

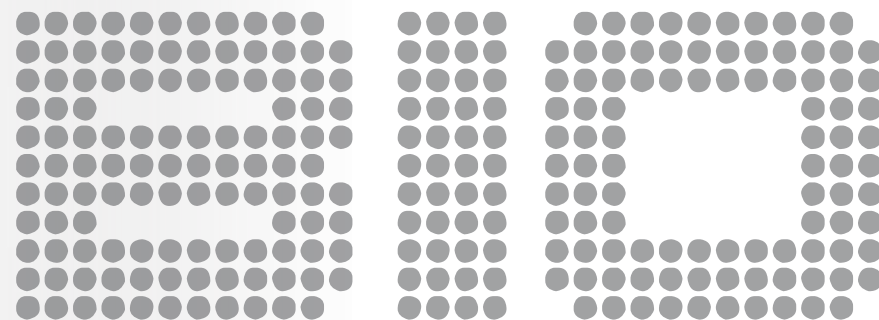


NEW FRONTIERS IN SPORTS SUPPLEMENTS FOR TRIATHLETES.

By Susan Grant

The nutrition plans of even the most amateur triathletes rival the complexity of a NASA space launch. We calculate carbohydrate, fat, sodium and protein content, and monitor our fluid intake as if each morsel and every drop was a variable in Nash's game theory. Food as fuel is a concept we have always embraced, but food as strategy has become the ultimate goal.

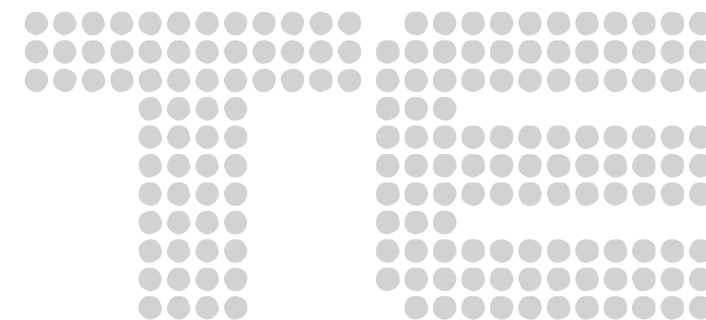
It wasn't always like this. It wasn't so long ago that aid stations offered little more than water and bits of banana. Now athletes are warned far in advance what brands of gel, energy drinks and sodium tablets to expect on the course so that they can prepare accordingly.



"Endurance nutrition," or nutrition for long-distance sports such as triathlon and cycling, is still an emerging sector in the nutrition industry. For years, endurance athletes relied on the always cutting-edge bodybuilding market for their supplement needs because at least the science was there. Other than a syrupy concoction of electrolytes and water developed for University of Florida football players affectionately named Gatorade and the early, Silly Putty-like versions of PowerBar, endurance athletes were largely left to fend for themselves, searching out carbohydrates wherever they could.

Colorado-based dietitian and triathlon coach Bob Seebohar, whose long list of career accomplishments includes working for everyone from the University of Florida's football team and the Boulder Center for Sports Medicine to his current post as the dietitian for the U.S. Olympic Committee, was originally told by a professor in the late '90s that his plans to become a sports nutritionist were little more than a pipe dream. "He told me that sports nutrition as a field didn't really exist and they really weren't sure where the field was even going," Seebohar says. "I told him that not only was I going to do it anyway, I would be a renowned sports nutritionist one day."

