





PUBLISHER'S NOTE

WELCOME



Welcome to Issue 98 of Endurance News!

First of all, I'd like to wish you a belated Happy New Year! I hope this year brings you great health and sees you achieve new heights in your athletic performance. As has been the case since day one, my growing staff and I will be here to help you every step of the way. If you did not completely nail your nutrition and fueling last year, make a point of letting us help you get there in 2016.

Through this publication, you can count on us to continue advocating a healthy diet rich in whole foods, supported by effective supplementation. We will also continue to promote severe moderation of sugar, wheat, dairy, artificial sweeteners, chemicals, additives, and preservatives. Lastly, we advise the

use of Hammer fuels in keeping with this philosophy to support your training, racing, and recovery needs. When you combine all of these with our proven "less is best" fueling protocols, health, vitality, and race PRs follow!

As always, this issue is chock-full of good stuff from all of our contributing athletes, clients, ambassadors, and our staff. Our new in-house nutritionist, Rachel Pelc, makes her editorial debut with a great article on the reality and necessity of prudent supplementation.

Time continues to fly by, and change is a constant here at Hammer as we continue to innovate, refine, and improve. But some things will never change: That includes my commitment to serve your needs with the most innovative and effective, highest-quality, all-natural products, backed by "Golden Rule" customer service and the information you need to succeed in your chosen sport.

Speaking of success, Victor Sheldon brought us our first National Championship of 2016 in January at Cyclocross Nationals in North Carolina. Even though it's technically a 2015 title, I'm counting it as the first of 2016. There will be many more before the year is over, that's for sure.

I'm excited about our first new product / flavor of 2016 — the delicious Chocolate Perpetuem. If you are a regular Perpetuem user, you'll enjoy this new option to give you a break from the other flavors. If you've tried Perpetuem in the past and did not find the existing flavors to your liking, maybe this one will do the trick for you. Either way, it's in stock and shipping as you read this.

Also in the new for 2016 category is another bit of a refresh of this publication. We have a new creative team that has taken it up several notches in terms of design, content, readability, and more. New feature articles, higher-quality photography, and expanded customer-driven content are just some of the improvements you'll enjoy. You can also look forward to more improvements as each issue comes out. This is just another example of our ceaseless efforts to improve everything we do. We're eager to hear from you, so please be sure to shoot us a note. Better still, send us a contribution for our next issue!

So, enjoy the read, then recycle this issue by sharing it with a friend.

Brian Frank Hammer Nutrition Owner

Brin Fre

On the cover: Brian Brothers rides the Headquarters National Recreation trail, Medicine Bow National Forest. "It was a rare windless day, fatbiking beneath the blue Wyoming sky on one of my favorite winter trails." Photo: Brian Brothers

ENDURANCE NEWS

The informed athlete's advantage since 1992

AN EXCLUSIVE PUBLICATION OF:



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MISSION

Endurance News provides informative, inspirational content to help endurance athletes like you achieve peak performance and health. The views expressed favor a healthy diet, hard training that emphasizes quality over quantity, and prudent supplementation to improve health and performance. Back issues are available at:

www.hammernutrition.com

OUR GUIDING PRINCIPLES

Service: From day one, we've strived to treat each client fairly, honestly, & individually. Your trust is our top priority.

Education: We educate and empower athletes with free, easily accessible information on health and performance.

Principles before Profits: Profits never take priority over our values. If it says "Hammer Nutrition," it's good for you.

OUR CORE VALUES

Innovation: Our development of new, cutting-edge products and categories has led the field since 1987.

Product Integrity: Our consumables are researched, tested, and USA-made to the strictest standards. *Read more at www.hammernutrition.com. "Mission"*





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FEATURES

12 / Sugar's Toxic Effects Proven

A new study shows that added dietary sugar wrecks health; but damage can be reversed in just 10 days BY JAKE GRILLEY

16 / Stepping Up

Key changes helped this triathlete reach the top of the podium in 1 year ${\mbox{\footnotesize BY JAIMIE C. MILLER}}$

18 / Secret Sodium

Beware these five hidden sources of sodium in your diet.

BY MARK KIRKPATRICK

20 / Trail Running in Europe

A Hammer athlete reviews the continent's finest trails, toughest races $\ensuremath{\mathtt{BY}}\xspace$ JASON POOLE

22 / Break Fast, aka Breakfast

Stoke your engine with this allimportant morning meal BY BRIAN FRANK

26 / The Power of Supplements

Five reasons you must supplement. BY RACHEL PELC

32 / New Government Sugar Guidelines

USDA and FDA suggest cutting back

January / February / March 2016: Issue 98

34 / Hammering Kilimanjaro

A competitive athlete switches gears to summit the famed peak BY PHIL BORGHUIS

36 / Spotlight: Suzy Degazon

From anorexia to champion triathlete and 'ultrawoman'

BY ENDURANCE NEWS STAFF

38 / The Truth About Getting 'Lean'

Yes, even active athletes must monitor their weight; here's why BY BRIAN FRANK

40 / Changing Lanes

Nutrition changes bring weight loss BY JOHN WRIGHT

46 / Onward and Upward

Skimo and climbing cross-training by andrea koenig

48 / Pre-Exercise Fueling

Know what to do . . . and not do!

50 / Protein: an Ultra Essential

How protein can boost performance BY BRIAN FRANK

60 / Vitamin D Delivers

Rev up your performance and immunity
BY STEVE BORN

REGULARS

- 4 / Publisher's Note
- 6 / Starting Lines
- 8 / #howihammer
- 14 / Atypical Athlete: Scott Turpin, Slacklining
- 24 / Aid Station: News and Tips
- **30 / EMS: Free Expert Consultations**
- 28, 42, 44, 50 / **Premium Insurance Caps**,

New for 2016; Bags; Vegan Protein

- 54 / Laura's Kitchen: Plant Protein Recipes
- 58 / Coffee: Longevity Benefits Confirmed
- 62 / Ask Hammer: Boron, HEED vs. Fizz
- 64 / Ambassador: Howie Nordström
- **66 / Events**
- 68 / Teams: Jason Frost
- 70 / Hammer International
- 74 / From Our Athletes
- 82 / Finish Chute









Scott Murr races to 1st in the Master's Division at the Asheville Duathlon. Photos: Courtesy Scott Murr

Nearly three decades later, Hammer still delivers

I started using Hammer Nutrition (then known as E-Caps) products in 1988 when I did my first iron-distance triathlon (Bud Light Endurance Triathlon in Cape Cod, Massachusetts). I still use a variety of Hammer Nutrition products to help stay healthy and race ready. While I do not race as often as I used to, I can still pull off a solid performance. I won the Master's Division at the Asheville (North Carolina) Duathlon this past September. The event was a 5K road run, ~12-mile off-road bike leg, and a final 5K packed dirt foot.

M. SCOTT MURR, ED.D. / VIP CLIENT HEALTH SCIENCES DEPARTMENT, FURMAN UNIVERSITY

Dynamic supplement duo

Thank you Steve Born and Hammer Nutrition for the great combination of Anti-Fatigue Caps and Endurance Amino. I read Steve's article on these products years ago, and since using them I have had great success during my ultra training, events, and races. I recently finished my toughest challenge yet, attempting the Hoodoo 500 for the second time, but this time in the Voyager, self-supported division. I was the first rider to ever do it in the 60+ category.

I was so impressed with the supplements last year, when I completed it solo with a crew, that I started telling everyone about them. Last year and this year, my mental acuity was amazing even after 46 hours in the saddle. My muscles still felt strong and pumped at the end. I did the entire race this year without a minute of sleep, thanks to Anti-Fatigue Caps.

STEVE MEICHTRY / CLIENT

No more digestive distress

I'm 48 years old and recently ran my first full marathon after inhaling all of Hammer Nutrition's fueling protocols. Several other companies' products made me ill in the past, and I also suffer from IBS, acid reflux, and high blood pressure. I followed your instructions for my second 20-miler, and unlike my experience with other products, I did not vomit, have gas, nor have any other irritations. I also did not run into "walls," as I had been doing, even on a 6-mile run.

Hammer Gel is now a staple for me. I take it before I start my warm-up (and of course during longer runs).

Thank you Hammer for being so personable. Your company is a gem, not only for its product quality and safety, but also for its service. I feel privileged to endorse your products to anyone in need. Thank you!

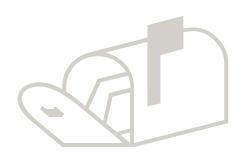
RUTHANN SHIRK / CLIENT

Hammer fueling switch a life-changing experience

I just completed my thirteenth marathon. In the past, I struggled with nutrition and racing, but a friend recently told me about Hammer Nutrition. I ordered and used your products for my most recent race.

It was life changing! For the first time since I have started racing, I fueled to the end with no stomach issues. Your products are great and they really live up to their reputation. It's amazing to know that going forward I will be able to rely on products that are so much better than those I struggled with in the past.

BRAD W. ELLIS / CLIENT



Great events, growing community

Thanks to Hammer Nutrition's generous contributions, we have added another successful Fat Tire Fest event to the books! You took the time to help make our event possible. Without the partnership of Hammer Nutrition, events such as Fat Tire simply do NOT happen. Because of your support, Hammer Nutrition's products were exposed to more than 250 cyclists from Illinois, Indiana, Kansas, Kentucky, and/or Missouri during our three-day festival! Hammer Nutrition truly cares about our activity and we appreciate it. The cycling community continues to grow because of companies like Hammer. We will not forget your generosity!

BIKE SURGEON / HAMMER DEALER

Excellent products, service

Thank you Steve Born so very much for the response and advice. I am also very appreciative of my friend Ryan Molln who referred me to Hammer! Your company is almost too good to be true. I love it more and more! I was recently in a bike tour here in Princeton, Illinois, along with 600 other riders from all over the state. It was encouraging to see other Hammer jerseys among the bikers!

AMY ERICKSON / CLIENT

Hammer products, protocols fuel success

I fueled solely with Hammer Nutrition products at the TBunk Endurance Challenge 100-miler, and I had a great race. I achieved a PR for the distance with 19:46 and finished as the overall winner. I used Perpetuem (small sips throughout the hour), 1 Endurolytes Extreme, and 2 Anti-Fatigue Caps every hour. My energy was consistent throughout the race, with no discernible lows. Even when I missed my wife with the refill at an aid station, it was okay because it was a Hammer-sponsored event, and they had HEED there to save me! Thank you so much for putting out solid products and fueling protocols. I followed your recommendation and went easy on the calories. It worked in training and it worked in the race!

MATTHEW BARTZ / CLIENT

SEND US YOUR LETTERS!

WE LOVE HEARING FROM OUR CLIENTS & ATHLETES:

Drop us a line and share a tip or tell us about your latest adventure. You can also stay in touch with us and other Hammerheads via social media. Send letters and comments to letters@hammernutrition.com



Perpetuem transformed my endurance fueling!

"For years I had been plagued by all the typical endurance sports food ailments — bloat, stomach cramps, sugar crashes, bonking, etc. On 100-mile rides I found myself stopping with leg cramps at mile 65, and needed half an hour to recover enough to keep riding. Now I use a 4-hour bottle of Perpetuem and Endurolytes capsules, plus a baggie with enough Perpetuem powder for another 3-hour bottle.

The transformation has been astonishing. I now ride a century or double metric century every weekend, and I feel almost as strong and fresh at the end as at the start, with no more cramps. My average speeds are higher too. This fuel is amazing!"

DARIUS TETER / CLIENT







ORDER TODAY!

Use Promo Code EN98 and get a FREE Single Serving of Chocolate Perpetuem. Expires 3/4/16.

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PHOTOS, FEATS, AND WORD ON THE STREET



@a_fire_inside

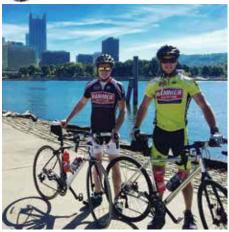


Cruising La Luz

Hammer Nutrition athlete Travis McWhorter gets back into running form after a much needed break. Above, Travis dashes downhill on the famous La Luz Trail near Albuquerque, New Mexico.



