women's health products pushed past \$3 billion in sales in 2023**, growing by **north of 5%**, according to NBJ analysts in the [2024 Condition Specific Report](#), which forecasts continued growth.



Savvy brands who can **tell their science and benefit stories to women** in a way that resonates with them **may have enormous opportunity.**



[only study](#) to improve exercise capacity, cardiovascular and bone health.

### Sleep and cognition

Active women need ingredients that help fight fatigue – not to mention brain fog, Smith-Ryan and Kleiner pointed out.

**Lactium**, made from milk proteins, [increases GABA](#) (gamma-aminobutyric acid) neurotransmitter activity. Made by French company Ingredia, Lactium showed efficacy results in nine clinical studies on both [stress](#) and [sleep](#). “A deep sleep promotes the release of toxins and waste produced during sporting activity, and accelerates the repair of muscle injuries,” Ingredia dairy expert Cecile Da Cunha said. “It also helps regulate metabolism.”

**Vanizem**, by Nektium, distributed by PLT Health Solutions, is an extract of West African spice

melegueta peppers (*Aframomum melegueta*), which has shown to support sleep quality and stress in women (and men) in a pilot study in [soon-to-be-published](#) research.

**Zynamite-S** by Nektium is a recently launched water-soluble version of the company’s mango leaf extract ingredient. Zynamite has been shown to [enhance cognitive function](#), significantly boosting performance accuracy. A clinical study found that a formula containing the nonstimulant ingredient improved [peak \(body\) power](#) by 19.4%, too.

**CognatIQ** from FutureCeuticals is a cognitive-support ingredient derived from upcycled coffee fruit. Backed by clinical studies that suggest it increases [brain activity and connectivity](#), as well as [improves working memory](#), CognatIQ was shown to [increase blood levels](#) of brain-derived neurotrophic



## watch!

### Emerging bioactives

This video analyzes traditional athletic supplements and emerging bioactives for overall well-being, with a focus on esports and future growth opportunities.

## Marketing insights

factor ([BDNF](#)). This key neuroprotein decreases in women as they age.

**Cognizin**, from Kyowa Hakko USA, is a B vitamin that's essential for women. It's a favorite of Kleiner. Daily citicoline supplementation has been [shown to enhance](#) attention, focus, cognition and memory. "It's absolutely critical for brain and body," Kleiner posited.

### Marketing to the active woman

"Pink it and shrink it" days are gone. Ola Lessard, managing partner of 9 Muses Marketing – which specializes in reaching female consumers – said brands need to develop "a relationship of trust" to win the loyalty of female consumers. She added that women tend to do more research on their purchases than their male counterparts.

Pointing to a concerning stat from Yankelovich Monitor and Greenfield Online, Lessard continued, "91% of women believe advertisers don't understand them."

Research [also shows](#) that active women have a higher level of awareness of health-beneficial ingredients as compared to women who are less active.

Savvy brands who can tell their science and benefit stories to women in a way that resonates with them may have enormous opportunity. But how to do it?

"Marketing to women is pretty much like setting up a good online dating profile," Lessard suggested. "Don't be pushy. Don't be creepy. Don't talk about yourself all the time. Let us see that you understand our lives, our fears, our burdens, our stresses, our joys – and earn our trust." ■



[Shara Rutberg](#) has been writing about natural products news, leaders, trends and brands that make things better for pets, people and the planet since 2007. A contagiously creative storytelling evangelist with expertise in content, copy and brand strategy, she earned a master's in journalism from Columbia University and a "PhDewar's" from that brand of whisky's copywriting program (not simultaneously).

## PRODUCT PICKS

# Nestlé Health Science

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## X marks the spot

Savvy brands should target Gen X for active nutrition supplementation.

by Adel Villalobos

**A**ctive nutrition continues to be a positive segment of growth within the health and wellness industry as a broad range of consumers gains greater awareness of their health needs. Combine this awareness with an active lifestyle, and the result is consumers who are looking for additional nutritional sources to support their target goals, from increased muscle mass to enhanced hydration.

According to recent [industry research](#), Millennials are a key driver of this growth, with their focus on healthy living, physical activity and nutritional awareness.

While Millennials and younger consumers will remain an important audience for supplement brands in this space, companies should not lose sight of other significant market opportunities, including Generation X consumers in the 40-50+ age group, in particular.

I fall into this category and, from a personal and professional perspective, the lack of products targeting this segment is surprising. Representing about one-fifth (19.5%) of the U.S. population, the [Gen X demographic](#) can benefit greatly from supplements aimed at helping them lead a healthier and more active life, while simultaneously supporting the health challenges that can arise as people age.

To top it off, according to [consumer research](#), some interesting characteristics specific to

[click to go!](#)



Gen X consumers include: more cash than perceived, motivated by value, high brand loyalty and interest in holistic health.

With products like Flintstones Vitamins, which debuted in 1968, we were the first generation introduced to taking vitamins as children and gained firsthand awareness of the importance of supplementation at an impressionable age. Now we are not just living longer, but we've matured during an era that understands that increasing life span without regard to health span – a period of life spent in healthy physical condition – is a mistake.

