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Sports Nutrition: *The Female Athlete*

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Viewpoint: It's About Strong & Fit



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The Goldilocks Issue: When Will Sports Nutrition Fit Women Just Right?

Female athletes are unique consumers requiring specific products based on precise research. **Steve Myers** dives into macronutrients, the effects of the menstrual cycle on studies and brand perspectives on products for the female body.



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Changes in Women's Fitness Goals Lead to Market Opportunity

Karen Butler identifies formulations geared toward female athletes as huge brand potential. Women seek products for performance enhancement, workout recovery and fatigue reduction. Brands weigh in on developing lines for women or gender-neutral products.



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Women's Sports Nutrition Here to Stay and Growing

To woo women, brands must speak with genuine authenticity to existing and potential customers. **Ginger Schlueter** guides the reader in how to effectively create female-focused brand messages and product packaging, and identifies trends of focus for companies.



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Image courtesy of Quinn Rooney / Getty Images

Q&A: Olympic Gold Medalist Diggins Talks Nutrition, Performance

Todd Runestad candidly spoke with Jessie Diggins, who explains her nutrition routine as a female athlete and gives advice on performance and nutrition for female athletes and those leading active lifestyles.



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Women Athletes and Choline

Emerging research shows choline provides fuel for energy production and supports brain health. **Tom Druke**, Balchem, discusses this ingredient, identifying health boosting considerations for women-focused product formulation.



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Data provided by **Andreas Baltatzis** and **Gideon Eckhouse**, KramerAmado PC, assist companies in establishing patents and trademarks for their female-focused sports products.



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Takeaways: Sports Nutrition for Female Athletes

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It's About Strong & Fit



While women are the primary purchasers of most types of

natural products, when it comes to the sports nutrition segment, they've traditionally been outspent by men. However, it's likely not because they're not nutritionally minded, or interested in optimizing performance. It may come down to a lack of products backed by targeted research and marketed appropriately. Combine that with how the media covers the field (the top results on Google for "female athletes" are all about the "hottest" and "sexiest"), and we're looking at a whitespace market opportunity.

This issue offers guidance to explore what the category could mean to your business. Our main feature digs into the challenges around research on female athletes. Steve Myers, **INSIDER**'s lead editor in the sports nutrition space, talked with several professionals on the topic, all of whom emphasized women have their own unique physiology and nutritional needs. This means research on ingredients and finished products needs to include women—of all ages—in studies to ensure the impact on performance and recovery is truly understood.

Beyond our main deep dive, you'll find additional insights to fuel your own business performance. A look at patent and trademark filings reveals what's happening in the intellectual property (IP) field and could spark a new strategy. We also review go-to-market concepts that go beyond putting your product in a small pink bottle. Plus, you'll go behind the scenes with Olympic gold medalist Jessie Diggins, as she shares her take on how women can maximize their diet to support athletic pursuits.

I don't consider myself a female athlete; I practice Bikram yoga, walk the dogs and try to get the most of my LA Fitness membership, all while keeping nutrition front of mind. So, I'll close with a shout-out to **INSIDER**'s Editor-in-Chief, Sandy Almendarez, who is an active triathlete and powerful woman. We're looking forward to her return from maternity leave, as I'm sure she's excited to get back to her athletic training and competition.

Best regards,

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The Goldilocks Issue: When Will Sports Nutrition Fit Women Just Right?

by Steve Myers

INSIDER's Take

- Women are not small men, but have their own unique physiology and nutritional needs.
- Despite equal participation numbers, women are routinely excluded from sports nutrition research.
- Female athletes want their own products, and sports nutrition brands that respond with research, formulation and messaging fit for women will reap the rewards.

For women who lead active lifestyles and compete in athletics, the sports nutrition market can, at times, seem like an odd fit. There is plenty of “too big,” including all the products aimed to get one “jacked” or super-muscular. There is also the “too little,” as seen in the pink-it-and-shrink-it approach to women’s products lines. The sports nutrition market won’t truly feel “just right” until it sees female consumers as unique athletes requiring unique products based on unique research.

“Females are greater than 50 percent of the participants in all sports activities,” said Susan Kleiner, Ph.D., R.D., owner of High Performance Nutrition LLC and nutritionist for many elite sports teams including the Seattle Storm (basketball) and Seattle Reign FC (soccer/football). “In studies that investigate injuries and performance, the two most important topics for athletes, only 2 to 3 percent of the subjects are female.”

In a 2017 issue of the *British Journal of Sports Medicine (BJSM)*, U.K. and U.S. researchers wrote, “Despite a decreasing gender gap in exercise participation, there remains a significant under-representation of women included in sport and exercise medicine research studies,” (51[6]:487-488). They found women were only 39 percent represented in 1,382 sports and exercise studies conducted between 2011 and 2013 and involving more than 6 million participants.

Kleiner, who is also a co-founder of the International Society of Sports Nutrition (ISSN), noted these results do not mean 39 percent of studies were on only women, but rather females made up a little more than one-third of the overall research pool for these studies. “In fact, a fraction [of sports medicine trials] are female-centric,” she said, adding there is no such data on sports nutrition research studies, “but I don’t imagine the numbers are better.”

Douglas Kalman, Ph.D., R.D., director of nutrition and endocrinology research at QPS and co-founder of ISSN, estimated 25 percent or less of sports nutrition studies involve female subjects. “This low percentage, though, is probably not different or much different than the low percentage of females targeted or utilized in



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pharmaceutical clinical trials,” he added. “It is something the academia and private researchers need to improve upon.”

The researchers in the *BJSM* article suggested the complexity of the menstrual cycle is the primary challenge to including women in such research studies.

“Historically, partially due to concerns of potentially damaging unborn fetuses, medical trials—including drug trials—were conducted solely in men,” they wrote, noting women were perceived as more physiologically variable, and using only male participants would provide more meaningful results with fewer participants and less funding. “Since men were viewed as adequate proxies for women, the years of exclusion of female participants from research were considered inconsequential.”

The researchers further reported 41.7 percent of exercising women believe their menstrual cycle has a negative impact on training and performance. One theory behind such performance dips is iron deficiency from heavy bleeding; however, there is a lack of research on exactly how menstruation affects exercise and performance.

A 2017 study of nine sub-elite female soccer players looked at how hormonal fluctuations during menstruation affect performance (*PLoS One*. 2017;12(3):e0173951).

“The menstrual cycle encompasses two main phases, the follicular phase (FP) and the luteal phase (LP),” the researchers explained. They further noted the early FP is characterized by low concentrations of both the key hormones estrogen and progesterone, while the mid FP is marked by estrogen at high levels independent from progesterone. The LP typically features high concentrations of both estrogen and progesterone. In between the two main phases, there is a steep surge in luteinizing hormone triggering ovulation. They noted this cycle is considered predictable over the reproductive years.



“Despite a decreasing gender gap in exercise participation, there remains a significant under-representation of women included in sport and exercise medicine research studies.”

— *British Journal of Sports Medicine* Researchers

A series of performance tests were conducted at distinct points during the early FP and mid LP phases of the menstrual cycle, “where hormones contrasted at their greatest magnitude.” They found a reduction in maximal endurance performance during mid-LP phase, although the same effect was not found for jumping and sprint performance. “Practitioners should keep menstrual cycle phase constant when completing routine physical assessments with their players, to ensure that changes in performance are consistent with the outcome and not due to the effects of the menstrual cycle,” they concluded.

Abbie Smith-Ryan, Ph.D., associate professor of exercise physiology and director of the Applied Physiology Lab at University of North Carolina, Chapel Hill, agreed the menstrual cycle is a large challenge, particularly for publishing data.

“First, we have to do a pregnancy test on every female of childbearing age for most intervention studies,” she explained. “Then we either have to do research measurements at the same time of the month to match up estrogen (and track ovulation), which then requires sensitive timing; or we have to measure estrogen levels in the blood or saliva (which costs more money and sometimes isn’t scientifically accepted); or only use females who are not taking birth control (which is a VERY small population, and difficult to recruit).”

Smith-Ryan also shed more light on what research has shown about the effects of menstrual cycles on energy and metabolism in female athletes.

“Estrogen is highly variable due to menstrual cycle, amenorrhea, pregnancy, nursing, menopause—all of which alters fuel utilization,” she said, noting females were designed to depend more on fat for fuel than males do. The energy challenge special to women is not entirely due to menstruation, however.