@bryanroper3



A change of pace for a good cause

Bryan Roper can usually be found on a motocross bike. But recently Bryan and his friend took a break from the dirt to ride the 3-2-1 Ride around Pittsburgh, fueled by Hammer the whole way! The event raised funds and awareness for melanoma and pancreatic cancer.



@ ad3



Hammer happy

Abrom Douglas beams as he soaks up the Florida rays in late November while training for the Rocketman Duathlon.



@maximussells



Water knife

Stand-up paddle boarder and Hammer athlete Thomas Maximus cuts through the water as he trains for his next race.



@See_stephanie_run



Boston bound

Recently committing to run the 2016 Boston Marathon, Stephanie Ormond will train nonstop until April. Core exercises are a key part of her workouts.





Some like it hot

From the land down under, Jo Coombe rides on the Queen Kaahumanu Highway (above) in preparation for the Ironman World Championships in Kona, Hawaii. Jo proudly crossed the Kona finish line a few weeks later, despite the extremely hot conditions this year!





Peak baggin'

Paul Monaco and his friends hiked four Adirondack High Peaks beginning on a Friday night and ending Sunday afternoon. The 28-mile trek had an elevation gain of over 10,000 feet. At the top of Sawteeth Mountain (above), Paul celebrates climbing all 46 Adirondack High Peaks!





What off-season?

Winter in California provides prime weather for endurance activities. Long-time Hammer athlete Stephen Armes says it best: "Southern California in December... not too bad."





Hill sessions with Hammer

Ultrarunner Dion Finocchiaro practices his hill runs in the sunshine with nearly 3,000 feet of climbing over the course of 12 miles.

AMBER REECE-YOUNG'S ASHEVILLE SPARTAN SUPER RACE RECIPE



Young crawls through mud to compete in the Elite division of the Asheville Spartan Super race. **Photo:** Courtesy of Amber Reece-Young



BEFORE: Hammer Bar

DURING: Hammer Gel; Endurolytes Fizz

AFTER: Recoverite

RESULTS

21st female, Elite

"I thought it would be a great idea to sign up for an obstacle race since it was on my bucket list. Little did I realize, I signed up for a Super, not a Sprint. It had 28 obstacles and over 8.5 miles of running. I surprised myself by completing some obstacles that I didn't think I could." — Amber Reece-Young

#howihammer





One speed, four seasons, all terrains

Some cyclists shy away from winter riding, but when you live in the Midwest and have a passion for cycling, you have to roll with the seasons. Here Chris Karpowicz hammers his way to 1st place singlespeed at the 2015 Road Apple Roubaix in Middlefield, Ohio.



@runfree_trihard



Tri training

Simply put, James Harrington is a triathlon fanatic. This is one of the few photos you'll find of James training indoors. Regardless of where his sweat sessions occur, he always proudly represents his favorite fuels.



emilieskadi

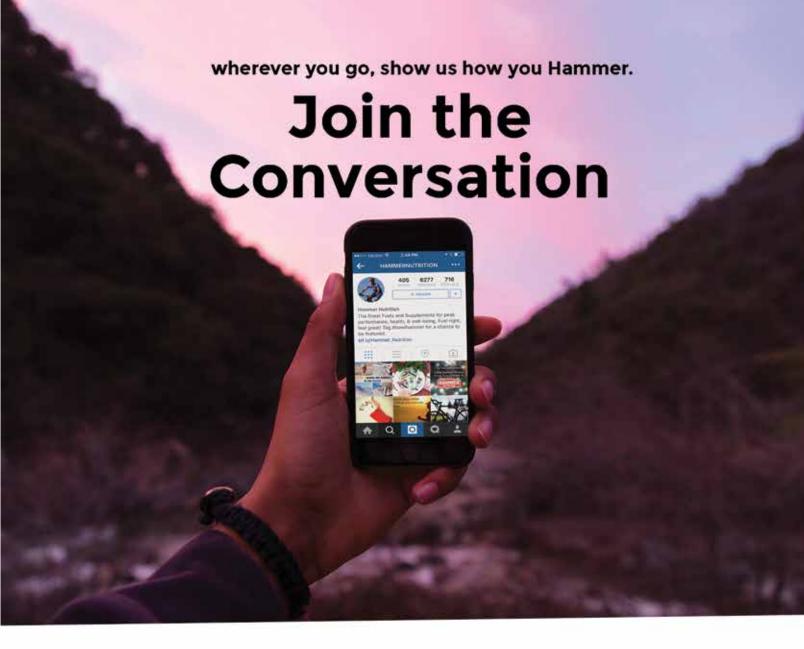


Dashing through the snow

Emilie Ritz is one of those four-season athletes who genuinely enjoys the outdoors, whenever and however she can. Snowshoe running through the mountains is just one of the ways Emilie hammers in winter.

Overheard ...

- "I don't know what I would do without my @hammernutrition Recoverite. This stuff saves lives. #triathlon #training"
- "Beautiful day for 114 miles fueled by @hammernutrition my fuel of choice. #howihammer"
- "S/O to @hammernutrition Montana Huckleberry for fueling me up for the half marathon and taking me to a 1:09:43 time."
- "Still trying out new race day nutrition. My favorite at the moment is @hammernutrition Perpetuem Solids. Easy to carry. Tastes good. Refuel."
- "I ordered some products from @hammernutrition. My first order arrived with a free gift. The gift might be worth more than my order!"
- "@hammernutrition thank you for the support! Hammer Gel played a huge role in my 10th place finish including pros this weekend @ a tough half!"
- "@hammernutrition I'm switching to your gels from Gu after taking them at #MonsterMashMarathon in Dover. They're so much better tasting!"
- "@hammernutrition The Strawberry Recoverite is delicious — love it!"



Inspiration • Community • Knowledge





Study: Sugar consumption's toxic health effects reversed in 10 days

Research links diet rich in added sugar to an array of serious health ailments

BY JAKE GRILLEY

Need concrete evidence that sugar alone is harming your health?

Here it is: A new study funded by the National Institutes of Health confirms that reducing levels of sugar in the diet can drastically improve health in just 10 days.

The study — conducted by researchers at the University of California, San Francisco, and Touro University California and recently published in Obesity — was designed to examine the effect added sugar has on overall health.

Foods containing added sugar were removed from the diets of a group of children and teenagers and replaced with starchy carbohydrates that had about the same number of calories.

Although this study focused on adolescents, sugar's devastating health consequences aren't isolated to that demographic. As we have reported regularly for decades in *Endurance* News and elsewhere, dietary sugar wrecks havoc on health and athletic performance.

The study results speak for themselves. After reducing dietary sugar from 28% to 10% the participants showed marked improvement in measurements of blood pressure, cholesterol, blood sugar, and overall weight . . . after just 10 days.

On average, diastolic blood pressure decreased by 5 points; LDL (bad) cholesterol dropped 10 points, triglyceride levels fell 33 points, and fasting blood sugar and insulin levels also showed marked decreases.

"Until now, there have been a lot of correlation studies linking sugar and metabolic syndrome. This is causation." study lead author Robert Lustig, a pediatric endocrinologist at the Benioff Children's Hospital of UCSF, told Time magazine.

"The positive message is that you can very quickly reverse a bad picture (of health) in a very simple way," commented the study's senior author Jean-Marc Schwarz, a professor at Touro University California, in a news release. "I have never seen results as striking or significant."

HEED: No added simple sugars

Unlike nearly every other sports drink on the market, Hammer Nutrition's HEED contains no added simple sugars, and only 2 grams of naturally occurring

simple sugar per serving. That's less than 1/2 teaspoon per serving. The complex carbohydrate maltodextrin used in HEED provides a more consistent and longer lasting energy supply than do simple sugar-based fuels, without putting your health at risk due to an excess of simple sugars.

Award-winning HEED also contains a full-spectrum of electrolytes, the healthy natural sweeteners stevia and xylitol, and L-carnosine and chromium polynicotinate to help buffer lactic acid. Among sports drinks, HEED is in a class of its own. [HN]

SUGAR: HAZARDOUS TO HEALTH IN ANY FORM

High dietary intake of refined sugar in any form not just sugary beverages - has been linked to a long list of serious health problems including diabetes, heart disease and stroke, many forms of cancer, and Alzheimer's Disease. Read more about the health problems linked to sugar consumption in the book Suicide by Sugar by Nancy Appleton, Ph.D. and G.N. Jacobs, available for sale on the Hammer Nutrition website.

FUEL FOR THOUGHT

WHAT'S IN YOUR ENERGY FUEL?



Clif® Shot Lemon Lime-Ade

Ingredients: Organic Glucose, Organic Dried Cane Syrup, Citric Acid, Sea Salt, Calcium Citrate, Magnesium Citrate, Potassium Citrate, Natural Flavor.

- Contains glucose and cane syrup, two simple sugars
- · Contains citric acid
- 19 grams of added sugar
- · 1 serving contains 250 mg of sodium
- · Contains no amino acids

Clif Shot is a trademark of Clif Bar & Company.

Bed text used for emphasis.



Lemon Lime Heed

Ingredients: Maltodextrin, Xylitol, Natural Flavor, Calcium Chelate, Potassium Chelate, Magnesium Chelate, Salt, L-Carnosine, Stevia, Glycine, Tyrosine, Manganese Chelate, Chromium Polynicotinate.

- Contains maltodextrin, a complex carbohydrate, for rapid digestion even at higher caloric amounts
- · Free of citric acid
- 1 serving contains 45 mg of sodium
- · Contains only 2 grams of naturally occurring sugars
- HEED contains I-carnosine, which has acid buffering and antioxidant properties and chromium polynicotinate for stabilizing blood sugar levels.

IT'S WHAT'S INSIDE THAT COUNTS!

You read labels at the grocery store, and you should do the same when it comes to sports nutrition. What you consume before, during, and after exercise is just as important as what's on the dinner table. Skip the simple sugars, excess sodium, and questionable additives found in other products. With Hammer Nutrition you can rest assured you are putting only the finest endurance fuels and supplements into your body. Fuel Right, Feel Great!®



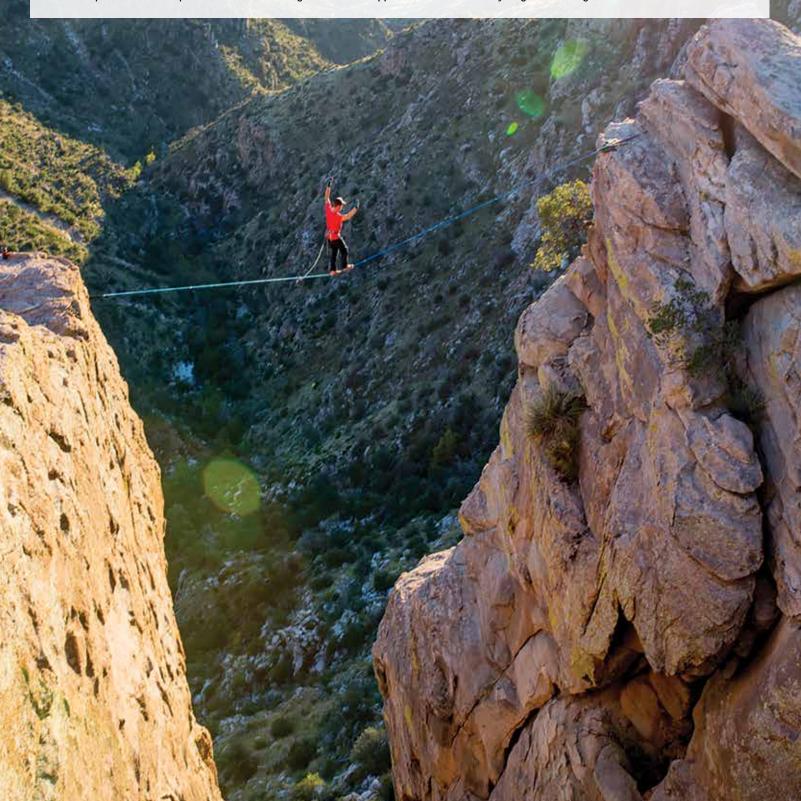
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THE ATYPICAL HAMMER ATHLETE

In each issue of *Endurance News*, we highlight some of the less conventional ways athletes use our products. From firefighting professionals to adventurers doing things the rest of us only dream about, Hammer Nutrition customers use our products far and wide. Hammer's "atypical athletes" prove that the importance of smart fueling and nutrition applies to far more than cycling and running!