Now that I'm in my 50s, my health needs have shifted. I'm no longer worried about maximizing



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## Markets

muscle size, I just want to be functionally fit. I'm no longer trying to stay up all night long, but more interested in getting quality sleep. My concerns these days are ensuring that I have energy throughout the day, that I keep my metabolism humming, and get a good night's sleep to protect my brain and provide the necessary fuel to get me through my busy days.

As I'm aging, I'm more aware than ever about how all these health functions work together. I'm not looking for quick fixes like caffeine to stay active. I'm looking for sustainable solutions like how to pump up my mitochondria because they power everything we do. This more holistic way of thinking about active nutrition is where the market is heading.

### Key concerns and supplements

Like many consumers in the 40s-50s+ age range, I am concerned with keeping up on the day-to-day tasks and feeling my best, but I also have a desire to avoid serious health problems. I want quality of life, not just quantity of life, and I'm more willing to make the sacrifices – like forgoing that alcoholic beverage for better sleep – than when I was younger.

I'm interested in supplementing sensibly without going overboard, and my regimen reflects this. Following are the key supplements and ingredients that I have found helpful in my daily routine.



## PRODUCT PICKS

# Zhou

### CREATINE CHEWS

Contains the requisite 5 g creatine monohydrate, intended to help muscles produce energy (three chews per serving).



**Multivitamins:** Multis can offer a combination of valuable benefits especially when formulated for specific stages in life.

**Omega-3 fatty acids:** Some of the potential benefits include risk factor reduction for [inflammation and heart disease](#), as well as improved [bone](#) and [joint](#) health.

**Vitamin D:** The sunshine vitamin can affect the health of [bones](#) and also plays a role in [muscles](#), [immunity](#) and avoiding [rickets](#).

**CoQ10:** As the power plant inside every cell, CoQ10 [may help](#) exercise performance by decreasing cell oxidative stress and improving mitochondrial function, and may help reduce fatigue, potentially improving exercise performance.

**Magnesium:** [Various studies](#) have found that magnesium may have a range of benefits, including helping to improve sleep quality.

Active nutrition consumers **aren't looking for quick fixes** like caffeine – but for **more holistic, sustainable solutions** ... like how to pump up mitochondria because they power everything we do.

### Brand guidance for developing products

One focus of contract manufacturers should be ensuring they are developing products that will speak to their customers' "ideal client avatar" (ICA) – a marketing exercise that can help a business better understand and identify its ideal customers. Brand A might have a 28-year-old ICA named Selena who is studying medicine, runs marathons on the weekend and likes spicy foods. Brand B's ICA is a 43-year-old software engineer named Ben who is into rock climbing and breakfast cereals. These two active individuals will want very different products.

With such a wide array of customer interests, tastes and lifestyles, it is imperative that brands have a clear understanding of who they are serving so a contract manufacturer can work with them to ensure the product speaks to that target customer. This includes not only the formulation, but the overall branding and packaging as well.

It's important for contract manufacturers to work in partnership with their clients to home in on how the brands want to represent



## Gen X females

**F**or active nutrition brands looking to target female consumers within the Gen X segment, some key points should be considered.

Women are interested in products that can help them thrive during the lengthy period of hormonal changes experienced throughout perimenopause (which can last as long as 10 years). This is an especially crucial time for women because how they manage perimenopause can have wide-reaching consequences later, as the relationship between menopause and cognition continues to be investigated and understood.

Also, despite our country's long history of fortification – and while we may have thought that deficiencies in micronutrients were behind us – a [study](#) published last month in The Lancet raised the alarm about worldwide nutrient discrepancies in women (and men) for iron, calcium, iodine and vitamin E. While calcium might be seen as a supplement for the very young and very old, for those who are active, it is an important supplement in all stages of life in order to help support and repair the stress of exercise.



Brands need a **clear understanding** of who they are serving to ensure product formulations speak to that target customer. This includes **formulation, branding** and even **packaging**.

---

themselves and then help them achieve that. Whether it's bringing in grass-fed collagen or re-creating a flavor from a favorite childhood memory, if brands are clear about who they serve and why, the manufacturer can better support them in reaching their objectives.

### Active nutrition innovation outlook

Looking ahead at some areas of anticipated innovation in the active nutrition space, some interesting ingredients to support energy represent opportunities for brands in this market. For example, I'm very excited about new ingredients like paraxanthine and extract of *Alpinia galanga* (from the *Zingiberaceae*, or ginger, family).

Paraxanthine (as enfinity, distributed by TSI Group) [helps](#) to support energy and showed to mitigate cognitive fatigue and elevate mood, among other possible benefits. Galanga

(as enXtra, distributed in North America by OmniActive Health Technologies) is a caffeine-free alternative clinically [shown](#) to support alertness and help with focus.