Smith-Ryan explained a high-carbohydrate diet can inhibit use of fat as fuel, a common occurrence for today’s female athletes. “There is data to suggest that fasting or hypocaloric intake can also influence a female’s natural ability to utilize fuel, and women are notorious for undereating or fasting around exercise,” she said. “Also, data suggests eating protein (90 kcals) vs. carbohydrate (90 kcals) ... before exercise increases caloric expenditure and fat oxidation.”

There are other non-menstrual factors on the health and performance of female athletes. Macronutrient needs vary between males and females (adjusting for calorie needs), according to Smith-Ryan, who noted bone health is a unique challenge for female athletes but is mostly influenced by estrogen or lack thereof. “I also believe, based on the data, that supplement needs vary for females—such that there are certain supplements that would work better or different in females compared to males,” she reasoned.

Differences in body size and composition can affect nutritional recommendations. “On average, men are taller than women (~15 cm) and heavier than women (~12 kg), however, the average woman has 6 to 11 percent higher percent body fat than the average man,” explained Dawn Anderson, Ph.D., professor of kinesiology at Taylor University, Indiana. “These differences alone impact the way that we may apply some nutritional recommendations that are not adjusted for body size.”

Kleiner said there is enough data to show that women and girls are not small men with hormone issues. “We are different: anatomically, biologically, physiologically and biochemically,” she asserted.



Data suggests eating protein (90 kcals) vs. carbohydrate (90 kcals) in a female before exercise increases caloric expenditure and fat oxidation.

— Abbie Smith-Ryan, Ph.D., associate professor of exercise physiology and director of the Applied Physiology Lab at University of North Carolina, Chapel Hill



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In their latest book, “ROAR: How to Match Your Food and Fitness to Your Unique Female Physiology for Optimum Performance, Great Health, and a Strong, Lean Body for Life,” exercise physiologist Stacy Sims, Ph.D., and athlete Selene Yeager issued a blunt nutritional message to female athletes: “Women are not small men. Stop eating and training like one.”

Kalman agreed women’s physiology is different than men’s. For instance, in addition to their more efficient use of fat as energy, women are more adept at running distance than are men—not necessarily faster, just more adept.

“If you are going to sell it to women, why not test it in women?” Kalman asked, adding the answer depends upon the product and the intended use—a protein powder meant to supplement the dietary intake of protein is a lot different than a purported fat burner. He further said the answer depends upon if women are also on oral contraceptives, as these medicines impact absorption and metabolism of many medicines and nutritionals. “One popular ingredient in sports nutrition is caffeine,” he explained. “We know that women metabolize and treat caffeine differently than men, so knowing if your female client is on such a medicine helps in understanding how and when to best use caffeine with the individual.”

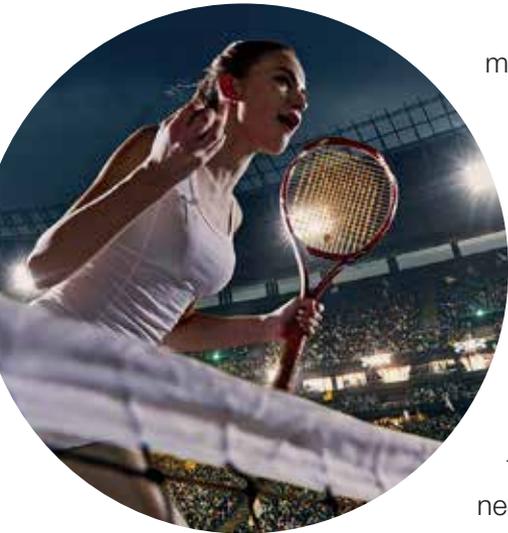


There is enough data to show that women and girls are not small men with hormone issues. [They] are different: anatomically, biologically, physiologically and biochemically.

At least one nutritionist thinks menstruation should not close the door to research on female athletes. “The inane idea that women are more difficult or more expensive to study is pure laziness, in my opinion,” Kleiner argued. “We have learned through past experience, converting pharmaceutical data from studies on adult men for use in children and women is scientifically baseless at best and dangerous at worst.” She noted the sports science and nutrition communities have been following that paradigm for years with mostly, but not completely, poor results. “It leaves a vacuum of information where quacks and charlatans can creep in and hook an eager consumer with false and misleading marketing.”

Researcher Bill Campbell, Ph.D., associate professor of exercise science at the University of South Florida, has not found unique challenges with researching female athletes, but he purposefully does not plan around menstrual cycles.

“If I did that, it would be much more challenging to plan and conduct a study that includes females,” he explained, pointing out he does not measure hormones (other than the hunger hormone leptin) in his studies with females. “The reason I do not consider the



Female athletes are increasingly asking for more research on **female athletes**, including female resistance training studies.

— Bill Campbell, Ph.D., associate professor of exercise science at the University of South Florida

menstrual cycle in my studies is that I like to be able to extrapolate my results by saying that the outcomes were irrespective of the female's menstrual cycle. Since I did not consider it in my research design, whatever outcome we observe can be expected to happen to the same population, no matter where they are at relative to their cycles."

Campbell said he has noticed female athletes are increasingly asking for more research on female athletes, including female resistance training studies. "I just spoke at a seminar two weeks ago, and a woman about 60 years old told me that not only is there not enough research on women and fitness, but that there needs to be more on women post-menopause as well," he said.

The onus may be on brands and supplement companies to prompt more female athlete nutritional studies. "Since NIH [National Institutes of Health] and federal entities will not fund sport performance studies, it is incumbent on the industry players to do this," Campbell said. "A good example of this is Dymatize." Campbell said he's conducted several studies that have included female populations, including trials funded by Dymatize.

Kalman added health and nutrition companies, whether Pfizer, EAS or any other firm, often have a target market in mind, which influences the researcher's rationale in putting together the study inclusion and exclusion criteria. "I have been involved in studies whereby we target a 50/50 mix of males and females, and others where no specific gender is targeted—the community response is represented in the final study group," Kalman reported. "Mind you, when doing weight loss studies, you typically get three or four women to every one male respond or show interest in being involved, but when doing a muscle-building study open to both genders, the skew is more males."

Smith-Ryan noted NIH now requires researchers to justify why they are or are not including women in their research proposals. "If you're excluding them, it has to be scientifically justified," she said. "For example, prostate cancer—you obviously can't study this in women."

For supplement brand Twinlab, researching female athletes is a no-brainer. "We study the nutritional needs of women to uncover their needs and drive new product innovation to support them better," reported Marc Stover, the company's vice president of sales and marketing.

Ingredient supplier Bergstrom Nutrition has also seen the light on female-specific research. "We ... see nutritional support for women as an underdeveloped market with huge potential and are moving forward with female-focused OptiMSM® research," said Tim Hammond, vice president of sales and marketing at Bergstrom Nutrition. He noted providing supplements that support proper nutrition and maintain hormonal balance may help minimize the effects of the female athlete triad—a combination of low energy availability, menstrual dysfunction (amenorrhea) and decreased bone mineral density (BMD).

Research for Women



Active female consumers and athletes are looking for more products designed specifically for them.

“The number of women participating in sport and fitness programs has increased by nearly 27 percent from 2010 to 2016, demonstrating a growing trend,” said Michio Imanaka, brand manager at AstaReal Inc. USA. “In the past, companies have targeted athletes in general, instead of tailoring formulations for women’s needs.”

He said women recognize balancing career, family and fitness goals requires a proactive approach to both fitness and nutrition, and women are increasingly focused on muscle building, resistance exercise and building physical endurance.

“While protein supplements dominate the sports nutrition market, accounting for 89 percent of the market in 2015, there is a need for innovative new ingredients that will help differentiate sports nutrition products for women, as they are not as much into mass building but rather into being fit and toned,” he added. “Besides protein supplements, women have long been taking vitamins, iron and folate for their energy and fitness needs.”

Kristi Parent, product development manager for Century Foods International, noted active females in the past were expected to buy nutrition supplements that often had been formulated based on what worked for men. “But younger women want product formulations designed for active women based on the uniqueness of female physiology,” she stated.

“Most sports nutrition companies only have products geared for men, or they’ve taken the same product and put a pink label on it,” Smith-Ryan said.

“As the number of women athletes increases, there is more demand for accurate nutritional information,” Anderson noted. “This is helping to encourage further research into the area of sports nutrition research to determine recommendations for female athletes.”