The High Life

"Mountain athlete" takes slacklining to new heights with highlining

BY SCOTT TURPIN

I've always had trouble defining what type of athlete I am. Hammer's "atypical athlete" category is a pretty good fit! When forced to provide a definition, I tend to see myself as a mountain athlete. Guided by a love of the outdoors and alpine environments, my athletic focus shifted early on from team sports to my current passions: climbing, highlining, mountain running, and skiing. I enjoy and find value in being an all-around athlete, rather than a specialist.

This year we began shooting a film about what's possible when you stop letting fear of the unknown dictate your experience in life. Set among ruggedly beautiful mountains and told through the vehicle of highlining, it is a thoughtful film for anyone who desires to live fully. Highlining, considered by many to be the pinnacle of slacklining, is the sport of balancing on a piece of webbing fixed high above the ground. Highliners are usually connected to the line by a leash that catches them if they happen to fall.

Featured in this film is a line I had established over the Notch on the south side of Longs Peak in Rocky Mountain National Park, Colorado. In the spring conditions, the trip involved a long approach with heavy packs, mixed snow, ice and rock climbing, then rigging the highline over this epic gap at over 14,000 feet! Once we got the line up, the cameras started rolling and we began walking this 1-inch ribbon of nylon in the windy thin air. I love these adventures and continue to dream up new ones.

'Less is Best' on the highline, too

The ever-changing nature of mountain sports leads to serious fueling challenges. Back to back days of performance necessitate a refined system of fueling and effective recovery. With the diverse demands of any given day, however, the



specific fueling and recovery strategies employed in standard racing must be flexible. More than that, when every ounce is on your back, every food choice is deliberated endlessly. Food is fuel, but fueling just right can be tricky — it's the difference between success and failure!

After years of searching and experimenting, including a decade of intense GI struggles, I found Hammer products and education to be the key component in my fueling strategy. Hammer products and the "less is best" fueling plan allow me to fuel with exactly what I need. These packable, portable, and potent products help me to stay at my best, day after day.

For more information on the film *Moment*, please visit www.momentthefilm.com. For more info on Scott, please visit www.scott-turpin.com. [HN]

Left: Scott Turpin closes the gap, expertly walking a 60-foot line originally established in 2008-09 on Mount Lemmon, near Tucson, Arizona.

Above: Turpin takes time out to recharge body, mind, and spirit.

Photos: Jon Mancuso

HOW A HIGHLINER HAMMERS

TRAINING (less than 4 hours)

Pre-training: Hammer Gel; Race Caps Supreme; Mito Caps

During training: HEED; Perpetuem Solids: Endurolytes

Post training: Recoverite, followed later by Hammer Whey protein!

HIGHLINE EXPEDITIONS

On long approaches: Hammer Bars; Perpetuem Solids; HEED; Hammer Gel; Endurolytes

On the climb: HEED; Hammer Gel; Anti-Fatigue Caps; Endurance Amino; Endurolytes Extreme

Highline: HEED; Hammer Bars End of the day: Recoverite; Hammer Whey

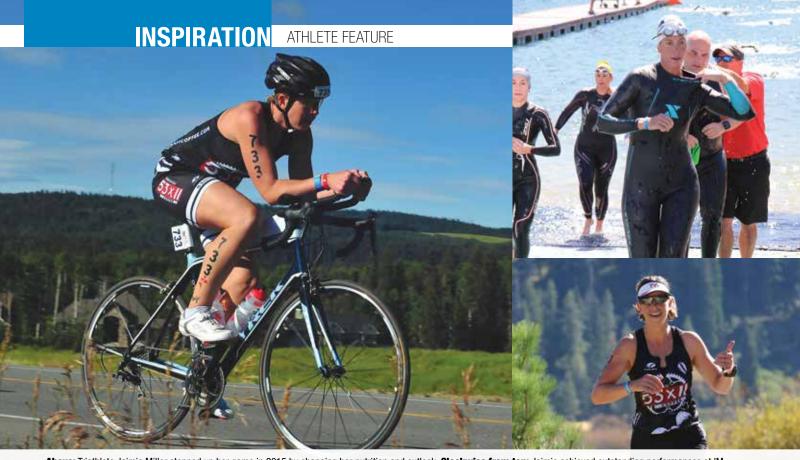
protein; Tissue Rejuvenator

Breakfast: Hammer Bar; Race Caps Supreme; Mito Caps; Endurolytes; mug of tea

Lunch: 100-200 calories/hour with HEED:

Hammer Gel: Hammer Bar

Dinner: Recoverite; a 600-700 calorie freeze dried dinner; Hammer Recovery Bar; mug of cocoa



Above: Triathlete Jaimie Miller stepped up her game in 2015 by changing her nutrition and outlook. Clockwise from top: Jaimie achieved outstanding performances at IM Calgary 70.3, IM Boise 70.3, and IM Lake Tahoe 140.6; her fuels included Hammer Gel before the swim, Sustained Energy/HEED on the bike, and Hammer Gel during the run.

Stepping Up

Transitioning from casual athlete to podium triathlete in one year

BY JAIMIE C. MILLER

Becoming a competitive athlete with a passion for multi-sport endurance racing has been a welcome journey for me. Until 18 months ago, my participation in triathlon was little more than a coping device as I struggled to gain the confidence to leave a destructive, 12-year marriage. I needed a goal to become better than what I had been teaching my kids, so I registered for Ironman Calgary 70.3 in 2014. As I trained, my confidence grew. I finished my college degree, and within one week of starting full-time work I was out on my own.

Crossing the finish line at Calgary 2014 was a life-changing moment. I knew that if I could finish that race, I could go for my dream: to compete in Ironman Kona one day. By spring 2015, I had lost 60 pounds from a starting

weight of 212. In the season's first race, I took 5 minutes off my time from the previous year, finishing just seconds behind 3rd place in my age group. In July, I took my first 1st place AG finish and 3rd overall, qualifying for the National Championships. At Ironman Lake Tahoe, the last of the season's eight races, I placed 13th out of 90 and became a silver level All World Athlete, weighing 70 pounds less than I did a little more than a year earlier.

Triathlon has opened a new world of opportunity for me. Through triathlon, I've learned to expose my mind and body only to what will strengthen me. I chose to change my belief that "I am not good enough to be an athlete" to "I am an athlete, and I can win." The steps I took are ones that you too can take to improve your performance this year.

Step 1: Visualize, then verbalize your goals to yourself and those around you. Create attitude goals as well as nutritional goals. Be courageous enough to say that you are going to win. Sounds crazy, but this is how dreams come true! Express these goals only to those who will support you and help you reach them. Excellence cannot be achieved by one who doubts its possibility.

Step 2: Train your mind as well as your body. If you want to place in a race, claim it! Obtain a training plan, train consistently, but also listen to your body when it needs to rest and recover. Taking your training one day at a time leads to one week at a time, and this leads to race day. Rome wasn't built in a day, but it was completed above expectations!

Step 3: Eat right, hydrate right. You push your body to the max in training, so it's critical to eat nutritious, whole foods and replenish vitamins and minerals. A lean diet rich in vegetables and healthy proteins, with little to no sugar, gluten, or dairy, will provide the foundation necessary for improving your performance and staying healthy.

Complement your diet with high-quality supplements. Hammer Nutrition's Daily Essentials (Premium Insurance Caps, Race Caps Supreme, Mito Caps, and EndurOmega) are designed to help your body function at its best even after months of hard training. Also remember that hydration is a substantial part of optimal performance: Multiply your bodyweight times 0.5 for the number of ounces of water you need to drink daily.

Step 4: Fine-tune your fueling.

Hammer offers an incredible selection of fuels and supplements for use before, during, and after training, including Hammer Gel, Perpetuem, Sustained Energy, HEED, and Hammer Bar. After every workout, recover properly with a combination of complex carbohydrates and protein, within 1 hour after exercise. Recoverite contains the ideal 3:1 ration of carbs to protein to replenish muscle glycogen, while reducing muscle soreness.

Take time to learn about all of these products and how to use them. Utilizing Hammer's "less is best" philosophy results in phenomenal performances! It works! (Read *How to Hammer* and *The 5 Secrets of Success for Endurance Fueling*, available for free on the Hammer website.) Use trial and error until you find your perfect fueling plan. Hammer Nutrition client advisors are happy to help you dial in your product selection, calories, and overall plan.

Step 5: Stay on course on race day. Train using the same fuels and supplements you plan to use on race day. DO NOT CHANGE anything on race day. Just race and have fun!

Making these key changes this year will benefit your mind and body ... and help you achieve success in your 2016 race season. [HN]

Jaimie Miller is a triathlete, Hammer Nutrition Brand Ambassador, and Hammer fueling advisor.

JAIMIE MILLER'S HALF OR FULL IRONMAN RACE RECIPE





3 HOURS PRERACE: half bagel (glutenfree); banana; 8 oz. water with 1 scoop Hammer Vegan Protein; small cup coffee **30 MINUTES BEFORE SWIM:**

2 Endurolytes; 2 Race Caps Supreme; 2 Anti–Fatigue Caps; 2 Endurance Aminos 15 MINUTES BEFORE SWIM:

Peanut Butter-Chocolate Hammer Gel (contains protein)

ON THE BIKE: Sustained Energy/HEED combo, plus 2 Endurolytes, 2 Race Caps Supreme, 2 Anti-Fatigue Caps, and 2 Endurance Aminos (as above); for the full iron distance ONLY. I also have 1 Oatmeal-Apple Hammer Bar (cut into eighths). My total calorie intake of all combined fuels, regardless of distance, is always 173 calories per hour.

DURING THE RUN: 1 Hammer Gel; 2 Endurolytes; 2 Race Caps Supreme; 2 Anti–Fatigue Caps; Endurance Amino; at aid stations: orange wedges (juice only) or banana pieces

AFTER THE RACE: Vanilla Recoverite in water; Tissue Rejuvenator; fruit and protein foods!

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- · Conteracts everyday fatigue
- · Boosts energy production

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5 Surprising Sources of SODIUM



BY MARK KIRKPATRICK

Doctors and other medical experts have been warning us for decades about the dangers of consuming too much salt in our diet. Although sodium is necessary for our bodies to function properly, higher than normal levels of this important element have been linked to a number of dangerous health conditions including:

- Hypertension (or high blood pressure), which can lead to heart failure
- Poor bone development, which can cause osteoporosis
- Fluid in the lungs, which can cause shortness of breath
- Kidney stones, which can cause renal failure
- Dehydration causing excessive thirst and water retention
- Gastric ulcers, cancer, and hormonal imbalances

Studies suggest that people who consume too much salt are twice as likely to develop stomach cancer and are at a much higher risk of contracting stomach ulcers, acid reflux, and other digestive problems including persistent heartburn, bloating, nausea with vomiting, severe stomach pain, and weight loss.

More than expected

Although experts recommend healthy adults consume only 2,300 mg of sodium (or about a teaspoon of salt) per day, research shows that 97% of people take in more than double this amount daily. For those at risk of developing, or who are already experiencing, high blood pressure, the amount of sodium recommended drops to only 1,500 mg daily.

Even if you are not using the saltshaker, you're probably consuming much more sodium than you know. Here are five seemingly healthy foods that are among the worst offenders:

COTTAGE CHEESE:

Many turn to this dairy product as a healthy weight loss solution, but the problem is all of that added salt. (Sodium content: 819 mg per cup)



CANNED BEANS:

2. CANNED BEANS.
Beans are a good source of protein, but most canned varieties come packaged with extra sodium. (Sodium content: 800 mg per cup)



CANNED TOMATOES:

3. CANNED IUMAIUES: This otherwise healthy vegetable is generally canned not only with added salt, but many manufacturers also add high fructose corn syrup or sugar, especially to sauces. (Sodium content: 1,350 mg per cup)



VEGETABLE JUICE:
What could be
healthier than drinking
vegetable juice? Many
canned and bottled
varieties are packed with
extra salt and added sugar
used for flavoring. To cut
back out the salt, juice
your own veggies. (Sodium
content: 481 mg per
serving)

5 BROTH:
Beef, chicken, and vegetable broths are usually low in fat and calories, and they add great flavor to many foods. Unfortunately, they are typically loaded with added sodium. (Sodium content: 773 mg per 1 cup vegetable beef)



What you can do

Fresh produce is always more healthful than processed foods. Whenever possible, use fresh or dry veggies in your cooking, and make your own juices, broth, and sauerkraut. If you do buy canned foods, read labels to check for actual sodium content. Look for no-salt-added or low-sodium alternatives. Use ground black pepper, fresh garlic, chives, and other herbs or spices to enhance flavor without adding sodium.