For those of us who are looking to stay active as we age, any supplements that help support our brain are also going to be of interest. While it isn't a muscle, the brain's health is key to allowing me to continue to throw a ball around with my son or jump on a mountain bike with a friend – and when it comes to functional health, those mean more to me than how many reps I can press.

These are just a few examples of opportunities available to brands looking to innovate in the active nutrition space. I look forward to the potential for a broader range of products targeting Gen X consumers as the market continues to develop. ■



Adel Villalobos is the CEO and founder of Lief Labs, a formulation and product development innovator and manufacturer of dietary supplements based in Valencia, California. He completed a degree in biochemistry and an executive MBA from UCLA's Anderson School of Management.



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## Active nutrition = hybrid sports nutrition

by David Foreman

Here are 19 sporting ingredients that target different aspects of active nutrition.

**A**ctive nutrition is a critical component of any lifestyle that emphasizes physical activity, whether someone is an elite athlete, a weekend warrior or just committed to maintaining a healthy, active life.

Active nutrition involves the right balance of macronutrients (fat, protein, carbohydrates) and the inclusion of specific supplements that support energy production, recovery, muscle growth, joint health and overall health. Many clinically substantiated ingredients are available for efficacious active nutrition formulations.

### Muscle health

Muscle health is a cornerstone of active nutrition, especially for individuals engaged in physical activity, sports or fitness routines.

Strong, [well-nourished muscles](#) support better performance and contribute to overall health, longevity and metabolic efficiency. Healthy muscles are necessary for strength, endurance and overall physical performance. Active nutrition gives the body the essential nutrients to build, maintain and repair muscle tissue, which is critical for optimal athletic performance.

[Maintaining muscle](#) health helps protect joints and bones during exercise, preventing injuries. Strong, flexible muscles stabilize the body, reducing the risk of strain or overuse injuries common in active individuals.

Muscle tissue [improves](#) metabolic health because it burns calories even at rest. Active individuals with higher muscle mass have better

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## Fore-mutations

metabolic health, including improved glucose regulation and fat metabolism. This also helps maintain a healthy weight and reduces the risk of metabolic diseases.

### Ingredients to consider

**Protein** is a critical macronutrient for muscle repair and growth, especially following physical exertion. High-quality proteins are rich in essential amino acids (EAAs) that help rebuild muscle fibers post-workout. [Research](#) has demonstrated that protein supplementation significantly enhances muscle protein synthesis (MPS) after exercise.

**Branched-chain amino acids (BCAAs)**, which include leucine, isoleucine and valine, play a vital role in [muscle metabolism](#). BCAAs are unique because they are metabolized in the muscle rather than the liver, allowing them to be used directly as a fuel source during exercise. Leucine may be the most critical of the BCAAs, as it [stimulates](#) MPS, which is the process of building muscle. It also helps prevent muscle breakdown during prolonged periods of exercise. [Isoleucine and valine](#) support energy production and muscle repair, making them essential for recovery after intense physical activity.



## PRODUCT PICKS

# Bodytech

### HEXATEIN-SR

One scoop of powder provides a healthy 22 grams of protein from six different sources (not from plants), designed to be metabolically released at different times to spread out the muscular benefits.



**Creatine supplementation** increases strength, lean mass and muscle morphology.

**HMB** (hydroxymethylbutyrate) is produced by leucine metabolism in the body. It has been identified as attenuating sarcopenia by promoting the protein synthesis pathway and suppressing the breakdown of proteins.

**Probiotics research** shows gut microbiota composition and diversity can determine skeletal muscle metabolism and functionality. This is true in catabolic (sarcopenia) or anabolic (exercise or in athletes) situations. Another [study](#) stated, "Probiotic supplementation enhances both muscle mass and global muscle strength; however, no beneficial effects were observed in total lean mass."

## Fore-mutations

### Physical energy

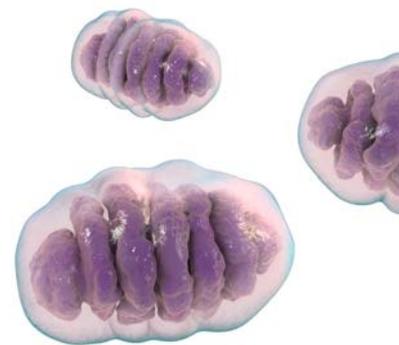
Physiologically and biochemically speaking, supporting energy levels should begin at the cellular level. This means we must start looking at supplement ingredients that help the cell's natural abilities to produce energy and recover more quickly so the process can begin. Regarding energy, the mitochondria (energy factories) play a critical role.

The energy needs of each type of cell determine the number of mitochondria found in those cells. For example, muscle and brain cells have more mitochondria because they need more energy than bone cells.

If we need more energy, then we need to support the nutritional needs of the mitochondria. This process begins by supporting the production of ATP (adenosine triphosphate), the [essential](#) energy-rich molecule produced by mitochondria and the key nutrients involved in this energy-producing process. Some of the nutrients to consider include:

**L-carnitine:** [Needed](#) to carry long-chain fatty acids (fuel) into the cell and mitochondria.

**Omega-3s:** [Research](#) showed that omega-3 supplementation positively impacted the composition of mitochondrial membranes and helped promote improvements in ADP (adenosine diphosphate) sensitivity.