Kleiner assured today’s women are savvy about products and science—and they are actively advocating “Strong, not Skinny.” She reported they are looking for authentic information that offers actionable solutions. “They are becoming aware of the baseless claims and misogynistic messaging to be the least that they can be rather than the most that they can be: ‘get skinny and sexy’ does not improve performance,” she advised. “Whoever puts their money where their mouth is when it comes to research-backed, solution-based products rather than selling ‘old standbys’ will come out ahead of the pack.”





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Changes in Women's Fitness Goals Lead to Market Opportunity

by Karen Butler

INSIDER's Take

- Women seek products to support their unique physiology in areas such as performance enhancement, workout recovery, muscle building and fatigue reduction.
- Some sports nutrition brands develop exclusive lines for women, while others incorporate offerings into established gender-neutral or male ranges.
- Trends in women's sports nutrition products include clean label, plant-based and convenient on-the-go formats like single-serving sachets and stick packs.

Sports nutrition has endured its share of growing pains; but, for the most part, the category is now on firm footing—enjoying a time of unparalleled expansion as more consumers are drawn to active lifestyles and complementary products. In fact, the market has revealed pockets of innovation in tandem with developments in the space, from the rampant popularity of CrossFit and competition courses for the masses, to nutrition preferences such as paleo and ketogenic diets. One area with huge potential is formulations specifically geared toward female athletes.

“There was a time when sports nutrition products were marketed to a male audience with what was affectionately called a ‘knuckle dragger’ attitude,” explained Shaheen Majeed, worldwide president, Sabinsa. However, he cautioned, “Women don’t necessarily respond to promises of bulking up! In recent years, brands woke up to an entire demographic they had been neglecting. Today, women have become a demographic of interest in the sport nutrition marketplace. As more women across a range of ages are taking up fitness and training activities seriously, demand for supplements that meet their specific needs is rising.”

Tim Hammond, vice president of sales and marketing at Bergstrom Nutrition®, concurred. “Recognizing how nutritional needs can differ significantly between genders is an evolution within the industry that presents exciting opportunities.”

One company making the most of the white space is Twinlab. Marc Stover, vice president of sales and marketing, explained: “We are especially tuned into the female customer.



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We are seeing more women enter the sports nutrition market and increasingly see their dissatisfaction for products formulated for men. They are demanding products with the characteristics they want—and rewarding companies that deliver.”

His advice for brands looking to explore the space? “Don’t insult [women] by simply taking products and putting them in the proverbial ‘pink bottle.’ That never has worked and won’t in the future, either,” Stover asserted.

Instead, companies need to stay connected to the evolving goals of active women. Elyse Lovett, marketing manager, Kyowa Hakko U.S.A. Inc., said “strong is the new skinny” has been trending for several years. “Many products are now marketed to women as performance-enhancing, muscle-building or even recovery after a workout,” she detailed. “More women are choosing these types of products and making an effort to understand how the ingredients in these products can aid in their overall performance goals.”

Michio Imanaka, brand manager at AstaReal Inc. USA, agreed the market has undergone a shift from the early days of women’s workouts largely focused on aerobics and yoga. “Muscle endurance and fatigue reduction are now the main talking points around supplements for women,” he shared. As women increasingly look to tone muscle, build endurance and burn fat, Imanaka said developing female-specific formulations to support these goals “will allow the female athlete supplement market to grow into a substantial market subset.”

“As more women across a range of ages are taking up fitness and training activities seriously, demand for supplements that meet their specific needs is rising.”

- Shaheen Majeed, worldwide president, Sabinsa



According to Kristi Parent, product development manager at Century Foods International, the potential is undeniable. “It’s clear this cohort of consumers is varied in its fitness interests and nutritional needs,” she explained. “This presents some exciting opportunities for product development, but can be challenging, as it requires a different approach to innovation.”

From meeting the wide range of women’s physical fitness priorities and abilities to formulating a brand strategy, the options are endless. Emily Pankow Fritz, Ph.D., technical services manager for the active wellness platform at Kemin Health, confirmed the latter, stating, “Many large sports nutrition brands have expanded their product offerings to include lines for women, and other companies have focused on sports nutrition options for women exclusively.”



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London-based Bio-Synergy Ltd. launched in 1997 with a mission to create the first clean, effective range of high-quality sports nutrition products to support the goals of all athletes. “Whether it is women, children or elite-level athletes, there is not necessarily a one-size-fits-all, and therefore our product development is all around the customer and their goals and needs,” stated Daniel Herman, founder and CEO.

Bio-Synergy boasts a full roster of sports nutrition products, some of which are not marketed specifically to women, but may appeal to them based on formulation, packaging and branding. Examples include Skinny Water®, British spring water with

L-carnitine and chromium in flavors such as mojito and bellini; and Skinny Protein®, which pairs 23 g whey protein per serving with green tea, chromium and L-carnitine to help athletes gain muscle without getting too bulky.



In 2012, the company moved more deliberately into the gender-specific arena, launching its Active Woman supplement range. It focuses on boosting lean muscle development and weight management while delivering a strategic mix of vitamins, minerals and nutrients.

More than 40 years ago, U.S.-based Twinlab's Fuel line was on the leading edge of serious bodybuilding. While products such as Mega Creatine Fuel® and Super Gainers Fuel™ 1350 have a loyal following, the company's new REAAL line offers widespread appeal to a broader base. “Women are instantly attracted to it because it

outperforms BCAAs [branched chain amino acids] and whey protein, without the dairy, without the gluten and without all the calories,” Stover said. “As opposed to old-style, filling (or heavy, depending on how you look at it) protein shakes, REAAL delivers light, all-day sippable, vegan formulas that taste incredible. A much smarter and more modern take on what sports nutrition can be.”

While palatability is half the battle, supplement users are only going to become repeat customers if a product also works for them, which is where clinically studied ingredients come in.

“Many females want high-quality ingredients that they can trust,” Lovett affirmed. “Products that are pure and are backed by strong science are always key.”



Marianne McDonagh, vice president of sales at Bioenergy Life Science Inc., also gave a nod to research. “Women are looking for clean, all natural and effective products that utilize ... scientifically proven ingredients that have true science behind them,” she stated.

When it comes to clinical study populations, though, room for improvement exists. “Unfortunately, the industry has paid little attention to including women in research for sports nutrition thus far,” Majeed explained. “Research often lags behind marketing, and this aspect of the industry has not yet caught on to the fact that there are many active women. However, the scenario is changing as females make up more of the customer base in this segment, which makes them an essential part of future research into the science behind product efficacy and safety. Going forward, we expect more females participating in trials on sports nutrition.”

While palatability is half the battle, supplement users are only going to become repeat customers if a product also works for them, which is where clinically studied ingredients come in.



Hammond concurred, “Sports nutrition research historically focused on male athletes, overlooking the nutritional needs of females in regards to supporting proper metabolism.”

Stover confirmed targeted research is key, noting, “Twinlab has always been about the science not the flash. Using the REAAL example, we’ve secured sports exclusivity for the technology and it’s backed by 24 human clinical studies generated over almost two decades. This body of research covers both genders, all ages, athletes and nonathletes.”

Identifying Trends

Trends in women’s sports nutrition products are as varied as women themselves. Parent credits female Millennials for the increased expectation for high-quality, clean label products, noting young consumers are “looking for sports nutrition products that carry organic and/or natural ingredient statements. We’re also seeing an interest around supplements that support different dietary lifestyles like paleo, keto, vegetarian and vegan.”

Fritz has observed similar preferences. “In addition to the trend toward natural, plant-based products, we have seen an expansion in convenient on-the-go formats like single-serving sachets and stick packs that are easy to travel with and utilize as part of a busy, active lifestyle,” she stated.

McDonagh noted the desire for convenient products resonates with women and men alike; however, she also suggested mint and tablet supplements are particularly suited to women on-the-go.

Herman agreed convenience continues to be an important factor. “Powders are still very popular as they are very versatile, can be stored easily, provide great value for the money and can be more easily produced using natural ingredients,” he said. “We have found that for certain products such as well-being and weight management, capsules are popular, too, as are drinks.”

When it comes to format, Imanaka suggested pill fatigue is a real issue. A couple of creative alternatives he mentioned include effervescent tablets for a water-based supplement drink and nutrient-infused confectionery, such as European product Esthechoc (a skin health product with added endurance and recovery properties).