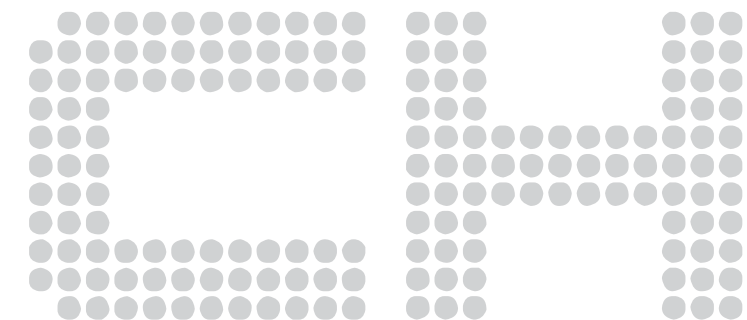
Fast-forward 10 years, and endurance nutrition is experiencing



something of a renaissance, which Seebohar credits largely to the work of a few nutrition companies that chose to focus on science instead of marketing gimmicks to develop products that didn't just look good on paper, but had a solid foundation of research behind them. Not only that, it had to be science specialized to the endurance consumer, not piggy-backing on a bodybuilding trend. Where bodybuilding science brought to light the importance of periodization training and protein intake, the concepts of recovery, protein-to-carbohydrate ratios and combating gastrointestinal distress during prolonged exercise were still largely undiscovered at the turn of the century.

If 16th-century Europe had Leonardo da Vinci and his Mona Lisa, endurance nutrition has Dr. Robert Portman, founder of New Jersey-based PacificHealth Laboratories Inc., and his collaboration with Dr. John Ivy in their 2004 book "Nutrient Timing: The Future of Sports Nutrition." In fact, before getting his PhD in biochemistry from Virginia Tech, Portman majored in Florentine Renaissance history at the University of Pennsylvania. "I always knew I would end up in science, but I figured I should get a more well-rounded education," Portman says with a laugh.

Nutrient timing, which is now the linchpin of nutrition classes around the country, was the result of Portman and Ivy's research into workout recovery. "We looked into recovery because at the time it



was the most ignored area in sports nutrition," says Portman. What they discovered not only rocked the nutrition world, but created a new sector in nutrition marketing: the recovery drink.

"We discovered that there was this whole array of metabolic machinery that was activated for a window of time, roughly 30 to 40 minutes after exercise, which was the optimum time to nourish the body and repair damage," Portman says. Upon further analysis, Ivy, who is a professor of health and kinesiology at the University of Texas, discovered that this metabolic window was the result of an increase in insulin, which, after 30 to 40 minutes, began to drop. "Before nutrient timing, I can remember giving talks to athletes



Bob Seebohar is a triathlete and ultrarunner in addition to his job as a dietician and multisport coach.

While PacificHealth Labs was paving the roads of endurance nutrition in New Jersey, Mike Fogarty and Robert Kunz were busy sticking out like sore thumbs in Salt Lake City as co-workers at the bodybuilding powerhouse Weider Nutrition International. In a company full of power-lifters, Fogarty, an avid cyclist, and Kunz, a triathlete, were greyhounds in an office full of bulldogs. "I weighed 147 pounds when I started at Weider," laughs Fogarty. "I mean, everyone there was nutty about exercise, but we definitely stuck out."

Besides their sinewy physiques, the two also shared a common belief: The endurance world was lacking options when it came to nutrition. At the time, high-profile cyclists like Levi Leipheimer and Dave Zabriskie were riding in Salt Lake City often, and they were contacting Fogarty, who was the director of sports nutrition at Weider, to ask for bodybuilding products. "I realized something was broken if cyclists were calling bodybuilding places to get supplements," Fogarty says. Meanwhile Kunz, who worked in research and development, was experiencing something eerily similar.

"It was weird to me that most of my triathlete friends wanted Weider products, but then they explained to me it was because at the time they were just so much more advanced than anything available in the endurance world," Kunz says.

Fogarty approached Kunz about developing an energy drink for endurance athletes, and thus First Endurance nutrition was born,



Dr. Robert Portman created PacificHealth Labs because he saw a need for scientifically sound nutrition.

"PORTMAN IS BY FAR ONE OF THE GREATEST INFLUENCERS REGARDING WHERE SPORTS NUTRITION HAS BEEN AND WHERE IT IS GOING."

that basically said, 'Here are your sports drinks and here are your sports bars,' and we never really said anything to them about when to drink or when to eat," Seebohar says. "They put timing on the map."