**Protein, BCAAs, creatine, omega-3s and probiotics ensure the body has the tools to repair, grow and perform at its best.**

**Ubiquinol:** This bioactive form of ubiquinone (CoQ10) is [involved](#) in synthesizing ATP in the mitochondria.

**Magnesium:** The master mineral [plays a key role](#) in mitochondrial functions, including energy production in the form of ATP.

**PQQ (pyrroloquinoline quinone):** Stimulates mitochondria production and supports mitochondrial function, i.e., not improving the mitochondria function

but increasing the number of mitochondria in the body.

**D-ribose:** Found in cells, particularly in the mitochondria, and essential in energy



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### Active nutrition at SupplySide East

Check out these six suppliers providing ready-made innovation.

**Lonza**

# Keep up with the new active lifestyle consumer

Discover the most researched brand  
of undenatured type II collagen\*

\*As of January 2024



Ready to learn more?  
Contact us  
[solutions@lonza.com](mailto:solutions@lonza.com)



Fore-mulations

Joint-supporting supplements like **boswellia**, **collagen** and **turmeric** can enhance mobility and reduce pain.

production. Without sufficient energy, cells cannot maintain integrity and function. Supplemental D-ribose has been [shown](#) to improve cellular processes when mitochondrial dysfunction occurs.

### Joint health

Without healthy, functioning joints, the word “active” would not be needed in this discussion. Just as muscle health is important, addressing joint health will go a long way toward supporting an active lifestyle. Some essential ingredients to consider in building such supplements follow.

**Boswellia:** Several branded *Boswellia serrata* ingredients are on the market. In short, [boswellia](#) has shown a fast reduction in pain and improved knee function.

**Chondroitin sulfate:** [Studies](#) with chondroitin sulfate showed decreased joint pain.

**Collagen:** [Studies](#) supported that consuming native type II collagen positively affected joint health by slowing down an adverse

### PRODUCT PICKS

## Herbalife Nutrition

### GLP-1- NUTRITION COMPANION CLASSIC

It's not a GLP-1 (glucagon-like peptide-1) agonist product like berberine, but rather one said to support the health of people taking Ozempic through positive, nutrient-dense, protein-forward nutrition.



immune response that contributes to cartilage breakdown.

**Collagen peptides:** [Studies](#) with some [collagen peptides](#) showed improvements in mobility and the promotion of cartilage tissue growth.

**Hyaluronic acid (HA):** Studies indicated that HA matrix helped the body produce more HA and supported the reduction of inflammation ([reduced](#) prostaglandin E2) and [joint discomfort](#).

**PEA (palmitoylethanolamide):** [Research](#) with PEA has shown improvements in joint pain (in just three days), stiffness, function and quality of life.

**Turmeric (*Curcuma longa*):** [Research](#) indicated it helps in multiple ways to support mobility concerns by improving exercise recovery, reducing lactic acid levels post-exercise,

## Fore-mulations

[reducing joint pain](#) and discomfort, and supporting overall joint health.

### One more thing

**Omega-3 fatty acids:** EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) omega-3s in particular are known for their [anti-inflammatory properties](#) and are crucial for reducing [exercise-induced](#) inflammation. People with an active lifestyle may experience inflammation from training, leading to muscle damage and longer recovery times. In addition to reducing inflammation, omega-3s support [heart health](#) and [cognitive function](#), which are vital for individuals engaged in high levels of physical activity.

### Putting a bow on active nutrition

Active nutrition is vital to maintaining a healthy and vibrant lifestyle, regardless of whether a person is an elite athlete or simply focused on staying fit. Individuals can support muscle health, improve energy production and protect joint function by incorporating the right balance of macronutrients and targeted supplements.

Using clinically supported ingredients such as protein, BCAAs, creatine, omega-3s and probiotics ensures the body has the tools to repair, grow and perform at its best. Additionally, joint-supporting supplements like boswellia, collagen and turmeric can enhance mobility and reduce pain, allowing individuals to stay active longer and recover faster. Through a comprehensive approach to nutrition, supplement manufacturers can equip consumers who are looking to boost overall performance, longevity and well-being in their active pursuits. ■



download now!

2024 science flash

Investigate this report on the new science behind five ingredients powering active nutrition.



David Foreman is a registered pharmacist, author and media personality known to consumers as the "[Herbal Pharmacist](#)." A background in pharmacy and natural medicine puts Foreman in an elite class who can teach integrative medicine practices. He serves on the Organic & Natural Health Association's (O&N) scientific advisory board and is the author of "4 Pillars of Health: Heart Disease."

## Ingredients we love

Innovation and science are the hallmarks of successful natural bioactive ingredients. Here are four of our favorites on the market today.