Majeed said women are typically willing to try products in newer forms beyond beverages and bars. “Other delivery formats that are catching the eyes of female shoppers include gummies, squeeze gels, highly concentrated shots, soups and fortified food,” he shared.

Majeed also pointed to the potential of sports nutrition formulations designed to support additional gender-specific areas of interest. “Women deal with a lot of health-related challenges—from reproductive health to menopause and aging to urinary tract infections,” he stated. For this reason, many female consumers are looking for supplements “not only to promote health, but to improve their overall quality of life as well.”

On that front, a host of ingredients offer benefits beyond athletic support, including skin and eye health, digestion, nutrient absorption, cognition and more.

Protein Reimagined

The global protein supplement market was valued at US\$2,662 million in 2016, and is projected to reach \$3,946 million by 2023, growing at a compound annual growth rate (CAGR) of 5.7 percent from 2017 to 2023, according to Allied Market Research.

Fizzique, a “fizzy, unique” sparkling water with 20 g hydrolyzed whey protein isolate and zero carbs, hopes to earn its share of the market. Each 12 oz serving also offers 4,400 mg of branched chain amino acids (BCAAs) and 45 mg caffeine from coffee extract. Launched April 2018, the 80-calorie beverage is the result of more than a decade of research and development (R&D).

While not specifically branded as a sports nutrition product, the slimline tall can, fresh-fruit graphics and sparkling water format may prove more appealing to female athletes than traditional ready-to-drink (RTD) protein beverages.





With so many options available, Parent asserted, “Brands need to understand the different priorities of the active female consumer and develop unique products that address these demands.”

Imanaka suggested market research can help identify what women care about when it comes to fitness. To that end, he cautioned, “Companies would be shortsighted to only target performance athletes. Recreational or ‘lifestyle’ athletes who are trying to improve their overall health have a huge market share and should not be overlooked when marketing imagery, writing style and product development are being considered.”

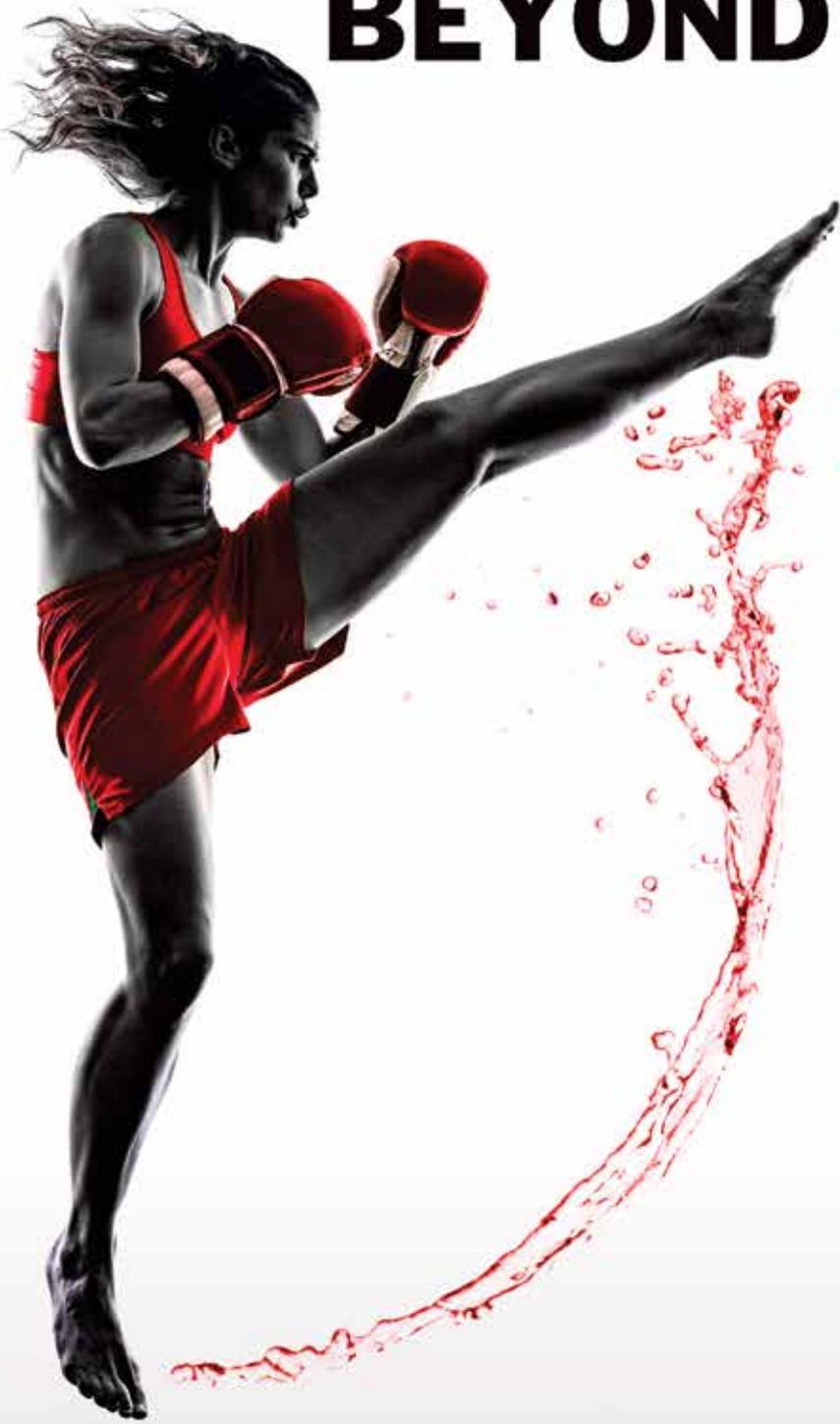
Hammond pointed out the sophistication of female athletes shouldn’t be underestimated. “Whether competing individually or as part of a team, women are so much more than casual participants,” he stated. “The drive, focus, skill and physicality of female athletes is being highlighted on a global scale. Their success and notoriety provide new female-centric marketing and formulation opportunities beyond just fueling.”

Tom Druke, director of VitaCholine® brand development, Balchem Human Nutrition and Pharma, agreed. “Formulating and marketing to address the needs of active women is a relatively recent development in the sports nutrition marketplace, but a welcome one,” he noted. “Many of the benefits that make sense for women in the gym extend to the rest of their lives, such as the ability to focus, maintain energy, and ensure normal communication between the brain and the muscles within the body.” 🏀



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Women's Sports Nutrition Here to Stay and Growing

by Ginger Schlueter

INSIDER's Take

- To successfully woo women in the sports nutrition market, brands and companies must speak a different language to women than men.
- Product packaging needs to grab female consumers' attention by communicating product usage results first, and then play into designs that appeal to females.
- Brands and companies must honestly and genuinely care about and commit to helping female athletes/active consumers solve a problem.

The female athlete and active consumer demographic is growing, giving sports nutrition companies a huge opportunity to craft new formulas dedicated specifically to women. This means creating products formulated just for women and their bodies, with the right packaging and messaging.

Women use sport-related products less than men, according to data from the Natural Marketing Institute's (NMI) 2017 Supplements/OTC/Rx Database, which surveyed 2,000 consumers about their use of energy drinks and shots, energy/nutrition/protein bars, muscle-building products, protein powder and sports drinks, such as Gatorade and Powerade.

"This indicates a huge opportunity to develop and market products to women," said Steve French, managing partner, NMI.

Who are these seemingly elusive female athletes and active consumers? According to market research provider Euromonitor International, Millennial moms are increasingly important targets in sports nutrition. In general, Millennials are getting married and having children; the Millennial mom is the decision maker and searches for brands she can identify with and that provide supportive products to enhance her natural lifestyle.

"Millennial females spend two times more on self-care products than Baby Boomers," said Carolina Ordonez, senior consumer health analyst, Euromonitor. She added this group is educated and looking for sports nutrition products that represent their values, such as transparency, organic, plant-based and few natural ingredients—to name some most central to the Millennial female.

Brands should not limit themselves by focusing just on Millennials, however, as women of all ages and generations are increasingly adding sports nutrition to their daily active lifestyles. Ordonez said more women are following fitness trends and looking for sports nutrition products to support their fitness goals.