Endurolytes: full spectrum minerals, not excess sodium

electrolytes during exercise, choose **Endurolytes**. Endurolytes capsules and Fizz contain a full spectrum of minerals, not just sodium and chloride. Endurolytes contains sodium in levels that will not overwhelm your body's natural ability to regulate this vital mineral. [HN]

When replenishing



Mark Kirkpatrick is a journalist and health and fitness enthusiast who lives in Los Angeles, California. He has found that productivity starts with healthy habits and hopes to help others achieve their goals through positive reinforcement.

Low sodium*, full-spectrum MINERAL REPLENISHMENT



"Endurolytes keeps my electrolytes balanced so I can give more kick during long endurance workouts. Highly recommend!"

Online reviewer



*Original Endurolytes is ideal for athletes who consume a healthy, low-sodium diet



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BY JASON POOLE

"Great news! We're moving to Munich, Germany!" "Are you kidding us?" was the hesitant response from our two children. In June 2014, our family packed up and temporarily left the comfort of our mountain home in Evergreen, Colorado, to head out on a grand adventure in Europe. My wife was offered an opportunity to lead the European sales organization for the software company where she works. Not only was it a great career move, but it also offered us the chance to explore foreign lands that we never thought we'd have the chance to visit. I was extremely excited for our children and the unique experiences they would encounter: The places they would see, the cultures they would learn about firsthand, the friends they would make at their international school. In addition, I was thrilled to be able to train and race on a completely different continent.



Left and below: With the Rockies as his home training ground, Jason Poole adapted quickly to Europe's alpine terrain. Photos: Patti Poole Above: Poole runs above Crete. Right: A trail near Kramerspitz, Germany Photos: Tim Conlin



Fueling up for ultra adventure

Having been a Hammer Nutrition user for many years, one of my first concerns was having enough product to last me for 14 months abroad. Because I use Hammer Nutrition on a daily basis, I ended up shipping several hundred pounds of fuels and supplements to our apartment in the Munich suburb of Gräfelfing. When the shipment arrived, I quickly realized that I needed an entire floor-to-ceiling cupboard for my Hammer items!

We were fortunate to live about an hour, along the silk-like German Autobahn, from some stunningly gorgeous paths in the Bavarian Alps. Being a stay-at-home dad allowed me to spend many days trail running in the Wetterstein, Ester, Walchensee, and Tegernsee Mountains.

These mountains look a lot different than the Rocky Mountains along the Front Range of Colorado. They are jagged, dramatic, and awe-inspiring. Yet despite this intimidating landscape,



HOW I HAMMER

For ultra mountain runs, whether training or racing, I rely primarily on these three Hammer favorites:

- Perpetuem Solids I take Strawberry-Vanilla Perpetuem Solids at 20-minute intervals during each and every long training session. They provide consistent, reliable energy and are convenient to carry.
- Hammer Gel Montana Huckleberry Hammer Gel rocks! It always settles fine in my stomach and is easy to digest. I eat two servings several minutes before every race and then repeat every hour throughout it.
- Recoverite I like Strawberry
 Recoverite SO much that I often daydream
 about drinking it when I'm in the middle of
 a training session!

the paths that weave their way through them are carefully signposted and very well maintained. I have fond memories of working my way up the steep, technical slopes and encountering beautiful alpine huts along the way. I would often pause at these huts to eat a Hammer Bar or have a Hammer Gel and take in the priceless view, reminding myself that this was truly God's Country and how blessed I was to have this opportunity.

Favorite European trail runs

While in Europe, I competed in some must-do races. Zugspitz Ultratrail (Germany), Ronda dels Cims (Andorra), Tor des Géants (Italy), and Hochkönigman (Austria) served up overdoses of elevation and exhaustion. culture and camaraderie. The Tor des Géants alone boasts approximately 79,000 feet of elevation gain and loss, stretched over a mind-blowing 330-kilometer nonstop trip through the Italian Alps. Throughout each event, Hammer Nutrition products propelled me efficiently to the finish line with zero stomach distress or bodily cramping. As tempting as it was to eat the local fare at the European aid stations, which generally included large selections of meats and cheeses, I stayed true to my fueling plan of using primarily Hammer Nutrition products.

In addition to the mountain ultramarathon races, I was fortunate to run trails on the Greek island of Crete (my favorite was from ancient Falassarna to Balos Beach in the far northwest of the island) and in the vast, desolate landscape of the Los Ajaches National Monument on the island of Lanzarote in the Canaries. Exploring Europe's mountains on foot provided some of the finest highlights of my 20+year trail running career. No matter where I roamed, Hammer Nutrition products were always my fuel of choice. [HN]

An endurance athlete since 1989, Jason Poole has traversed mountain ranges around the globe via ultrarunning, adventure racing, and mountain bike racing events. He was a member of the U.S. 24-hour orienteering champion team in 2002 and 2003 and continues to enjoy navigating unfamiliar mountain terrain.



Break Fast, aka Breakfast

Stoke your 2016 performance by beginning each day with this vital meal

BY BRIAN FRANK

You are certainly familiar with the old cliché "breakfast is the most important meal of the day." The saying "eat breakfast like a king/queen, lunch like a prince/princess, and dinner like a pauper" might be another one you've heard batted around over the years.

But are they just sayings? Actually, both are in fact 100% true! However, many of us tend to skimp on this meal or skip it altogether. The reasons are myriad, but at the end of the day, breakfast gets neglected. If this rings true for you, I hope you'll keep reading and resolve to become a breakfast champion. The benefits to your overall health, metabolism, energy levels, and ultimately to your performance are well worth the effort and the change.

The importance of break-fast

While it might not be the case with the words we use for our other meals, "breakfast," or break-fast, describes what this meal accomplishes. You are breaking an overnight fast, and now the body needs fuel to fire up the factory for the day. Absent an adequate supply of fuel, the body has no choice but to operate at limited capacity. So, instead of ramping up energy production to meet your needs, the body has to slow metabolism due to the limited calories

on hand to process. This metabolic dysfunction not only lowers our energy levels, but also makes us more prone to store the calories that we take in later in the day instead of burning them up. Consuming the majority of your calories in the afternoon/evening only compounds the problem. I can already hear people mouthing the reasons why they don't eat a proper breakfast, with the most common being 1) not enough time to prepare a meal in the morning; 2) no appetite in the morning; and 3) if I eat a big breakfast, then I feel hungry all day. I'll address each of these separately.

Overcoming the obstacles

No time to eat in the morning — For me, this comes down to planning and breaking away from the meategg-potato-cereal-dairy-fruit breakfast paradigm. In Vietnam, for example, breakfast is a large bowl of Pho soup, a hearty beefstock with meat, vegetables, and rice noodles. Pho is a complete meal that satiates for hours and provides protein, complex carbs, and fat. While I'm not suggesting that you have Pho daily for breakfast, I am suggesting that you could eat leftovers for breakfast or make larger portions at dinner to repurpose in the morning. We often make extra protein and starch for dinner so it can be eaten for breakfast the next morning. Chicken, rice, and vegetables scrambled up with a couple

"Winning at breakfast is the first step toward winning everywhere else."

of eggs works for me. Of course, if you like cereals, dairy, or dairy substitutes and fruit, that's great too. My point is to plan and/or prepare breakfast in advance; that way, when you are hurried in the morning, you can just grab and go.

No appetite — This is a case of the tail wagging the dog. Your appetite is a reflection of your eating patterns, not some internal clock that accurately signals when you need food. What? Think about this: How would you feel if you went 8-10 hours or more during the day without consuming any calories? Your appetite would go haywire. So, not feeling hungry when you wake up after fasting for 8-10 hours clearly means that your appetite is not always functioning accurately. In this case, you know the need and you must meet it, regardless of the presence (or absence) of hunger pangs. I also guarantee that after forcing yourself to eat a proper breakfast for a week or two, you'll wake up in the morning feeling hungry, with your stomach grumbling!

Eating a big breakfast makes me feel hungry all day — Exactly! This only serves to bolster my main point about fueling up the factory and revving up your

metabolism for the whole day after a long fast. It's also another indicator of the inaccurate signals our appetite gives us. The good news is that this sensation does not last. After a couple of weeks, your appetite will recalibrate and you'll feel fine. During that re-programming time, be sure to eat what you know you need to eat, and avoid being a slave to your appetite. I mean eat three square meals each day, light snacks in between, and no snacking between dinner and bedtime.

What to eat? — This last point of resistance is beyond the scope of this article, but your goal should be 20-30 grams of protein, 60-90 grams of carbs, and whatever fat comes along with the first two. We also regularly publish breakfast recipes in this magazine and have many good ones in our cookbook, *In the Kitchen with Hammer Nutrition*, if you need ideas.

Just as "they" were right about eating your vegetables, "they" are also spot on when it comes to breakfast. Winning at breakfast is the first step toward winning everywhere else. If you've been neglecting your first meal of the day recently, or for years, make 2016 the year you correct that and enjoy all of the benefits that come with it. [HN]

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AID STATION

YOUR HANDUP OF NUTRITION TIPS AND TIDBITS

Lack of sleep tied to dementia

If inadequate sleep has you ordering a double shot of espresso every morning simply to wake up, you might want to pay close attention to recent research findings published in the journal Nature Neuroscience.

Repeated lack of deep sleep could be greatly increasing your risk for dementia, according to scientists at U.C. Berkeley's Sleep and Neuroimaging Lab. The researchers discovered that missing out on deep non-REM sleep could leave the brain more vulnerable to the memory loss associated with Alzheimer's disease. It seems that beta-amyloid protein. suspected as a catalyst of Alzheimer's, collects in higher amounts of those who consistently sleep poorly.

"What was unknown was whether or not that's just a side relationship that has nothing to do with the clinical symptoms of dementia, or if sleep disruption is part of why these toxic chemicals in the brain are causing memory loss," commented neuroscientist Bruce Mander, who coled the study.

The study involved 26 men and women ages 65 to 81, not currently suffering from any form of dementia or sleep disorders. PET scans measured the amount of beta-amyloid in the subjects' brains at the start of the study as well as one year later. At the one-year mark, they were given a test to measure their ability to recall word pairs, while receiving an MRI scan of brain activity. The tests showed that those with the most beta-amyloid protein in their brains after one year also experienced the worst sleep over the past year and performed most poorly on the recall test. Some researchers believe that the beta-amyloid protein may trigger other events that lead to neuro-degeneration.



HAMMER QUICK TIP

Make sure you get the quality sleep you need with Hammer Nutrition's natural sleep supplement, **REM** Caps. REM Caps includes melatonin, the same natural hormone your body uses to regulate biological sleep rhythms. You can count on REM Caps to improve sleep duration and quality, enhance growth hormone release, and support immune system function.

Vitamin D may benefit exercise recovery

Chalk up another huge potential benefit for vitamin D. A scientific review published in a 2015 issue of the Journal of the International Society of Sports Nutrition cited several studies suggesting that vitamin D could play an important role in post-exercise recovery.

One study with animals showed a marked increase in skeletal muscle repair and enhanced recovery time in response to a high dose of vitamin D. According to one of the researchers, "the finding that vitamin D supplementation enhances the recovery in peak isometric force shortly after intense exercise was recently supported in much lower doses in modestly-active humans."