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### ADM Active Lifestyle Blend

**Innovation:** This proprietary probiotic blend of ES1 (*Bifidobacterium longum* CECT 7347), BPL4 (*Lactobacillus casei* CECT 9104) and BPL15 (*L. rhamnosus* CECT 8361) is among the first of its kind said to influence the “gut-muscle axis,” enabling the gut microflora to affect one’s active lifestyle/sports nutrition capacity. Touted for supporting key markers of exercise recovery, according to the company, this blend represents the first microbiome/probiotic-based product to address muscle recovery from a probiotic base of ingredients.

**Science:** This blend has [been shown](#) to support biomarkers related to post-exercise oxidative stress. The Active Lifestyle Blend was studied in 44 adult men in a randomized double-blind placebo-controlled trial. The subjects were assessed for their recovery from exercise when supplemented with 1 billion colony-forming units (CFUs)/day or placebo. The exercise challenge consisted of daily cycling during the six weeks of supplementation. Blood markers of oxidative stress were collected at baseline and at the end of the six weeks, before and after the exercise challenge. Data showed that serum levels of malonaldehyde (MDA) and urinary 8-oxo-2'-deoxyguanosine (8-OHdG) significantly decreased with supplementation vs. placebo and after the exercise challenge. In addition, serum Ox-LDL decreased from baseline. This suggests Active Lifestyle Blend may help reduce measures related to oxidative stress in healthy people practicing prolonged, intense exercise.



After the study period, **only 54% reported discomfort** and cited **better overall physical well-being** compared to baseline.

### FrieslandCampina Ingredients Biotis Fermentis

**Innovation:** This first-of-its kind solution combines the benefits of whey protein, prebiotic Biotis GOS (galactooligosaccharides) and probiotic cultures by fermenting them together, creating a unique formulation that supports both athletic performance and holistic health.

**Science:** Gastrointestinal (GI) issues are commonly reported among athletes. Probiotics and/or prebiotics consumed via fermented foods may aid in improving gut health by relieving GI discomfort. A [study was conducted](#) on 50 athletes with GI issues and 21 without such challenges. After a three-week observation period, a three-week intervention period with fermented whey product intake looked at GI status. At the start, 72% of athletes with GI issues complained. After the study period, only 54% reported discomfort and cited better overall physical well-being compared to baseline.

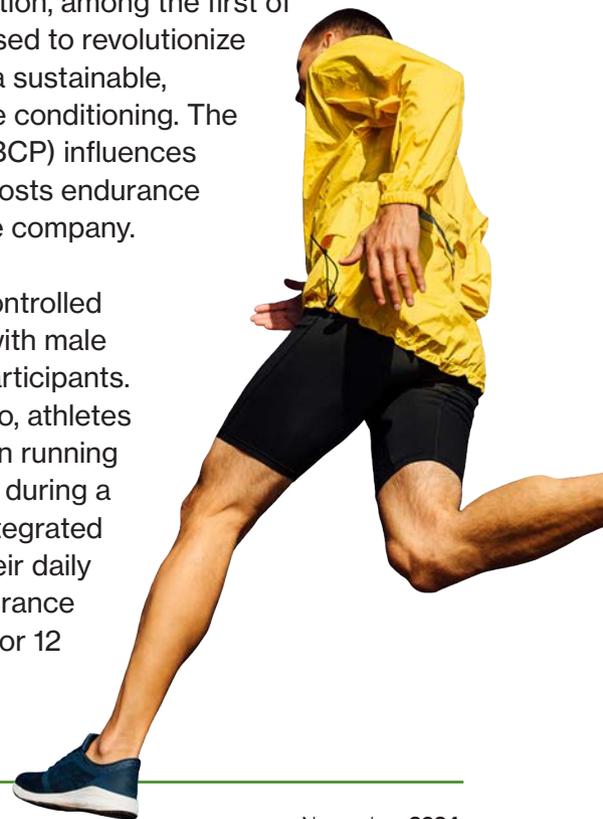
## GELITA

When compared to a placebo, athletes experienced **improvements in running speed and distance covered** during a one-hour run.

### Gelita PeptENDURE

**Innovation:** This protein solution, among the first of its kind on the market, is poised to revolutionize endurance training through a sustainable, adaptive approach to muscle conditioning. The bioactive collagen peptide (BCP) influences metabolic processes and boosts endurance capabilities, according to the company.

**Science:** Two randomized controlled trials were conducted, one with male and the other with female participants. When compared to a placebo, athletes experienced improvements in running speed and distance covered during a one-hour run. All subjects integrated 15 g of PeptENDURE into their daily diet and participated in endurance training three times a week for 12 weeks.





Out of the 15 participants, **eight improved their max bicep weight** with MålTor versus placebo, three had no change, and four decreased.



### NutriScience Innovations

#### MålTor

**Innovation:** A new, patent-pending, clinically researched taurine-L-malic acid complex with an ergogenic effect (improved physical exercise performance – study cited below), the ingredient is made using a proprietary process that creates a synergistic interaction. It provides pre-workout anabolic sports performance benefits, including energy, improved muscle recovery and increased pain/muscle soreness threshold.