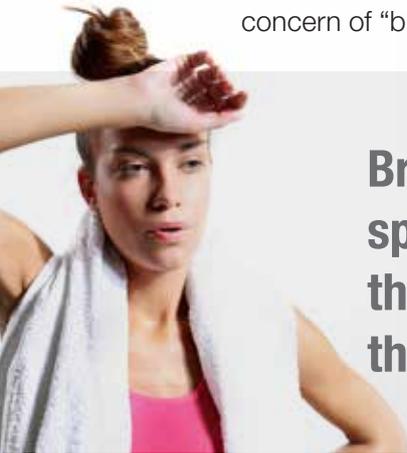


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Female-Focused Brand Messaging

To change the male-dominated perspective of sports nutrition products already on the market, and to create and offer new products that speak to women, brands and companies must embrace what females seek to accomplish within their daily active lifestyles. To successfully woo women in the sports nutrition market, brands and companies today must not only speak a different language to women than men, they must expand their marketing pitch beyond the traditional category of weight management.

In 2017, the top targets for female-focused lines were weight management, body toning and energy, according to last year's SupplySide West session "Sports Nutrition Market Trends, Science & Innovation." This year, 2018, seems to be truly heading the mantra "strong, not skinny," with "strong" spotlighting more than just the typical female concern of "bulking up."



Brands and companies today must not only speak a different language to women than men, they must expand their marketing pitch beyond the traditional category of weight management.

"Females are less focused on protein than males and are looking for more of a toned look rather than a buff or muscular appearance," said Jeff Hilton, co-founder of BrandHive, a public relations firm focused on the natural products industry. Hilton believes active female consumers are also seeking products to enhance energy and endurance, and aid in rapid recovery, similar to last year's trends.

"The fitness industry is moving towards more of an empowerment tone," explained Jennifer Hughey, president and CEO, BPI Sports. "Instead of 'look your best,' the focus is on 'feel your best' because it's about self-love and living a healthy life."

For brands and companies to jump on the idea of female self-love, there are a few important traits they must employ in their messaging. Brands should exhibit trust, identify with female athletes/active consumers and reflect their lifestyles in the off and online world, Ordonez said.

"Be authentic," advised Susan Kleiner, owner, High Performance Nutrition LLC, "and talk to women; ask them what they want." Brands need to realize "women want solutions, not fairy tales," continued Kleiner.



Hughey and Kleiner both echoed women want honesty from the brands they select. If a brand really stands by these traits, they will reach female athletes and active consumers through an online viral network, Kleiner said.

“Today’s female consumer is empowered and engaged in the nutrition conversation, but also quite confused at the dizzying array of options in the marketplace,” Hilton said. This is not ideal since women are often the primary purchaser for nutritional products for their homes.

To help bring clarification to sports nutrition products and ingredients, brands should incorporate educational marketing and positivity into their strategies to effectively reach female athletes/active consumers.

“Many women don’t have any idea what their solutions might be and sometimes, they haven’t even identified a problem,” Kleiner said. “They assume that their life and their body is the way it has to be.”

However, Kleiner warns brands not to tell female consumers they are broken or that a product can “fix” them; instead, educate female consumers on how to improve and get better.



Female-Focused Product Packaging

Product packaging is a brand’s first chance to stand out on store shelves or among thousands of similar products online. To do so, packaging must communicate with accuracy and in a way that resonates with consumers enough for them to choose the product, put it into their shopping cart—physically or online—and finally commit by finalizing the purchase.

To develop packaging that attracts female athletes/active consumers, brands need to first focus on formulation and ingredients and then the design since “just slapping a female label onto a male product isn’t going to convince anyone,” Hilton observed. “A company has to look [at] what they are offering and make sure that the formulation has been developed with females in mind and contains ingredients that specifically appeal to women.”

Packaging needs to grab the attention of female consumers by communicating product usage results and then play into designs that appeal to females.

Case in point: BPI Sports’ packaging is designed with a modern and approachable feel that targets women by avoiding pink or featuring female athletes with desirable physiques. Instead, they play up the flavors of the supplement while keeping to a neutral font. Flavors that women tend to lean toward are chocolate, cookies and cream, and watermelon, according to Ordonez.

“The industry is starting to see a shift towards appealing to women’s intellect,” Hughey said. “Fonts are more sleek and simple, packaging is cleaner and product names often cleverly address the problem the consumer is trying to solve.”

However, as the industry is shifting, it still seems to be focused on the “pink” movement, as indicated by Kleiner. “It’s all ‘shrink it and pink it’ as my business partner Bernie (Bernadette) Wooster says.”

To differentiate, brands should consider repackaging products to appeal directly to female consumers, and for new companies, keep the pink to a minimum on packaging.

Although the terms “female athletes” and “female active consumers” have a similar connotation, perhaps the key to successful packaging is to highlight their differences.

“Female athletes will zero in on performance, but are still very interested in everything that the active consumer is interested in: health, energy, brain health and focus, rest, relationships and a fit-looking body,” Kleiner explained. She also mentioned female active consumers often have performance at the bottom of their priorities, so when targeting them, brands should not highlight “athletic performance” on their packaging but rather use the phrase “life performance.”

There is also a huge focus on product convenience as many female athletes/active consumers are searching for “on-the-go sports nutrition products and portable nutrition options,” Ordonez explained.

The industry is starting to see a shift towards appealing to women’s intellect. Fonts are more sleek and simple, packaging is cleaner and product names often cleverly address the problem the consumer is trying to solve.

—Jennifer Hughey, president and CEO, BPI Sports



Products should be easy to transport—thrown into a gym bag or purse—and simple to consume. Think pop-top lids, easy-to-open packages and consumable straight from the package. Along with this, however, Hilton said female athletes and active consumers are “searching for guidance,” and packaging is the perfect way for brands to highlight product ingredients “tailored to her specific requirements and deficiencies.”

Trends and Marketing

Euromonitor’s Ordonez recently spoke with the CEO of Clean Machine, Geoff Palmer, a plant-based fitness company who mentioned “consumers truly want a brand they can identify with.” Playing off emerging consumer trends can prompt direct relationships with consumers by creating products that satisfy their wants and needs. Also key is an effective marketing strategy to keep communication open with consumers, further enhancing relationships and confirming the brand’s identity as trustworthy.

Women are increasingly following fitness trends and, according to Ordonez, four trends brands should focus on are:

- 1** Plant-based protein is growing in the sports nutrition niche, but there is still a core group of female users who prefer whey protein. Ordonez said this was evident at the Arnold Expo in Ohio this year.
- 2** Female bodybuilders (and probably active female consumers) are looking for healthy desserts. For example, Ordonez interacted with G Butter, a nut butter that transforms from a spread into a brownie, at the same show this year. According to the company's website, few ingredients are used, including whey protein isolate, nuts, stevia and safflower oil (CLA), and the nut butter transforms into a 115-calorie brownie inside the microwave in just 30 seconds. "Its dessert-like approach made it [G Butter] very popular among female bodybuilders and athletes looking for healthy dessert options," Ordonez said.
- 3** Soon, most sports nutrition products are expected to be positioned around keto diets as more athletes are switching to this diet, Ordonez predicted.
- 4** It is also forecast there will be many social media fitness influencers launching their own sports nutrition lines, and "these types of companies could become potential targets for M&As, due to the very loyal and engaged group of fans they have," Ordonez said.

Consider highlighting these trends to open conversations with established and future female athletes and active consumers to "create an uplifting, empowering community," Hughey advised. This conversation strategy not only helps brands and companies to understand exactly what female consumers are searching for from sports nutrition products, but it also helps build a solid relationship based on common ground.

Final Thoughts About Female Consumers

With "strong is the new pretty" trending, according to Ordonez, brands and companies need to showcase their products as specifically positioned for women. To do this, brands and companies must honestly and genuinely care about and commit to helping female athletes/active consumers solve a problem.

"Take women seriously," Kleiner said. "They are not small men with hormone issues; [women] are unique and have their own biological needs." Because of this, it is important to invest dollars into research to produce scientifically sound, effective products.

Female athletes/active consumers—and in general, most females—are concerned about how their bodies look and are perceived by others. Hughey advised, "When choosing models or ambassadors, think about women who appeal to women with relatable, attainable physiques."

When female consumers can identify with other females who are similar or seek similar goals, the more likely trust is achieved and purchases are made.

Overall, Hilton thinks it's best to "build a new brand and image around a women's performance/sports line, along with a mission and vision that caters to female performance needs and how to best achieve women's goals in sports performance." 



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Q&A:

Olympic Gold Medalist Diggins Talks Nutrition, Performance

by Todd Runestad

“Here comes Diggins! Here comes Diggins!”