In that placebo-controlled study,



healthy, moderately active adults who received 4,000 IU of vitamin D per day for 35 days had reduced inflammatory biomarkers immediately after completing 10 sets of 10 repetitions of peak isometric force jumps. In addition, the vitamin D group's peak power output immediately after exercise decreased less than that of the control group (a 6% decrease vs. 32% decrease).

HAMMER QUICK TIP

Recoverite, Hammer Nutrition's premium postrecovery drink, is formulated with the ideal 3:1 ratio of complex carbohydrates to the highest quality protein (grass-fed, hormone-free whey protein isolate) for superior alvoogen synthesis and muscle rebuilding. Recoverite also the potent recovery boosting nutrient, I-glutamine, as well as chromium polynicotinate (for maximizing muscle glycogen synthesis) and I-carnosine, a powerful antioxidant and potential anti-aging nutrient. Read more about the exercise benefits of and sources for vitamin D on p. 60.

ONE FOR THE ROAD

The same voice that says 'give up' can also be trained to say 'keep going.'"

- Jessica Garcia, Hammer sponsored athlete

FUEL FOR THOUGHT

WHAT'S IN YOUR RECOVERY DRINK?



Endurox® R4® (Citrus Orange)

Ingredients: Dextrose, Maltodextrin, Whey Protein Concentrate, Soy Protein Isolate, Fructose, Sucrose, Citric Acid, Natural Flavors, Soy Lecithin, Xanthan Gum, L-Glutamine, Magnesium Carbonate, Vitamin E Acetate, Salt, Absorbic Acid, (Vitamin C), Potassium Phosphate, Annatto (for Color)

- Contains 40 grams of sugar (77% of its total carbohydrate makeup) in the form of dextrose, fructose, and sucrose
- · Contains citric acid
- Contains whey protein concentrate (WPC), which is usually comprised of a maximum of 70% - 80% protein, leaving a fair percentage in the form of lactose and fat
- Contains soy protein isolate, which is not considered the best protein source for post-exercise recovery
- · Contains soy lecithin as an emulsifier
- Contains 1.5 grams of fat and 20 mg of cholesterol

Endurox and R4 are trademarks of Pacific Health Labs.



Recoverite (Orange-Vanilla)

Ingredients: Maltodextrin, Whey Protein Isolate (Whey Protein, Sunflower Lecithin), L-Glutamine, Natural Flavors, Calcium Chelate, Xylitol, Magnesium Chelate, Stevia, Potassium Chelate, L-Carnosine, Glycine, Salt, L-Tyrosine, Manganese Chelate, Chromium Polynicotinate.

- Contains only 3 grams of naturally occurring sugars (9% of its total carbohydrate makeup)
- · Does not contain citric acid
- Contains only whey protein isolate (WPI), a purer form of whey with up to 97% protein and less lactose and fat than WPC. The whey protein isolate in Recoverite comes from grass-fed cows and is hormone free and antibiotic
- Contains sunflower lecithin as an emulsifier, making it acceptable for consumption by those who are soy intolerant

IT'S WHAT'S INSIDE THAT COUNTS!

You read labels at the grocery store, and you should do the same when it comes to sports nutrition. What you consume before, during, and after exercise is just as important as what's on the dinner table. Skip the simple sugars, excess sodium, and questionable additives found in other products. With Hammer Nutrition you can rest assured you are putting only the finest endurance fuels and supplements into your body. Fuel Right, Feel Great!®



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BY RACHEL PELC

Diet alone is not enough to get all of the vitamins and nutrients your body needs. As we have previously reported here in Endurance News, the notion of eating a "balanced diet" for a strong, healthy body is a myth. Yes, the foods you consume will provide some nutrients, calories, satiation, pleasure, etc. But that's not enough in our modern world.

Many factors — including depleted agricultural soils, increased consumption of processed foods, and busy schedules — have contributed to our inability to ingest all of the nutrients we need. While eating a diet that includes plenty of vegetables, fruits, lean proteins, and low GI (glycemic index) starches and grains is still extremely important to fuel your body on a daily basis, here are five excellent reasons to supplement your healthy diet:





• GET THE "ESSENTIALS."

Supplements like Premium Insurance Caps can provide the essential nutrients that your body needs to function properly and that it cannot make on its own (or can't make rapidly on its own). Essential vitamins include A. D. E. and K as well as the B-complex vitamins and vitamin C. There are also 16 essential minerals that your body needs to help regulate various processes for it to function. For endurance athletes, replenishing these nutrients is imperative, especially during peak training periods when you want your body to perform at its best.



2 FEEL BETTER.

The ingredients in multivitamin supplements such as Hammer's Daily Essentials (Premium Insurance Caps, Mito Caps, Race Caps Supreme, and EndurOmega) have been proven to boost immunity. So when the nasty cold/flu bug hits, your body will be prepared. Taking supplements can also help alleviate or prevent gastrointestinal problems. Ever get the winter blues? Symptoms of seasonal affect disorder (SAD) include fatigue, depression, and weight gain — potentially linked to the craving of starchy foods. According to Dr. Jonathan Prousky, chief naturopathic medical officer at the Canadian College of Naturopathic Medicine, consuming omega-3 fatty acids and itamin D can help reduce depression and other symptoms of SAD during the winter.



1 LOOK BETTER.

Need we say more? Vitamin A has been proven to aid in the replenishment of skin cells, hair growth, and maintenance of healthy teeth and gums. Beta-carotene and vitamins C, E, and A protect against free radicals that can harm skin cells and cause signs of aging, as well as boost collagen production. The minerals calcium and iron are crucial for healthy teeth and gums. Folic acid and the B-complex vitamins also assist with hair health and growth.



5 ENJOY LIFE, LONGER.

Vitamins and minerals help eliminate free radical carcinogens and support the overall health of the cardiovascular, digestive, circulatory, and other systems. According to a Rush University Medical Center study, the brain-protective nutrients vitamin K, lutein, folate, and betacarotene appear to be linked to slower cognitive decline.

Adding high-quality supplements to your healthy diet is a "winning" combination. [HN]



PERFORM BETTER.

The nutrients in EndurOmega, Mito Caps, and Race Caps Supreme have been linked to improved muscle mass and function as well as higher energy levels during workouts, increased endurance, and decreased soreness. The Coenzyme Q10 and Idebenone in Race Caps are important fuels that aid energy production and speed recovery. Mito Caps benefit mitochondria function, which means improved athletic performance, according to Dr. Bruce Ames, Ph.D.

Meet our new staff nutritionist!



We're very pleased to introduce our new staff nutritionist, Rachel Pelc. A member of the American Dietetic Association, Rachel is a

trained and licensed nutritionist with a degree in Community Health from Carroll College. Before joining Hammer Nutrition, Rachel worked as a personal trainer, health coach, and nutrition counselor.

Rachel is available to help you create a nutritional plan that will result in better health and athletic performance; help you solve nutrition issues through diet and supplementation; and/or suggest simple changes for weight control. Call 800.336.1977 to request a free, personal consultation with Rachel.

FOUNDATION FOR A WINNING SEASON



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- Premium Insurance Caps
- Race Caps Supreme
- Mito Caps
- Endur0mega

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Product Spotlight: **Premium Insurance** Caps



BY STEVE BORN

Few athletes would choose to have average health, knowing that supreme health is within easy reach. Naturally, you want to get the absolute most from your body during workouts and races, achieve greater success, and have fun in the process. That's where an intelligent, high-quality supplement program comes in. Supplements play a vital role in helping you achieve optimal athletic performance and overall health. (See "5 Reasons Athletes Must Supplement" on page 26.) Premium Insurance Caps is the foundation of that supplement program, and it should be part of your daily routine. Here's why.

1. Optimum, not minimum, amounts

- Unlike many vitamin/mineral supplements that contain inadequate Reference Daily Intake (RDI) amounts of nutrients, Premium Insurance Caps contains Optimum Daily Intake (ODI) amounts of the highest quality vitamins and minerals. Dr. Shari Lieberman hits the nail on the head about why the use of ODI amounts in supplementation is so important: "RDIs reflect amounts adequate to prevent nutrient-deficiency diseases, and are not tailored for individual needs. In order to attain a state of optimum health and disease prevention, we must take into our bodies optimum — not minimum — amounts of vitamins and minerals."

Note that Premium Insurance Caps contains superb levels of the B complex vitamins, amounts that replicate many stress support formulas, thus making those products unnecessary in your supplement regimen.

2. Capsules, not tablets - The

nutrients in Premium Insurance Caps are contained within a two-piece allvegetable capsule. That means they will dissolve more rapidly and completely than tablets would, so your body actually will receive the nutrients you're consuming. Because tablets can take longer to break down, they often irritate the intestinal lining, causing stomach discomfort. Additionally, tablets can pass through the entire digestive system partially dissolved, or not dissolved at all. Either way, your body does not get the full volume of nutrients you ingest, which means you're not getting what you paid for.

- 3. Highly-assimilated, amino acidchelated minerals - For many minerals, there are several forms available, all with differing absorption rates. Some companies use inexpensive forms of minerals in their products; e.g., magnesium in the oxide form or calcium in the carbonate form. Unfortunately, these less expensive forms are not as well absorbed as the amino acid chelates used in Premium Insurance Caps.
- 4. Multiple digestive enzymes for maximum nutrient absorption - It's not what you consume, it's what you absorb.

To aid the absorption of nutrients, Premium Insurance Caps includes digestive enzymes such as protease, amylase, glucoamylase, lipase, cellulase. phytase, maltase, and sucrase.

5. Only beneficial nutrients, no "salt and pepper" - Some companies add auxiliary nutrients at levels that have no real value (what we call "salt and pepper" amounts). For example, some multivitamin/mineral supplements contain only 5 mg of Coenzyme Q10 or lipoic acid. Both are highly beneficial nutrients, but at that level you won't experience their benefits. When you buy such a product, you're paying for a product that has little more than an impressive label. All of the nutrients included in Premium Insurance Caps are at levels that will provide real benefits.

Bottom line: Athletes need more

Keep in mind the words of Bill Misner, Ph.D.: "Endurance athletes require more minerals, antioxidant vitamins, and water-and fat-soluble vitamins because exercise intensity or duration takes its toll, often depleting them faster than food can alone re-supply them."

High-potency Premium Insurance Caps provides your body with the foundation of vitamins and minerals it needs to function properly, maximize training, and achieve supreme health. Reach for it daily. [HN]

THE 'HOLE' TRUTH



EVEN THE MOST BALANCED DIET HAS HOLES

For optimal health and 'smooth' athletic performance, daily supplementation with a high quality vitamin & mineral supplement is critical. Fill in the holes and get what your diet is missing.

PREMIUM INSURANCE CAPS

- Supports optimum performance
- · Increases energy all day
- Benefits digestion

120 Capsules \$19.95 210 Capsules \$34.95

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From left: Hammer Nutrition EMS experts Steve Born, Casey Becker, Patrick Jones, and Brian Frank are available for EMS customer consultations, including a free initial 30-minute consultation. Photo: Luke Oursland

EMS experts at your service

Get the most from your Hammer Nutrition-purchased EMS unit with a free 30-minute consultation

BY BRIAN FRANK

I have been advocating the use of and selling EMS machines since 2004. Many of you have bought a Compex or Globus EMS unit from us, and for that, I thank you. However, I am also aware that getting comfortable using these devices, learning the ins and outs of the various different programs, pad placements, and current levels, and incorporating them into your training regimen can be challenging for a lot of new buyers. So, it's not surprising that relatively few athletes venture beyond the Active Recovery routine.

Using the EMS strength programs to reduce neural inhibition and correct muscle imbalances is one of the greatest benefits of this technology, but it is also the least used. That is why we include a free 30-minute telephone consultation with one of our highly trained EMS experts with each unit we sell. Here's the part I don't understand: Only about 1 in 10 who purchase a unit from us ever calls up to take advantage of their free consultation!

Pioneers in EMS for athletes

Besides personally using EMS for more than a decade and experiencing amazing results, Steve and I had the opportunity to do a week of intensive training in Italy with Gianpaolo Boschetti, known as the "father" of EMS technology and usage. During that week, we learned all about how and why EMS works, but we also discovered that we were the pioneers in the use of EMS specifically for endurance athletes. Gianpaolo readily admitted that he had very limited experience working with endurance and ultra endurance athletes, having always focused explosive strength athletes like downhill skiers, volleyball players and the like. Our time together in Italy resulted in two new programs being written and incorporated into the top-end Globus model. Since then, I've taken all of my experience and training and shared it with my EMS staff so that they can help vou!