Portman and Ivy then began looking at nutrition during exercise, and whether what you consumed during activity could affect your ability to recover. "The common belief at the time was that protein was the micronutrient for weight training athletes and carbohydrates were for endurance athletes, but we found that if you mixed these two micronutrients together, an athlete would get more effective replenishment overall," says Portman. The result is the 4:1 carbohydrate to protein ratio that has become a signature of PacificHealth Labs products, starting with Endurox R4 (a recovery drink) and later Accelerade (a performance drink). "Portman is by far one of the greatest influencers regarding where sports nutrition has been and where it is going," Seebohar says.



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Robert Kunz, right, and Mike Fogarty of First Endurance make a point to test their products on the race course.

with Kunz heading up research and development as well as triathlon and running sponsorships and Fogarty overseeing marketing and cycling sponsorships. "I'm the 40,000-foot guy and Robert is the day-to-day guy," Fogarty says. "It works really well."

Soon after forming the company, the two realized that an energy drink was no longer a viable option because products like Endurox R4 and EAS' Piranha were already on the market, so the duo set out on yet another breakthrough in the endurance nutrition world: the supplement capsule.

During his time at Weider, Kunz had been accumulating studies on a type of natural adaptogen called *Rhodiola rosea*, which had been found to improve physical performance, as well as ribose, which was found to reduce fatigue. *Rhodiola* is a plant that grows in cold temperatures and for years was used by sherpas in the Himalayas for combating altitude sickness, while ribose is an organic compound that forms the backbone of RNA.

"I looked around and saw that no one else was really using these ingredients, primarily because they are expensive," Kunz says. By the time their formulation and athlete tests were finished, the cost of the product came to \$50, more than double the price of other supplements on the market. But the two forged ahead, confident that they had firm, comprehensive science behind them. "Right out of the gate we knew



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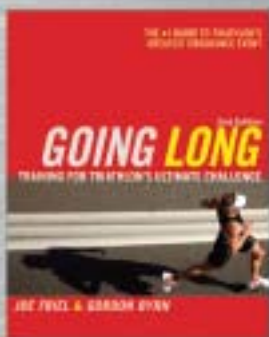
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"Dr. James" founded Mix1 on the premise of sound science and simple ingredients for athletes of all varieties.

we wanted to be the Ferrari of sports nutrition," Fogarty says. Their first product, Optygen capsules, came out in 2005, and they quickly developed a fan following with cyclists such as Leipheimer and Alberto Contador.

They also captured the attention of nutritionists like Seebohar, who now sits on the nutrition advisory board for the company alongside six other noted medical professionals and nutritionists who are all also avid athletes. "They will really look at the research and see if something is really worth putting in their products, which I admire," Seebohar says. "They do a lot of behind-the-scene testing with athletes and most importantly, they really listen to what they have to say."

The athlete testing and constant communication with consumers is what Fogarty and Kunz believe helps them stand out in the ever-growing endurance nutrition world. They both still race regularly, and whether it's an Ironman event or a local road race, they take the time to answer questions and learn as much as they can about the nutrition problems that people are encountering out on the course. Fogarty says they realize that no one is more in-tune with their bodies than professional endurance athletes, and so when they say a product isn't work-

ing or could be improved—they should listen. First Endurance sponsors Team Astana, Team Bissell and Team Columbia, and in July Kunz and Fogarty were in France with the teams testing products during Le Tour. Fogarty says their relationship with Astana started when Leipheimer brought their products to the tour in 2006 and his team

“Dr. James is coming at nutrition with a personal approach to let people understand how important it is to take care of yourself as an athlete,” Seebohar says.

Rouse’s ideas for Mix1 were founded in his examination room, where the majority of his more than 400 patients are triathletes, much like himself. “I had the perfect laboratory,” says Rouse.