U.S. Olympic Ski Team member Jessie Diggins won a gold medal in the 2018 Winter Olympics in what may be the greatest race finish of all time, punctuated by NBC announcer Chad Salmela. See the finish [here](#).

In this exclusive Q&A hosted by Todd Runestad, Ingredients & Supplements Editor, Diggins provides a peek into her nutrition routine leading up to the Olympics race, and offers advice on performance and nutrition for women athletes.

INSIDER: What’s the secret to optimizing your body’s performance through nutrition?

JD: When we’re in training camp, we train up to four hours a day or more. My body is burning a lot of energy. So, while I’m training I’m drinking sports drinks all the time. We have water bottles that clip on a belt so we can ski with them. I have Bioenergy Ribose, my partner for a long time, helping me stay on top of my performance and recovery. I also use Nuun as an electrolyte carbohydrate. And then, right after the workout, right away, we eat bars. You can eat any sort of food, but bars are easy because you can put it in your pocket and have it wherever you are. I use Kate’s Real Food bars, and it’s an awesome product because you get a great mix of carbohydrates and protein and some fat, and it absorbs in that window of time where your body is really able to use the nutrients. If you eat within 20 minutes of finishing your workout then you really are able to absorb it and it helps you recover faster and build your muscles back up faster. If you wait 40 minutes, then it’s still beneficial to refuel but you don’t get quite the same benefit as if you eat right away.



Image courtesy of Quinn Rooney / Getty Images

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INSIDER: You said you'd wake up at 5 a.m. at the Olympics and chug a shake before going back to sleep in order to keep weight on. What was in that shake?

JD: The Olympics are high stress both with the competing and with the media, and I was having trouble keeping weight on. I'd get up at 5 a.m. and wake up hungry and chug a Nutrimeal that the ski team brought for me. And I'd chug 500 calories worth. And then I'd brush my teeth and sleep for another five hours. It's mostly protein and carbohydrates. It's like a Muscle Milk, mostly quick-absorbing carbohydrates and protein, probably some fat, too.

INSIDER: How much ribose do you take on competition days versus off days?

JD: The normal dose is 5 g, but it was recommended to me to take up to three times that if I'm training all the time because my body and my metabolism is just constantly going through stuff. And so the program has 5 g before training—I put it in my coffee or oatmeal or in some water—and then after training and then in the afternoon.

INSIDER: Do you see a difference between the women's ski team diets and what the men are doing?

JD: The only thing I see between women and men is iron. And women need iron because you get your period, so sometimes it's difficult to stay on top of iron. One of the guys who's 6 feet tall eats more than me, but we're eating the same type of things.

INSIDER: What guidance would you offer to women looking to maximize their diets to support their athletic pursuits?

JD: I think it's really important to see food as fuel and have a relationship with food where you see it as allowing you to do awesome things. It's not like saying, 'I shouldn't eat because I haven't worked out'—that's not a healthy relationship! It's more like, 'Hey I need to eat this peanut butter sandwich because I want to climb a mountain today,' or '... because I have a test and I need to focus.' For women, I hope that's the way they should view their bodies, as vehicles for going out and doing awesome things. So instead of saying, 'Oh I don't like how big my quads are,' say 'They're really strong and powerful and I should sprint with these legs of mine.' It's important to see the positive in what your body can let you do. It starts with working hard to have a very positive relationship with food and seeing it as something to help you do cool things. 



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Women Athletes and Choline

by Tom Druke

INSIDER's Take

- Choline's role in cell structure and function, fat metabolism and neurotransmission is fundamental to its benefits to athletes.
- NHANES data shows women experience larger shortfalls in choline intake than men.
- Sports nutrition is a leading market category for choline, with 6.1 percent of new sports nutrition product launches in 2017 containing choline.

This is an interesting and important time for choline, with a growing body of compelling research and a significant increase in nutritional policy support. Much of the recent research has focused on the benefits of increased choline availability during prenatal development, infancy and childhood, which may support cognitive function throughout life. However, there are good reasons why women of all ages should strive to maintain adequate levels of choline, and there is substantial information on its benefits to brain health, liver function and cellular integrity that are of particular interest to the female athlete.

Based on data from the National Health and Nutrition Examination Survey (NHANES) 2013-2014, women experience larger shortfalls in choline intake than men. Choline plays a vital role in cell structure and function, fat metabolism and neurotransmission.¹ Given that women depend on their bodies to be healthy and energetic, and their brains to function well, the need for adequate choline intake should be viewed in the context of everyday life, not just in the gym.

The emergence of interest in choline is relatively recent, with the Institute of Medicine (IOM) recognizing it as an essential nutrient in 1998.² Choline awareness is growing rapidly, driven by scientific research at leading institutions such as Cornell University and the University of North Carolina, Chapel Hill, which has demonstrated the nutrient's important and relevant benefits to human health. As the science builds, national medical groups such as the American Medical Association (AMA) and the American Academy of Pediatrics (AAP) have taken note, as well, with both groups issuing policy statements recognizing the important role choline plays in maternal health and childhood development.

Choline provides critical benefits before, during and after exercise. It provides fuel for energy production. Choline consumption is especially vital to physically active people engaging in sustained intensive exercise, which depletes choline levels.^{3,4} Without inadequate choline levels, the body will break down cells to ensure the brain gets enough.

Over time, this can lead to a detrimental buildup of fat in both liver cells⁵ and muscle cells.⁶

Replacing choline post-workout helps to maintain the body's stores and ensures proper communication throughout the brain and to the muscles via the neuromuscular junction.^{7,8} Manufacturers are also recognizing the important role choline can play in



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sports nutrition products. According to product launch data from Innova Market Insights, sports nutrition is a leading market category for choline, with 6.1 percent of new product launches in 2017 in sports nutrition containing choline compared to just 3.8 percent in 2015—an increase of 61 percent in just two years.

Choline has an incomparable ability to transport fats out of the liver for conversion to energy.⁹ Through this process, choline provides fuel for the body and helps B vitamins produce energy. Choline complements carnitine's fat metabolism role, and manages homocysteine to aid in continuing energy production. It is a critical part of both synthesis and optimization of the vasodilator nitric oxide (NO), helping amplify the flow of oxygen and nutrients to the muscles.¹⁰

Supplementation to support brain function is a growing segment in the sports nutrition category, and choline's role here is well-defined. Maintaining adequate choline levels in the brain may help with performance, as well as accurate responses and coordination.¹¹ The body requires free choline to make acetylcholine, the brain's "instant messenger." Acetylcholine, a primary neurotransmitter, helps transmit messages in the brain and at the neuromuscular junction, fundamentally sending messages to the muscles more quickly; research suggests it may augment fine motor coordination to help enhance muscle memory.

Choline complements carnitine's fat metabolism role, and manages homocysteine to aid in continuing energy production.



Accuracy and focus are also important aspects of sports nutrition. A clinical study published in the journal *Nature* in 2015 discovered choline's function in focus and accuracy.¹¹ After taking choline bitartrate supplements, adults who performed "click and aim" tasks on a computer were able to make the adjustments needed to optimize the balance between speed and accuracy required for overall improved performance.

Government agencies are also taking action to elevate the prominence of choline in the nutritional arena. Choline is the latest nutrient to receive a Reference Daily Intake (RDI), and the scientific report of the 2015 Dietary Guidelines for Americans Committee (DGAC) called out choline as one of four "shortfall" nutrients with inadequate intakes across all adult dietary patterns.¹² As part of the recent revisions to nutrition labeling, FDA established 550 mg as the RDI for choline for adults, providing for an associated percent Daily Value (% DV) on both Nutrition Facts and Supplement Facts panels as part of the

revisions to nutrition labeling in 2016. This is a timely development, given that a 2016 study published in the *Journal of the American College of Nutrition* estimated nearly 90 percent of people do not get enough choline in their diets.¹³

Because the body can produce it, but not in sufficient quantities to meet demand, choline is classified as an essential nutrient. As it was long assumed this need was met through diet alone, choline has not been talked about as much as other nutrients. However, there is growing agreement that people must get additional choline through diet or other forms of supplementation. For female athletes in particular, choline may help maintain mind and body energy, a critical driver of peak performance. 