**Science:** MålTor works through multiple mechanisms of action. It helps to increase exercise pain threshold; its antioxidant effect improves recovery and reduces muscle damage; it improves the absorption of taurine and the elimination of waste from plasma during exercise; and the L-malic acid component counters muscle fatigue by reducing the buildup of lactic acid.

These mechanisms of action were delineated in a 2024 pilot [study](#) designed as a randomized placebo-controlled double-blind crossover DOMS (delayed onset muscle soreness) protocol clinical trial. A total of 15 healthy trained men, with no restrictions on diet or exercise, consumed 5 g MålTor or placebo daily for two weeks, with a washout period and then crossover. The men did 70 bicep extensions after taking the placebo or MålTor. Two days later, researchers tested how much weight study participants could lift with a single bicep curl (one repetition maximum, or 1-RM). The results showed a significant reduction in threshold pain and a trend toward a smaller reduction in 1-RM versus control. Out of the 15 participants, eight improved their max bicep weight with MålTor versus placebo, three had no change, and four decreased. These numbers support the overall trends in 1-RM observed. ■

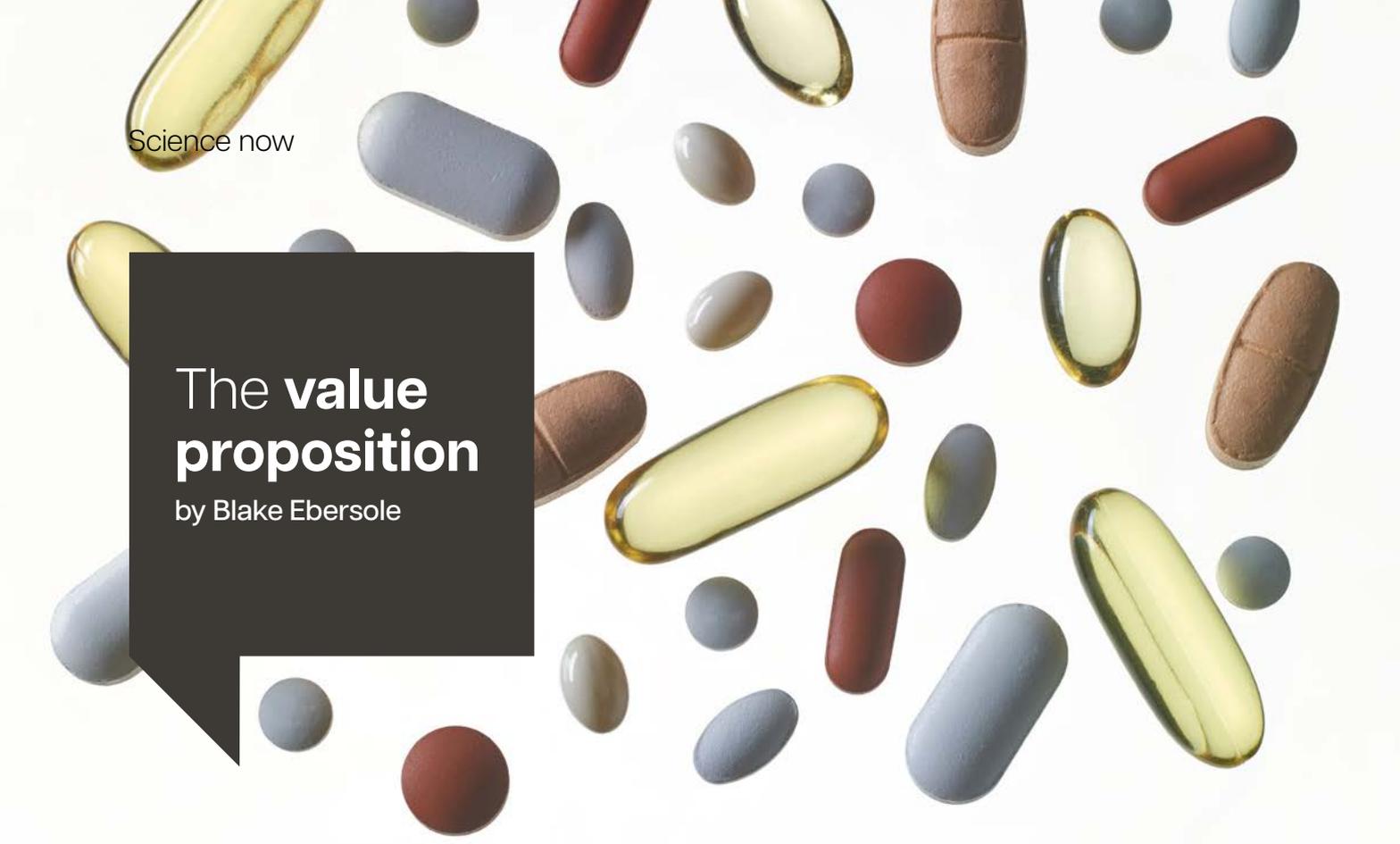


## click

### The shift is on

These eight ingredient and product format trends are driving the shift from sports to active nutrition.