But Rouse’s affinity for health and wellness started more than 25 years ago, when he was studying to become a doctor of naturopathic medicine at the National College of Naturopathic Medicine in Portland, Ore. It was around this same time that he was bitten by the triathlon bug, and while he had a great time during his first race, he wasn’t so thrilled with what he saw on the aid station tables. “Back then, there wasn’t really any conversation about quality of calories. They had Chips Ahoy cookies and Coke at every aid station,” says Rouse. “Even as a college kid it really took me aback. From then on I always had a goal of parlaying my love of sports with proper nutrition.”

These days, if you live in or around Denver, chances are you’ve seen “Dr. James.” Rouse is the creator of the “Optimum Wellness” television program, which airs in Denver, Los Angeles, Seattle, Salt Lake City and Phoenix. He has also written several books on health and wellness.

When developing Mix1, Rouse’s goal was to create a drink that helped mitigate nutrition gaps he found in so many of his patients.

“Triathletes have this unique tendency to cram so much into every single day, and food often becomes something of a menace to them,” Rouse says. What this go-getter lifestyle may reap for

“THE DISCOVERY OF HOW TO FIGHT INFLAMMATION WILL HAVE THE SAME EFFECT ON THE NUTRITION INDUSTRY THAT THE DISCOVERY OF ELECTROLYTES DID.”

members borrowed them and were so impressed, they insisted to their directors that First Endurance come on board. “I don’t think you could ask for better validation than that,” says Fogarty.

But the endurance nutrition world doesn’t cater only to elite athletes powering through the Pyrenees. The everyday endurance athlete—the one who fits in a swim workout before breakfast and a run in between afternoon meetings—is also benefitting from the upswing in endurance nutrition science. And the guy heading the charge is Boulder, Colo., -based holistic wellness specialist James Rouse, formulator of Mix1 health drinks.

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them professionally and athletically, it often saps from them internally. "When people train hard, work hard and do everything hard, they often don't sleep enough or eat properly," Rouse says. "What this leads to is inflammation and oxidative stress, and fighting it on a nutritional level is paramount."

Oxidative stress, which occurs when the body cannot readily detoxify itself or repair the damage caused by free radicals, has only recently even begun to be understood, but Seebohar and Rouse agree that fighting this inflammation will become the focus of sports nutrition in the coming years. "The discovery of how to fight inflammation will have the same effect on the nutrition industry that the discovery of electrolytes did," Seebohar says. "The whole story is still in its infancy, but in the next three to five years we will see a ton of new research on it."

Rouse believes that fighting inflammation through nutrition is a matter of simplifying—rather than complicating—one's diet. "It really gets down to quality of calories and usable calories," Rouse says. "Mix1 is founded with sound science but is also convenient because none of us have the time to steam broccoli all day long."

The Mix1 drinks contain whey protein isolate, which unlike other proteins has the highest biological value possible, meaning it is the easiest for the body to digest. Rouse also put in heart-healthy fat from olive oil, chromium to maintain blood sugar and green

tea polyphenols for their extremely high antioxidant value. "I built Mix1 for moms and dads and the elite athletes alike," Rouse says. "What we are realizing in the nutrition world is that performance in everyday life is just as important as performance out on the race course."

Pretty soon Mix1 will also be affecting performance on the battlefield. The unique makeup of Mix1 is stable until opened, even in hot temperatures, and the company was contacted by military Special Forces this year and is in the process of sending over bottles of the drink to Iraq and Afghanistan. "I can't tell you how proud that makes me feel," Rouse says. "It also gives you an idea about how sports nutrition is really getting into a greater realm than every before. Athletes truly come in all forms."

As the world of endurance nutrition continues to grow, it is clear that the successful companies will be those relying on science and not marketing gimmicks. The endurance nutrition sector, even as it grows to include both the everyday and elite athlete, will continue to cater to a very complex, discerning individual. This individual, according to Seebohar, has been influenced by companies like PacificHealth Labs, First Endurance and Mix1, and has emerged stronger, faster and more knowledgeable about nutrition than ever before. "These companies have changed the paradigm that athletes look to when it comes to their health. They educated the athlete," Seebohar says. ⓘ



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