So, if you have purchased a Compex or Globus EMS unit from us and are only using the Active Recovery program or not using the machine at all, and you have not yet had your free 30-minute phone consultation, I strongly encourage you to do so today, or tomorrow, or next week. I want to make sure that you get full value and benefit out of these powerful little devices. We can schedule it for a specific time and date, or you can just call during normal business hours and one of the four of us will surely be available to go over your device, programs, and more.



Order your EMS unit from Hammer Nutrition and receive a no-cost initial 30-minute consultation (\$49.95 value) along with these other FREE bonuses:

- Electrode pads* (\$29.95 value)
- 90-day money back guarantee
- 3-day Fed-Ex Express Shipping
- 3-year warranty
- Ongoing tech support

*Compex Edge model excluded

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The best in EMS technology is now wireless



PRICE - \$1,149.00

Order an EMS unit from Hammer and enjoy FREE Shipping & a FREE expert consultation. See website for details and additional models.

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Electronic Muscle
Stimulation technology is
one of the most powerful
tools you can use as
an endurance athlete.
Benefits include:

- Advanced warm-up & recovery
- · Increased endurance
- · Faster training results



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Serving Size 2/3 Servings Per Co		out 8	
Amount Per Servi	19		
Calories 230	-	lories fron	Fat 72
		% Dail	y Value
Total Fat 8g			129
Saturated Fat 1g			5%
Trans Fat 0g			
Cholesterol Omg			09
Sodium 160mg			79
Total Carboh	•	7m	123
Dietary Fiber 4g			169
Sugars 1g	19		
Protein 3g			
Protein ag			
Vitamin A			109
Vitamin C			89
Calcium			20%
Iron			453
*Percent Daily Value Your daily value may your calorie needs.	be higher or	lawer depen	ding on
Total Fut	Calories: Less than	2.000 65g	2,500 80g
Sat Fat	Less than	200	259
Cholesterol	Less than	300mg	300mg
Sodium Total Carbohydrate	Less than	2,400mg	2,400m
LOSSI CARDONYORASO		300g 25g	375g

Proposed



Dietary Guidelines: Consume less sugar

New government suggestions a step in the right direction

BY BRIAN FRANK

The U.S. government, through the Department of Health and Human Services and USDA, has released their 2015-2020 Dietary Guidelines for Americans. Certain of these new guidelines address sugar intake and - together with the recently proposed changes to the Nutrition Facts panels — they are most definitely a step in the right direction in getting Americans to reduce their chronic, excessive sugar consumption.

The new guidelines urge one to limit daily "added sugars" to 10% of total caloric intake. This would go hand in hand with the FDA's proposed Nutrition Facts panel revisions that would require "added sugars" to be listed separately from naturally occurring sugar content, as the example (above right) suggests. (The changes to the Nutrition Facts were proposed in April 2014 and reintroduced this past summer, but they remain a proposal as of this date.) This certainly would be the most profound of the suggested nutrition changes, much of which is not really new, as they still

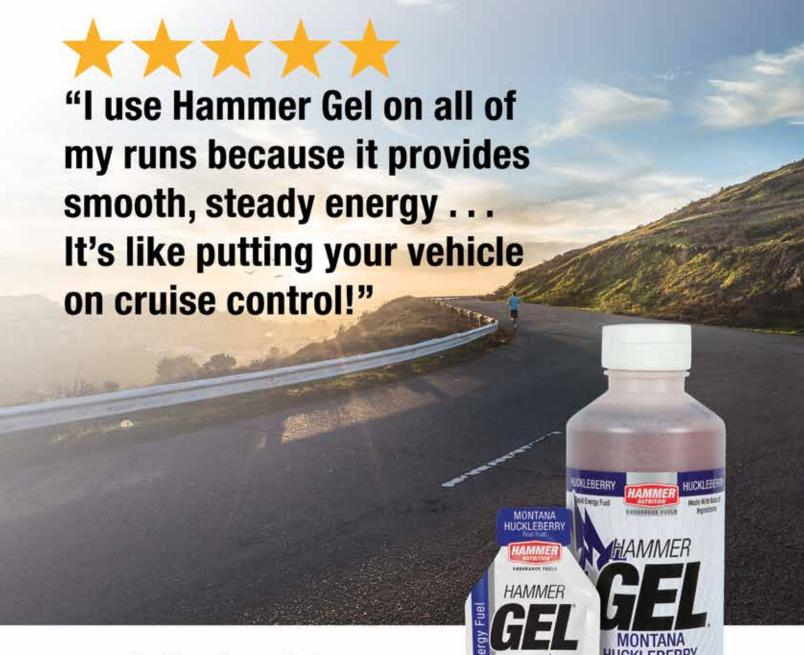
contain the same old recommendation that overemphasizes whole grains (aka wheat) and dairy, but I digress.

As some have pointed out, the government's newest dietary guidelines that Americans reduce sugar intake is not new. But putting the 10% number to it is an improvement, albeit a slight one. According to their research, the average American consumes more than 13% of their calories from added sugar, so a reduction to 10% would be great.

Doing some quick math, limiting added sugar intake to 10% of total calories would equate to a total intake of about 40 pounds of sugar per year for those who consume 2,000 calories daily, and 60 pounds of sugar per year for those who consume 3,000 calories daily. Since the USDA previously reported that the average American consumes 150 to 170 pounds of refined sugar per year, reducing that intake by two-thirds would be a huge improvement. So credit where due, kudos to the USDA (Dietary Guidelines) and

FDA (proposed Nutrition Facts labeling) for suggesting such radical updates.

I really hope that the proposed update to the Nutrition Facts panel will be adopted, but I imagine that the food lobby will have something to say about it. By separating out the naturally occurring sugars from the added sugars, consumers can make better buying decisions. In our case, it would be a good way for clients to easily determine the difference between our products and the sugar-based ones. Looking at the proposed panel, you might see 27 grams of carbs, 2 grams of sugar, and 0 grams of added sugar for a Hammer fuel, while a sugar-based competitor's product would have to list 25 grams of carbs, 25 grams of sugar, and 25 grams of added sugar! I'm pretty sure they wouldn't like that. When we consider that high-sugar diets cause insulin resistance, hypoglycemia, type 2 diabetes, and about 150 other ailments, drastically reducing your daily sugar intake should be more than a suggestion or guideline. It should be a requirement. [HN]



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A competitive cyclist switches gears to summit the famed peak

BY PHIL BORGHUIS

This past November, I joined six trekkers in their 30s and 40s as well as two guides on a climb of Mount Kilimanjaro in Tanzania. We took the longest route on the mountain, Lemosho, because the eight-day trek has a successful acclimatization record and is the most scenic, transitioning from jungle through forest to alpine desert and ice cap.

Dialing in for the climb

With the help of Steve Born and Brian Frank, I modified my longstanding bike-racing program of Hammer Gel and Perpetuem to include Endurolytes, Race Caps Supreme, and Xobaline. Perpetuem is a great fuel—it's almost a "meal in a bottle"—and Hammer Gel is an ideal and compact way to get high-quality calories fast. Plus I knew from years of using these products that my body runs very well on them. Race Caps was added primarily for its idebenone (think "spark plug" for energy production). Xobaline, with its vitamin B12/folic acid combination, would be especially beneficial during high-altitude exercise. I used Endurolytes as my primary electrolyte replacement.

The trek took seven days ascending plus one day descending. As we gained altitude each afternoon, fog and rain closed in, but every morning dawned crystal clear providing spectacular views of Tanzania below us as well as our destination above us.

Summit day: 4,140 vertical feet

We began climbing at midnight of day seven — summit day. Storms had covered the mountain with snow the preceding four nights, hunkering us down in our tents. This amount of snow Phil and a mountain guide on the Barranco Wall just beyond Camp 4 on his journey to the summit. Photo: Courtesy Phil Borghuis

is unusual, and it meant that we had to kick steps in sections of the climb. When you're climbing above 15,000 feet, kicking just two steps is exhausting! We climbed 4,140 vertical feet that night, from 15,200 feet to 19,340 feet, reaching the summit at dawn, having taken six hours to cross 3 miles.

The final phase of summit day was to down climb 10,000 vertical feet to Camp 7. From start to finish that day, we climbed 16 hours with 14,000 feet in elevation change and 10 miles distance.

Of our seven climbers and two guides, seven made the summit. My 40-yearold buddy on the climb, Chris, suffered cerebral and pulmonary edema and was evacuated in the middle of the night from Camp 6 by his brother, our lead guide. They had to descend an exhausting rocky route for six hours by headlamp to get Chris stabilized at a lower altitude. Four weeks after the descent, Chris was just returning to normal, a reminder of the risks of adventure.

By the way, I celebrated my 61st birthday on the mountain! And my guiding company, North Cascade Mountain Guides, would like to rep HAMMER for all of their clients. Thank you for the great products! [HN]



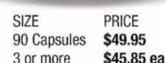
Phillip Borghuis lives in Marin County, California, with his wife Christin and their two children. Rowan 6 and Eden 8. His interests include cycling, training, yoga, backpacking, and family.

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Victory Laps

BY ENDURANCE NEWS STAFF

From anorexia to champion triathlete and "ultrawoman"

In 1993 at age 30, Suzy Degazon hitched a lift to Vega Baja, Puerto Rico, and competed in her first triathlon riding a borrowed bike. She ended up winning her age group ... and never looked back.

"I had no idea what I was doing but it was fun!" Before that milestone victory, Suzy struggled for 10 years with anorexia nervosa, which nearly cost her her life. Through the sport of triathlon and sheer willpower, Suzy Degazon overcame illness to become a winning Hammer-sponsored ultra triathlete and role model for others. She is the only woman in the world to have completed the Ultraman World Championships in Hawaii 15 times in a row, achieving five age group wins. You can read more about Suzy (a.k.a. Ultrawoman) on her website, www.suzydegazon.com, or catch her blog at http://suzyultrawoman.blogspot.com/

Please share a bit about your journey how did you go from pastry chef to triathlete?

Living in England, "I had worked in London's finest hotels, where I was known as the anorexic pastry chef. Weighing just 58 pounds, I suffered cardiac arrest at the age of 24 and was put into a commune. I should have died but God had a different plan. Through a series of events, I ended up on the shore of Bogueron, Puerto Rico, at 2 a.m., and for the next 13 years, I called Puerto Rico home.

This page: Hammer sponsored athlete Suzy Degazon enjoys the challenge of ultratriathlons. Photo: Marc André

Opposite page left: Degazon crosses the finish line for an Avon Breast Cancer Crusade ultra; she raised more than \$90,000 for the cause. Right: Degazon with her training partner, a miniature pinscher she named Hammer

Photos: Courtesy Suzy Degazon





I put the same obsessive compulsive behavior that had gotten me sick into the sport of triathlon. I lived in a humble abode and swam every morning in the ocean, and I used a borrowed bike (which I later bought for \$400) to commute around the area.

In 1994, a year after my first triathlon, I did Ironman Vineman in California. I was so far back they were taking the balloons down when I finished in 14 hours and change!

After hearing about New Zealand, I did Ironman Auckland in 1995. I met some people there, and in 1997 I ended up doing a triple Iron distance race — 7 miles swimming, 336 miles cycling, and 78 miles running — a couple of weeks after winning a pay check at the Nice, France, triathlon!

That changed my life. I became part of the International Ultra Triathlon Association (IUTA) and did the double and triple circuits.

I ran because it built bone mass, and I had to eat to be able to compete. I loved the camaraderie of the ultra-distance racing; the athletes and crews were just warm and friendly and had an unspoken respect for each other.

Ultra-distance sports changed my life, and it complemented my job as a Professional Association of Diving Instructors (PADI) scuba instructor. No more kitchens! Ultra sports became my new lifestyle.

How did you first learn about Hammer Nutrition products?