6 m read



Science now

# The **value proposition**

by Blake Ebersole

**Don't create products that are poor quality, overpriced, under-dosed, use deceptive claims or are otherwise mostly a waste of money when it comes to nutrition and scientific support.**

I grew up part of the underserved 50% of Americans who don't take supplements unless we have a real problem.

The Ebersoles relied on Pennsylvania Dutch Mennonite staple home remedies – mainly apple cider vinegar and Epsom salts. We didn't go to the doctor unless we couldn't get out of bed with assistance or were bleeding profusely (“might need stitches” was usually the decision point). My mom became a licensed nurse who taught us about health options invented after the 1800s. We had two bottles in the kitchen cabinet with dust on them – Centrum and Flintstones. I hated the taste and dropped them into the trash can.

It was the '80s.

I've grown a lot and learned a lot since the good ol' days. But I'm still an Ebersole, so I'm still looking for value – and benefit – in my food and supplements. Times have

changed, but I still have a natural tendency to the practical side of nutrition, especially considering my understanding of the average American consumer of supplements. We don't often grow up with a ton of disposable income, so we don't waste money on things we don't need and which have no clear benefit.

Fast-forward 30 years and my people are still far away from access to reliable, effective options that affect our most pervasive needs and nutrient shortfalls. And that's why we usually don't trust supplements, even if we had the money or the need for them.

Most people believe that supplements should provide real value. So, industry shouldn't create products that are poor quality, overpriced, under-dosed, use deceptive claims or are otherwise mostly a waste of money when it comes to nutrition and scientific support.

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Science now

### Educate with integrity

Every ingredient and dosage should have a purpose, supported by science. We should get what we pay for. That's how the world should work. And whether you're rich, poor or somewhere in between, that's all most people want.

But then we see the consumer messaging, where our social feed becomes more and more of only what we pause for a few seconds before making an impulsive decision to buy or swipe.

Personally, I enjoy swiping through Instagram, TikTok and Facebook occasionally. My feed is always filled with well-targeted supplement ads. But at precisely this time of year, mid-October, they seem to be 10x. Every other swipe is the guy with orange glasses talking about the next big product to buy. Whether we live in the country or city or in between, we're either a little open-minded and listening for a few seconds, or we quickly swipe through.

This represents an incredible opportunity to educate to my demo with a power like never before. So we should do it wisely and responsibly. The demo is the 150+ million people who each view hundreds of clips per day on TikTok, another few dozen on Instagram and maybe a little Facebook, too. We're listening and watching. And sometimes, we actually make a purchase. But rest assured, my people are tired of the BS. We want better supplements that address real needs ... and fit within our budget.

### PRODUCT PICKS

## TB12

### PERFORM

The most sophisticated SKU from the GOAT (greatest of all time, Tom Brady) contains four branded ingredients – two adaptogens; Zembrin (*Sceletium tortuosum*), which [was shown](#) to bring about “unsolicited positive effects on well-being”; and Zynamite (*Mangifera indica* L., or mango), which was indicated in a single dose to improve attention, memory and visual information processing. Touchdown!



### Market with integrity

In my demo, need states span widely across age and gender. Let's start with kids and teenagers, who often get their “healthy



click

Seven winning branded ingredients for active sports performance products are celebrated.

3 m read

“

Every ingredient and dosage should **have a purpose, supported by science**. We should **get what we pay for**. That’s how the world should work.

indulgence” gummy vitamin with a “feel good” front of pack. But we’re betrayed by the Facts on the back.

In the effort to get our kids to take vitamins they don’t really need, we’re falling prey to several of the [most important nutrient deficiencies](#) (as noted by The Lancet) – vitamins C, E and the minerals iron and magnesium (for North Americans).

To make it more hypocritical, our marketing squawks endlessly about throwaways and red herrings. We need to be organic or natural, or not too many servings, or hit a price point, or be an indulgence – all at the cost of using better ingredients or dosages that actually do matter.

How we have let rational thought escape many supplement products reminds me of Steve Jobs explaining how to structure your team to create great products, which was basically this: When you let marketers make the final decision about product over the engineers or product developers, you get products that might sound good, but you don’t end up actually creating something new that consumers really want or need. This holds true for Apple as well as it does for supplements.

And sure, marketers can follow the trends –



in our industry, copying is what we do best. So we can parrot social media doctors’ sponsored Insta ads for magnesium as the holy grail of both energy and sleep all we want. (And for only certain types of magnesium, mind you – a level of scientific ignorance we’ll save for another discussion.)

But none of that matters in the long run – another year or two from now, consumers will realize that a product didn’t deliver on its promises. They won’t purchase repeatedly. They will churn the crap out of your business and burn up your cash. All your competitors that were lifting your sails with their message



## watch Going mainstream

Replay this SupplySide seminar to hear from experts on a range of sports nutrition topics, including esports, creatine and hydration innovation.