Tom Druke is director of VitaCholine brand development at [Balchem Human Nutrition and Pharma](#). Druke has more than 20 years of experience working in both the corporate and nonprofit sectors. He began his product management career with packaged goods producer Reckitt Benckiser, working on the Airwick and Finish brands. He has also worked in the consumer health care sector with Pfizer Consumer Healthcare and held product management roles on major dietary supplement brands, including Caltrate and Centrum. Prior to joining Balchem, Druke was a co-founder of the Insight Prism, a boutique market research firm specializing in insight discovery.

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Intellectual Property Trends in Sports Nutrition Products for the Female Athlete

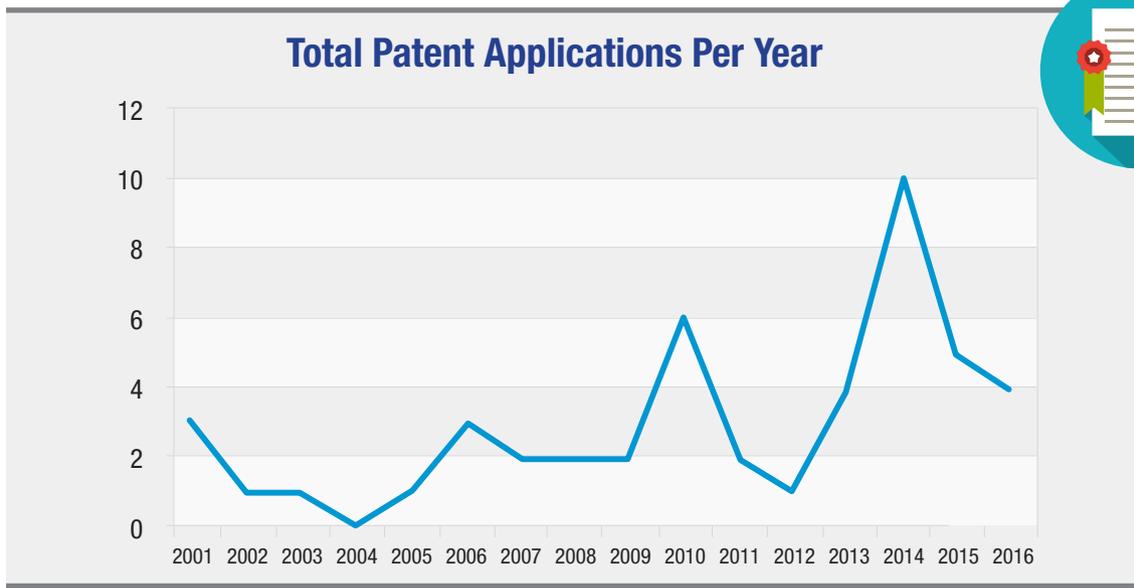
by Andreas Baltatzis and Gideon Eckhouse

INSIDER's Take

- The term “sport” is more popular than “fitness” in dietary supplement trademark filings, and “woman” is the most commonly used term to describe the gender.
- Data show a steady rate of “woman” and “sport” trademark filings over the last five years.
- Lack of patent activity and increasing interest in products tailored to the female athlete may be a great opportunity for innovation.

Patents and trademarks protect innovative nutritional supplement products and their unique names, respectively. Products designed for the female athlete should contain ingredients understood by consumers to provide benefits for an active lifestyle. Similarly, the brand names for these products should convey the products are targeted to the needs of the female athlete.

Approximately half of the world’s population is female, and smart brand owners have realized they should market to this lucrative population. Female athletes are an important segment of this consumer demographic. To date, there have been 582 trademark applications that include the terms “female” and “athlete.” However, only 30 of those applications were filed for nutritional supplements. Other industries, such as apparel, appear to use the terms more frequently.



When examining other possible combinations of words brand owners might use instead of “female” and “athlete,” the term “sport” is exceedingly more popular in nutritional supplement trademark filings as compared to the term “fitness,” as shown in the data below.

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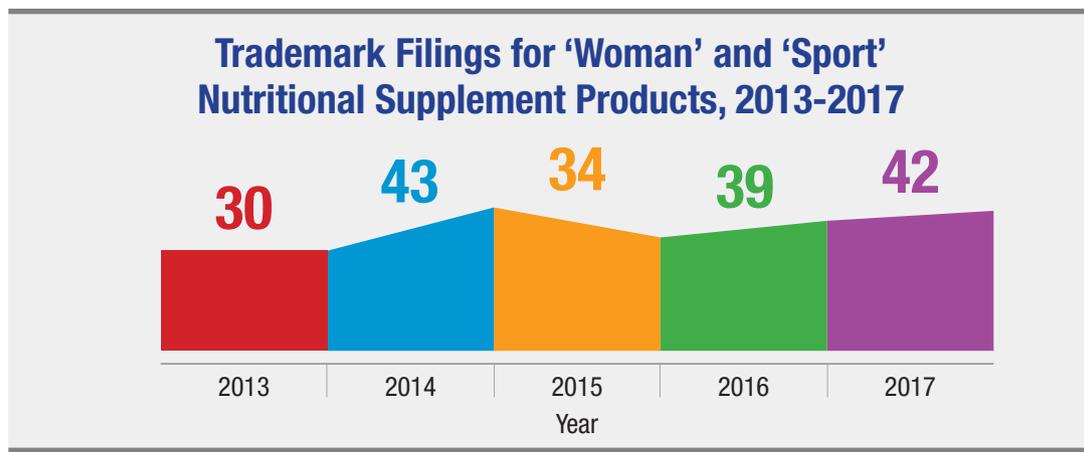
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Popular Branding Combinations of Trademark Filings



These data also show “woman” is the most commonly used term to describe the gender. In fact, the combination of “woman” and “sport” appeared in 619 nutritional supplement trademark filings. The next most-popular combinations are “woman” and “fitness,” with a mere 160 filings, and “sport” and “girl,” with 102.



The data clearly show a steady rate of “woman” and “sport” trademark filings over the last five years, with no more than 43 filings in 2014 and no fewer than 30 filings in 2013. Extrapolating data for 2018 indicates there will be 24 “woman” and “sport” trademark filings, which would be a five-year low. However, the trend could increase in the second half of the year.

Overall, the data show brand owners are targeting the female athlete using words that explicitly show their products are designed for her. As more trademark applications are filed, the available space for new brands shrinks. That is why it is important to consult with trademark counsel before developing a brand in order to create a strategy for finding space in the shrinking world of female athlete brands.

Patent Trends for the Female Athlete

There have been relatively few patent applications filed over the past 20 years directed specifically to sports nutrition for the female athlete. The number of applications filed per year has averaged between zero to 10 applications. For comparison purposes, patent

applications directed to sports energy formulations averaged between 40 to 100 applications between 2001 to 2011, as shown in the article, “Energy Product Patent and Trademark Trends,” in [INSIDER’s Sports Nutrition: Pure Energy, Pure Ingredients Digital Magazine](#). The lack of applications may indicate “white space,” or gaps, in the patent landscape with opportunities for innovation and few patent barriers.