I had been given some Hammer Gel to take with me to Hawaii in 2001. I also

met other athletes who used Hammer Nutrition for RAAM. After using Hammer products that year, I saw a huge improvement in my performance. I've been using Hammer ever since then!

What has been the most important thing that you have learned about fueling and nutrition as an endurance athlete?

What works for me is structure — knowing how many calories an hour I need to train and race. I like to use multi-hour bottles of fuel on the bike.

But probably the best secret is to use Recoverite!! Be sure to fuel your muscles and body after every workout, be it a speed session or all-day bike ride. Recover and rest, and you will reap gains in your performance.

Do you have a typical fueling plan that you generally follow?

Yes, I have been using Hammer Nutrition products since 2001, and I have come to rely on Hammer Gel, Endurolytes, Perpetuem, and Recoverite as my staples.

My favorite products are the Chocolate Peanut Hammer Vegan Recovery Bar and the Oatmeal Apple Hammer Bar.

What advice do you have to share with new endurance athletes?

- Know your race course profile; in other words, if it is hilly, train on hills, etc.
- Have your nutrition dialed in ahead of time — do not do or use anything new on race day.
- Get plenty of rest! Recovery is just as important as training.



What have been your most rewarding achievements as an athlete?

In 1997, I finished 3rd in the Défi Mondial de L'endurance Triple Iron in Fontanil, France, becoming the ninth woman in 10 years to finish this event . . . taking 3rd place female in the Triple Iron World Championships in Moosburg, Austria . . . being the only woman in the world to have completed the Ultraman World Championships in Hawaii 15 times in a row, with five age group wins.

Also, between November 2005 and November 2010 I raised more than \$90,000 for the Puerto Rican American Cancer Society through Avon Breast Cancer Crusade. Every mile I swam, cycled, and ran was money in the bank for the cause.

Biggest challenge as an athlete?

Within the sport, it would have to be the swim. So I've embraced it by becoming a Masters Swim Coach! Also, because I do not drive, getting to events is always a challenge, and the financial cost of events can be challenging, too.

What are your goals for the year?

I am coming off some major injuries this past year, including a pretty horrific accident in November, so my plan for 2016 is to get fully healthy to be able to compete again competitively at ultracycling and triathlons. In the meantime, I will be coaching high school swimming and coaching running.

I also have a miniature pinscher named Hammer. We will be running the trails and helping my husband put on cycling events. *[HN]*



BY BRIAN FRANK

Shortly before Christmas, I received an email from a client who questioned the value of our weight management supplement, Phytolean, and why a healthy athletic person would even need such a product. I consider all customer feedback — whether positive or negative — very important. Reading this email, I realized that it probably represents the beliefs of possibly dozens of other athletes. That's why I am sharing it here with you, along with my response:

Subject: Re: Enjoy the season and stay lean!

From: Skeptical Stan To: Hammer Nutrition 12/20/2015



C'mon you guys — really? Your market is, I thought, one of healthy, athletic people. Taking any supplement to be lean is just so not in keeping with the truth about having a lean body . . . or a certain level of fitness.

Hammer's marketing of a quick fix like this really disappoints me and casts doubt on the value of any of your products.

Subject: Re: Re: Enjoy the season and stay lean!

From: Brian Frank To: Skeptical Stan 12/22/2015



Hello Stan,

Thank you for taking the time to share your thoughts with us. They are very important to me. I believe they represent the sentiments of at least a few dozen clients, and are not a voice in the wilderness. I do need to address your misperceptions and suggestion that any one product puts the others in question. If you are a super-lean athlete with zero excess body fat. then this product is not for you. If you do not gain any weight during the holidays, this product is not for you. But please realize that would make you the exception, not the rule, among endurance athletes, including those who do business with us.

As you may know. I've been doing this for about 28 years and have developed a lot of products during that time. You likely do not use all of my products and this one may not be for you, but that does not make it invalid for those who do need it, nor impugn our credibility. Each product that I develop is intended to address a specific need that has been identified in our customer base and is not being met elsewhere.

I'm a problem solver, and I noticed a very odd problem common to our clients, even though they are health conscious and spend a lot of time training: They are typically 5-10 pounds or more overweight, carrying around excess adipose tissue (fat) that serves no purpose but to slow them down. Knowing how much they spend to reduce the weight of their bikes and other equipment, I saw a very real need for a product that would help them lean down, without compromising their energy, endurance, or recovery.

The reason these athletes carry this extra fat is that they over-consume starchy carbs! I have been advocating the reduction of starchy carbs in the diet to reduce body fat levels for decades, but it's easier said than done. Unfortunately, I fall into this category myself, even though I know how to address it through diet. In fact, I used the main ingredient in Phytolean for decades before offering it to the public. Additionally, we do not suggest that anyone can just take a pill and magically be lean! With every Phytolean bottle we sell, we provide specific dietary recommendations to reduce body fat levels by reducing starch intake. This product simply helps jump-start and accelerate the process as the athlete works to lower their dietary starch intake.

So, enter Phytolean. Its primary ingredient is an extract from white kidney beans that has been clinically proven to block starch. Specifically, it inhibits amylase function; amylase is the enzyme that breaks down starch in the gut. This extract will block 100x its weight. So if you consume 2 capsules of Phytolean (which delivers 1,000 mg of Phaseolus vulgaris), it will prevent 100 grams of starch (roughly 4 oz., or the typical serving of bread, pasta, etc.) from being digested and turned into fat. Instead, the starch acts like fiber and goes right through you. Add to those attributes Phytolean's raspberry ketones, which also have been shown to increase fat metabolism, and you have an extremely potent formula to aid in the loss of excess body fat by fit athletes. It's scientifically formulated and highly effective for those who want to reduce body fat levels.

I hope my reply has been helpful to you in understanding the efficacy of this product and the audience it is intended to reach. Enjoy the holidays, and thank you again for your feedback.

Best Regards. Brian Frank

REAL ATHLETES, REAL RESULTS! NICK MATTHEWS: PHYTOLEAN



Nick Matthews says Phytolean is an integral part of his training regimen. Photo: Courtesy Nick Matthews

"Someone once told me that every 5 pounds of excess weight you carry will cause you to run 15 seconds a mile slower. If you don't believe it, go run with a 5-pound weight!

"Getting to race weight for a 140.6-mile race might sound easy since you're exercising 15 to 20 hours a week. The challenge is reaching a lean body weight while fueling sufficiently for effective training. If I cut calories too much I become fatigued.

"To get to race weight and still be properly fueled for training I use Phytolean during the last 8 weeks of my training build cycle. By adding in Phytolean and cutting out breads, I am able to attain my race weight and race at my best. Phytolean is one of my go-to supplements!"

Nick Matthews, triathlete



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Changing Lanes

For Michelle Perdue, nutrition and lifestyle changes bring weight loss and rejuvenation

BY JOHN WRIGHT, HAMMER BRAND AMBASSADOR

I can't go on like this, something has to change! I never leave the house, I am inactive, depressed, and sick."

- Michelle Perdue

This is how Michelle Perdue felt prior to losing 80 pounds over the course of a year. Before Michelle put on weight she was active in the racing community, outgoing, and fun loving. She raced, assisted others, and had loads of friends. Michelle also has a loving family of four that she cares for dearly — but the weight was decreasing her quality of life.

At age 20 Michelle weighed 130 pounds. But by age 40, her weight had shot up to 220 pounds and she was showing signs of bad health. Her doctor diagnosed her with a fatty liver and explained that she was at risk of liver failure. She also was suffering from a myriad of other obesity-related health concerns: pancreas problems, gallstones, and ankle problems that required a pharmaceutical dosage of 800 mg of ibuprofen every afternoon and evening. Although she was just 40, her doctor recommended ankle replacement.

Opportunity for change

When a friend challenged Michelle to an eating plan that involved primarily proteins and vegetables (healthy carbohydrates), Michelle realized it was an opportunity to change her life forever, although she knew it would not be easy.

The eating plan cut out all sugar. This meant no sodas, no cakes, no cookies, no sweet coffees, and no alcohol. She could eat all the vegetables she desired. For protein she could eat chicken and fish, as well as a small amount of beef.

Right: Proper nutrition and lifestyle changes helped Michelle Perdue lose more than 100 pounds. Opposite page: Michelle and her husband Steve Perdue. Photos: Courtesy Michelle Perdue



HOW MICHELLE HAMMERS

Hammer Nutrition products played a huge role in Michelle's weight loss journey — giving her energy to reach her goals, keeping her glucose levels healthy, suppressing her appetite, and boosting her antioxidant intake. Now, as a competitive athlete, she continues her Hammer program:

- Hammer Gel for energy during long runs
- Perpetuem Solids as fuel for long marathons
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- HEED to help meet energy, electrolyte, and hydration requirements
- Endurolytes Fizz to replenish electrolytes daily and during events
- · Recoverite to aid recovery after events and daily runs
- . Tissue Rejuvenator daily for healthy joint tissue
- REM Caps, whenever she needs a sleep aid
- . Phytomax daily for overall health
- · Appestat to suppress appetite



Michelle limited her fat intake to the polyunsaturated/monounsaturated natural fats from avocados, nuts, and seeds to meet her macro-nutrient and omega 3/6 requirements. This was a lifestyle change she would need to learn to love in order to regain her health and lose the weight.

After changing her eating habits, Michelle began losing weight. She was down to 160 pounds in less than 6 months. Diet alone would not be enough to complete her weight loss, however; physical activity had to be part of the program.

The challenges

Michelle started venturing outside. but the extra weight made moving was difficult. Everything hurt. In addition, because our modern society encourages a "perfect" body, many who are overweight feel anxious about exercising.

Knowing she had to begin somewhere, Michelle called upon her inner strength and determination. She started with

small goals such as walks to the corner, resting, and returning home. Later, she reached for larger goals: walking to the next stoplight, resting, and returning home. As she progressed, she celebrated each victory along the way. Eventually, she began running some and walking others. Ultimately, Michelle found herself running all of her routes. Now, after losing 100 pounds, Michelle has found a new lifestyle. She RUNS a minimum of 7 miles a day!

Preparing three meals a day for her family also proved challenging. Her daughter ate a special diet, while her husband ate another. She found it difficult to give up snacking, too, but she knew she had to eat only foods that would sustain her and keep her glucose levels constant. Today, Michelle eats four to five small healthy meals throughout the day. Occasionally she has a glass of wine or something sweet, but now she controls her eating habits instead of being controlled by them.

The reward

Michelle is amazing and an inspiration for all. After motivating herself to lose 100 pounds over a two-year period, Michelle is again active, weighs 120 pounds, and has a healthy self-image. In addition to running daily, she has competed in two Tough Mudder events, numerous 5Ks, 12Ks, and a Spartan Race. She has an abundance of energy and a metabolism firing on all cylinders. She is healthy and has no ankle, liver, or pancreas problems — now she is searching for a CrossFit gym to join. Our fun-loving Michelle is back! [HN]

John Wright is a long-time Hammer Brand Ambassador, kart racer, and skier, and who lives in Kent, Washington. He was featured In Endurance News 97.

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Above, oppposite page: Andrea Koenig summits The Bugaboos in eastern British Columbia, Canada. Photos: Mike Stuart

Onward and upward

Get vertical! Climbing and skimo are ideal winter workouts for endurance athletes

BY ANDREA KOENIG, M.S., PH.D.

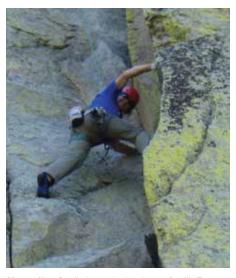
No matter what your endurance sport of choice — cycling, running, triathlon, or other — you can maintain your fitness and even improve your performance by taking your off-season training to the nearest cliff or mountain. Climbing and skimo provide a good mental break from your usual workouts, and they are a great way to enjoy mother nature. Why train indoors when you can strap on some skis and skin up a run or two, or comfortably climb a south-facing slope on a sunny winter day?

Skimo and climbing offer great cardio benefits. They are also excellent ways to work out your core, strengthen the muscles you use in-season, and develop the muscles that you don't work as often. Here's how to get started.