2 h 55 m

The **failure started** with how your essential product decisions were made, and whether these decisions helped to address a real market need.

are now on to something new and different. When this happens in a few months, just don't blame external forces or lack of marketing spend. The failure started with how your essential product decisions were made, and whether these decisions helped to address a real market need.

### Develop products with integrity

The magnesium craze is a good example of this concept. Because the truth remains that most of us who already have the money to buy discretionary supplements already get enough magnesium from our diets. And those of us with stress and sleep issues don't benefit by taking a little more.

As an experiment, I calculated the average magnesium intake of my picky mini-me fifth-grader, based on his preferred diet of chicken nuggets 'n' fries, milk and a handful of fruits and vegetables, based on USDA nutritional data. I was surprised to learn that he's already close to the 420 mg daily value for magnesium. But he's not anywhere close to the recommended intake for fiber, calcium, iron, folate and selenium, most of which are all conspicuously absent

or under-dosed in his gummy vitamin that he forgets to take without a reminder.

If we want to make a real dent in childhood malnutrition (much less adult), we need to stop misleading ourselves (and consumers) about the health benefits of our products and start talking about the most important nutrient shortfalls experienced by most of our population. We should stop automatically taking what podcast doctor marketers and paid advertisers parrot as problem-and-solution, and dig a little deeper for market opportunities that will create products to outlast short-term trends and benefit the consumer, based on real, hard science.

Because let's face it: Unless you've got the best diet in the world, then you do have a nutrient shortfall, at least on some days. In fact, recent estimates from The Lancet put the "underserved" population in the U.S. at around 50% for nutrients like iron, calcium, iodine and folate. It's hard to argue with the recommendation that everyone should be taking a multivitamin that addresses their shortfalls. Yet most multis aren't formulated to address them. Some of the same marketers of calcium-deficient multivitamins chirp anti-dairy or otherwise calcium-deficiency messages, which seems a little like nutritional malpractice to me.

I love advanced supplements that really deliver at a range of costs and prices. But as a middle-aged consumer, and part of my demographic, I'm still watching and listening, and I remain loyal to the products that benefit my health. And there are another 149,999,999+ of us right here in the good ol' U.S. of A. ■



Blake Ebersole has led several botanical quality initiatives and formed collaborations with dozens of universities and research centers. As president of [NaturPro Scientific](#), Ebersole established quality compliance and product development services for supplements and ingredients such as ID Verified. Follow him on X (Twitter) at @NaturalBlake.

## Active nutrition directory

Click links for more information.

### [Akay Bioactives](#)

[Capsifen](#) offers bioavailable capsaicinoids.

### [Applied Food Sciences](#)

[AmaTea Max](#) is organic guayusa extract, a source of caffeine.

### [Cargill](#)

These [plant proteins](#) target sports nutrition.

### [CoreFX Ingredients](#)

#### [CoreNHanced Nutrient Delivery Platform](#)

transforms oils to powders, opening the way for a broader scope of finished product applications.

### [FutureCeuticals](#)

[S7](#) is a combination of seven plant-based ingredients that target nitric oxide.

### [Glico Nutrition](#)

[Cluster Dextrin](#) is a highly branched cyclic dextrin.

### [Gnosis by Lesaffre](#)

[Mythocondro](#) is a chondroitin sulfate.

### [Kyowa Hakko USA](#)

[Setria](#) aims to support nitric oxide production.

### [Lonza Capsules & Health Ingredients](#)

[Carnipure](#) is a branded L-carnitine.

click to go!

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### [Lubrizol Life Science](#)

[MagShape](#) is a magnesium microcapsule.

### [Microphyt](#)

[PhaeOptim](#) is positioned to naturally optimize healthy active lifestyle benefits.

### [PLT Health Solutions](#)

The company offers a touchdown's worth of ingredients (not counting the extra point), including [AlvioLife](#), [cellflo6](#), [Dynagenix Joint + Muscle Formula](#), [MegaNatural-BP Cardio Health Support](#), [Osystorm Standardized Nitrate](#), and [Rhodiolife Rhodiola rosea](#).

### [Prinova](#)

[CitraPeak](#) is glucosyl hesperidin for pre-workouts.

### [Robertet Health & Beauty](#)

[Melorun](#) can be used for recovery.

Supplier directory

### [Rousselot Health and Nutrition](#)

The company offers a range of collagen peptides as well as the [ProTake](#) protein enrichment ingredient.

### [Sabinsa](#)

[Sabeet](#) is a beetroot extract.

### [Specialty Enzymes & Probiotics](#)

[DigeSEB Sport](#) is a blend of five probiotic species, proteolytic enzymes and a prebiotic to optimize protein digestion.

### [Stratum Nutrition](#)

[NEM](#) is eggshell membrane for joint health.

### [Tetra SOD](#)

Superoxide dismutase (SOD) is a natural enzyme and antioxidant.

### [TSI Group](#)

[myHMB](#) is calcium beta-hydroxy-beta-methylbutyrate.

### [XSTO Solutions](#)

[Cuvitas](#) is whole fruit cucumber extract for recovery.



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