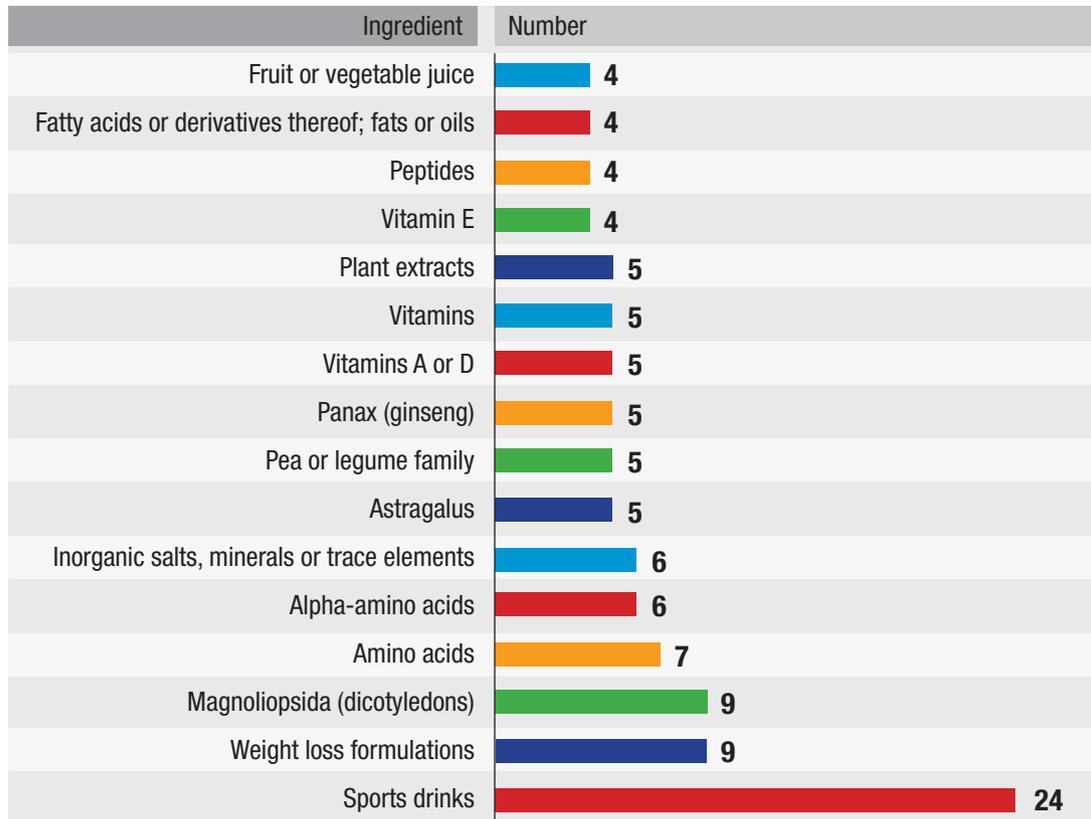
Another explanation for the lack of patent applications directed specifically to the female athlete is the relatively narrow scope of the intended use of the product. Patents in the nutritional supplement space are most commonly directed to formulations or compositions, including novel components or combinations of known components that provide improved physiological activity over previous formulations. Composition patents are often considered more valuable in the nutritional supplement space, as it is easier to determine whether a competitor is infringing the patent by analyzing the components of a competing product. Moreover, the direct infringer of a composition patent is most likely a competitor who manufactures or sells a competing product. The intended use of a product is usually not given patentable weight during the examination process. Therefore, many composition patents that would be particularly useful for the female athlete would not necessarily be limited or directed to that specific use.



The lack of applications may indicate “white space,” or gaps, in the patent landscape with opportunities for innovation and few patent barriers.

Alternatively, “method of use” patents are specifically directed to the end user or the result of administering a composition. However, these types of patents are often disfavored in the nutritional supplement space. Method of use patents may be difficult to enforce due to FDA restrictions on the labeling of dietary supplements, and it may be more challenging to obtain patents directed solely to structure/function (S/F) claims. Moreover, the direct infringer is the consumer, and the competitor selling a competing product would be liable for indirect infringement through induced or contributory infringement. Proving indirect infringement is an additional hurdle in asserting patents rights.

Formulations and Ingredients in Patent Applications



As such, the majority of the patent applications identified were directed by specific types of compositions (e.g., sports drinks) or ingredients. The most common of these ingredients are shown in the chart above. The lack of patent activity and the increasing interest in products tailored to the female athlete may be a great opportunity for innovation.

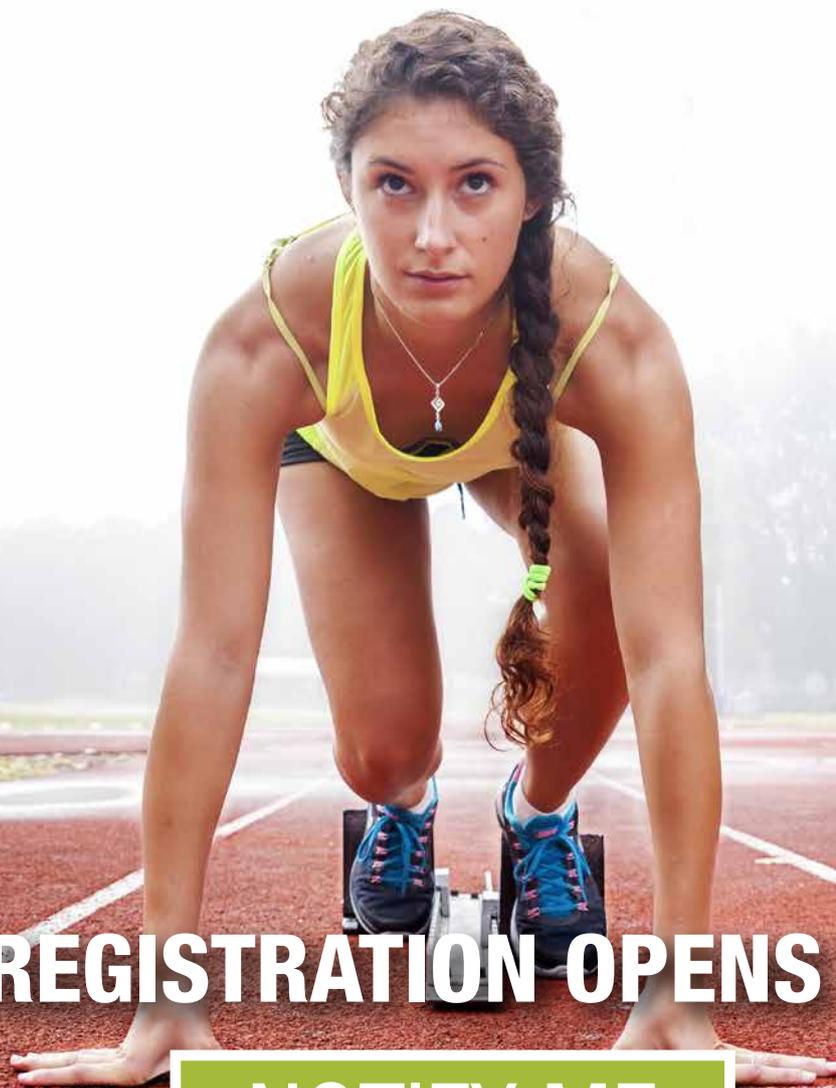


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Gideon Eckhouse is a senior associate at KramerAmado, with more than 10 years of experience in patents and trademarks. He assists innovative nutritional supplement and nutraceutical companies in protecting their IP throughout the world. Eckhouse counsels and implements global trademark strategies for new brand launches. Additionally, he prepares and prosecutes patent portfolios protecting new products coming to market.

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Takeaways: Sports Nutrition for Female Athletes

By Steve Myers

The world is half female. At least half of the sporting world is female; however, most products are formulated for men or based on research conducted mostly on men.

There is tremendous opportunity for companies to capture part of this growing category, but it will require an approach that considers and respects the uniqueness of active females.

Research, Research, Research. It is up to brands and manufacturers to request, fund and support increased research on female athletes. “The inane idea that women are more difficult or more expensive to study is pure laziness, in my opinion,” said Susan Kleiner, Ph.D., R.D., owner of High Performance Nutrition LLC and nutritionist for many elite female sports teams.

For instance, researchers like Bill Campbell, Ph.D., associate professor of exercise science at the University of South Florida, purposefully does not plan trials around menstrual cycles. “The reason I do not consider the menstrual cycle in my studies is that I like to be able to extrapolate my results by saying that the outcomes were irrespective of the female’s menstrual cycle,” he explained.

More companies, such as sports nutrition brand Dymatize and ingredient supplier Bergstrom Nutrition, are funding studies on females. Abbie Smith-Ryan, Ph.D., associate professor of exercise physiology and director of the Applied Physiology Lab at University of North Carolina, Chapel Hill, who also conducts studies on females, reported NIH now requires researchers to justify why they are or are not including women in their proposals.

Strong, Not Skinny. Body composition is important to active females, but it isn’t the whole picture. These athletic consumers care about performance, strength, endurance, body composition, iron status, energy, bone and joint health and cognitive function. Ingredients like choline help address energy, cognitive health and neuromuscular function. Younger women are educated and looking for sports nutrition products that represent their values, such as transparency, organic, plant-based and few, natural ingredients.

Don’t Shrink it and Pink It. Sports nutrition products have historically been formulated for men, including products designed to promote growth of big muscles. Most women want to work on muscle tone and build some muscle, but they don’t want to get huge. Thus, taking a male formula and simply putting it into a smaller pink bottle is not enough.

Speaking women’s language and appealing to their sensibilities and priorities is important for formulating, branding and packaging a successful female sports nutrition product. Basing formulation on the latest science on female physiology is a good start. Consider not just health, but social and environmental concerns. Social media, including key female fitness influencers, could be valuable to communicating with this consumer market. Messaging and packaging should reflect strong, confident women, not just skinny-chasing dieters.



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