No mountain? No problem

You may be surprised how many areas there are to climb that are not actual mountains. I've seen granite quarries, local short cliffs, and even buildings used to climb (the latter is sometimes illegal, so be sure to check first).

Mountain Project, now a free app, will guide you to climbing areas near you and have the most recent information about the climbing routes. Finally, most cities have climbing gyms where you can obtain a punch card or become a member once you sign waivers and pass belay tests. You don't need a nearby ski mountain to try skimo, either. You can skin and ski on smaller ski hills close to you or even snow-covered trails in open space areas.



Above: Koenig climbs vertical rock near Devil's Tower in Wyoming. Photos: Courtesy Andrea Koenig



Recommended workouts

With skimo you can incorporate the same type of interval workouts as for cycling, running, or swimming. Keep in mind that your heart rate may not get as high as it does at sea level or lower elevations.

When climbing outdoors, increase your workout by carrying both the rope and rack in your pack while hiking to and from the cliff. You'll breathe harder and work your hamstrings (going up) and quads (going down), similar to what you might do in a weight room. Plus you'll score points with your partner by reducing their load.

If you're climbing (indoors, especially) you can repeat climb and down-climb routes fast to increase your heart rate and work on coordination, then rest/recover while your partner does his or her climbing. By pushing yourself to climb at your limit (i.e., you fall or hang on the route, but after working it that day or over several days you get it "clean" — no hangs or falls) you will strengthen many muscles, especially your core.

Fueling for the ascent

Before a climb, I typically eat real food meals and drink water and coffee or tea. I also supplement with AO Booster, Tissue Rejuvenator, Mito Caps, Race Caps Supreme, and sometimes Energy Surge.

During a climb, I fuel with either Hammer Bars, Hammer Gels, or a sandwich. (It's easier to eat real foods when climbing because you have breaks while belaying.) When I need a pick-me-up halfway through a long climb, I have a caffeinated Tropical and/or Espresso Hammer Gel. Afterward, I always take Recoverite within 30 minutes of finishing exercise. I follow the same protocol for skimo racing, except about 20-30 minutes prior to my race I take Anti-Fatigue Caps, Energy Surge, and Race Day Boost. During a skimo race, I hydrate with water and replace calories solely with Perpetuem, Hammer Gel, and Hammer Bars.

Minimizing risk of injury

The downhill sections of skimo races can be very challenging — either super steep, covered with moguls or tight trees, or in the backcountry — and I've taken falls that can cause pain for a few days after the event. I also sometimes find that odd places in my body are sore after a day or more of climbing, especially when I push myself on harder routes. To avoid serious injury doing either activity, I make sure to stretch, ice, and take Tissue Rejuvenator.

I also try to take days off from these sports to do active recovery by biking (great, since there is no impact) or lifting, or I just take the day off completely. Thankfully, I'm fairly strong from participating in sports most of my life, so I recover quickly from minor soreness and injuries.

The rewards for body, mind, and spirit make climbing and skimo wonderful cross-training options for every endurance athlete. What's more, both are Type 1 fun! (Well, skimo is Type 1 on the way down!) *[HN]*

A member of the U.S. Ski Mountaineering Association, Andrea Koenig is an endurance cyclist, competitive skier, alpine climber/ mountaineer, rock climber, and climbing instructor. She lives in Denver, Colorado.

recovery + HEALTH



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Do's and Don'ts of Pre-Exercise Fueling

BY STEVE BORN

Few nutrition topics cause as much confusion for athletes as pre-exercise fueling. The recommendations of media "experts" have arguably generated the greatest confusion, and many an athlete has paid a hefty performance price for this misinformation. If you're tired of the missteps and ready to start enjoying higher quality workouts and better race results, consistently apply these timeproven "Do's" and Don'ts" right away.



DO finish all calorie consumption 3 hours before exercise begins. Weeks of

consistent high quality training and immediate post-workout refueling builds and maximizes your stores of muscle glycogen, the first fuel your body will use when you begin exercising. You've got a finite supply of this fuel so, naturally, you want to use it as efficiently as possible.

Eating sooner than 3 hours prior to exercise promotes faster depletion of muscle glycogen and inhibits fat utilization, a combination that will devastate your performance.

DON'T sacrifice sleep to eat. Muscle glycogen levels remain intact — not one calorie has been depleted — even after a full night's sleep, so it's unnecessary and of no benefit to intentionally wake up early just to eat. Instead, if eating a pre-exercise meal 3 hours prior is not logistically feasible, consume a small amount of your supplemental fuel, such as Hammer Gel, about 5 minutes prior to the start. By the time those calories are ingested and blood sugar levels are elevated, you'll be well into your workout or race and glycogen depletion rates won't be negatively affected.

DON'T overeat. The goal of the pre-exercise meal is to top off your liver glycogen, which has been depleted during your sleep. Accomplishing this doesn't require you to eat 600, 800, or 1000 calories or more, as some so-called "experts" would have you believe. A pre-exercise meal of no more than 300-400 calories is guite sufficient.

You can't add anything to muscle glycogen stores now (you'll just be topping off liver glycogen), so stuffing yourself is counterproductive, especially if you've got an early morning race.

DO avoid simple sugars, high fat, and high fiber. Give your body the right fuel, which means complex carbohydrates and perhaps a

small amount of protein. Simple sugars (sucrose, glucose, fructose) provide unwanted junk calories; they're not what your body wants nor needs.

Also avoid fat-containing and high fiber food; this minimizes the potential for stomach distress as well as an unscheduled bathroom break during your workout or race.

DO stay properly hydrated. Either of these sensible suggestions will satisfy hydration

needs without putting you at the risk for overhydration:

- · One liter of water (about 34 oz.) in the 2 hours prior to the start (about 17 oz./hour), ceasing consumption about 20-30 minutes before the workout or
- 10-12 oz. of water each hour up to 30 minutes prior to the start (24-30 oz. total fluid intake).



DO take your first dose of **Endurolytes 15-30 minutes**

prior. This will cover your first hour's requirements for electrolytes. So instead of reaching for pills when your workout or race begins, you can focus on getting into a nice smooth rhythm. HN

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Protein:

An Endurance **Essential**

Boost performance while reducing fatigue and soreness with this key nutrient



BY BRIAN FRANK

Since we pioneered the use of protein-fortified energy drinks in 1992, thousands and thousands of endurance athletes have personally experienced the beneficial results of augmenting their carbohydrate fuel with a small amount of protein — a huge reduction in muscle fatigue during exercise and much less soreness and recovery required afterward.

When carbs alone are not enough

Beginning approximately 90-120 minutes into a long workout, 5-15% of the calories burned by your body come from protein. This process, called gluconeogenesis, is unavoidable; if you don't supply the needed protein from your fuel, your body will literally scavenge it from your own muscle tissue.

This protein cannibalization results in many undesired consequences including:

- Muscle fatigue and depletion
- Post-exercise soreness due to excess ammonia buildup
- Weakened immune system

For exercise that goes beyond 2 or 3 hours, consuming protein alongside complex carbohydrates is essential. Perpetuem, Perpetuem Solids, and Sustained Energy use soy protein to meet an optimal 8:1 carbs to protein ratio.

Soy protein is ideal for prolonged exercise as it doesn't readily produce ammonia and has an excellent amino acid profile. Our proprietary ratio of carbs to protein gives your body enough protein to offset what it is metabolizing without causing a delay in calories moving through the stomach. That's why higher protein levels during exercise are not helpful.

Both Sustained Energy and Perpetuem contain the ideal amount of protein to keep you going for as long as you want.

In addition to these two protein-fortified products, you can make your own by adding Hammer Soy Protein or Hammer Vegan Protein to HEED or Hammer Gel. You could also fuel with Hammer's "ultra gels" — Nocciola, Peanut Butter and Peanut Butter-Chocolate Hammer Gels contain naturally occurring protein. Yet another option is to consume 3-4 Endurance Aminos each hour with your carb fuels.

Protein for recovery

What you do immediately after your workouts is just as important as everything you do during them. To get the full value from all of the effort you've put into your training sessions, you must replenish your body right away. That means giving it an adequate supply of carbohydrates (30-60 grams) and protein (10-30 grams) immediately after exercise, when it's most receptive to replenishment.

Consuming 1-3 scoops of Recoverite within 30 minutes after your workouts will provide the carbohydrates you need to replenish and increase muscle glycogen stores. (Note: This is what true "carbo loading" is.) At the same time, you will also be providing the amino acids your body requires for muscle tissue repair and immune system support.

Bottom line: Adding a few grams per hour of protein during extended training and racing, along with timely high-quality protein intake immediately after exercise, is your best bet for minimizing muscular cannibalization and fatigue while maximizing your ability to recover. [HN]

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All of the awesome benefits of our other Perpetuem flavors, now in ultra-delicious chocolate! Enjoy rich chocolatey flavor and smooth energy, hour after hour!



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Hammer Vegan Protein: THE INSIDE SCOOP



BY ENDURANCE NEWS STAFF

With five sources of nutrient-dense, 100% plant-based protein, Hammer Vegan Protein is the ideal choice for high-quality, dairy-free, soy-free nutrition

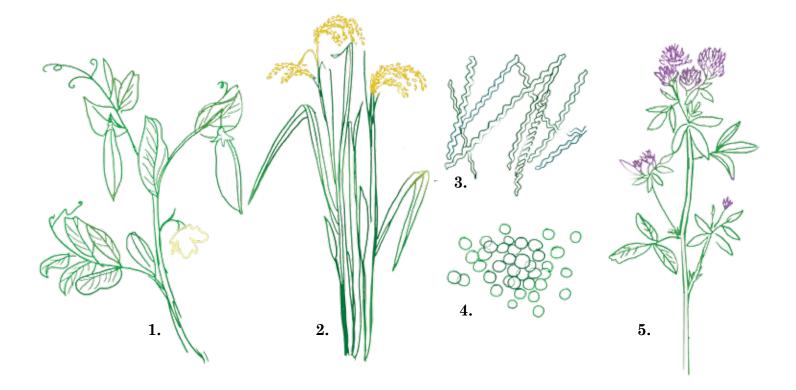
A powerhouse of vitamins, minerals, RNA/DNA, essential fatty acids, and more, Hammer Vegan Protein is a unique blend of alkaline protein sources, ideal for daily health. To ensure efficient and complete digestion, Hammer Vegan Protein is also formulated with a variety of digestive enzymes. Packed with 20 grams of protein per scoop, Hammer Vegan Protein is virtually carbohydratefree and contains no added simple sugars or artificial sweeteners. Only

healthy natural ingredients and organic stevia extract are used to flavor and sweeten the product.

Perhaps best of all, it tastes absolutely delicious! If you're seeking the highestquality alternative to dairy-derived or soy protein powders, Hammer Vegan Protein is what you've been looking for. Use it as a post-workout/race recovery drink or whenever you want to bolster your daily protein intake.

FIVE 5-STAR PLANT PROTEINS

1. Pea Protein is easily digested and contains an excellent amino acid profile; it's a rich source of leucine, isoleucine, valine (the three branched-chain amino acids), lysine, arginine, and glutamine. And because pea protein assists in lowering levels of grehlin, an appetitestimulating peptide, it also might help prevent overeating.



together with pea protein forms a complete protein source, containing all essential amino acids and nonessential amino acids. Like pea protein, it is

2. Organic Brown Rice Protein*

very easy to digest and has the highest Biological Value (BV) of any vegetable protein source. Even those with food allergies generally have no trouble with this plant protein.

3. Organic Spirulina, a microscopic single-celled alga, is a complete protein source and has the highest concentration of protein by weight of any food. Considered by many to be THE superfood of superfoods, spirulina is vitamin- and mineral-dense. It's also rich in enzymes and antioxidants such as superoxide dismutase. Spirulina is considered a blood-building nutrient and is believed to help maintain digestive

system health.

4. Chlorella, like spirulina, is a complete protein loaded with chlorophyll and essential fatty acids. Chlorella is perhaps the most vitamin- and mineraldense "green food" available, and it includes a complete B vitamin profile. Chlorella assists in cellular growth and repair. It is considered an eye health nutrient due to its abundance of betacarotene and lutein. It is also considered an excellent detoxifying agent, purported to have the ability to bind to heavy metals and other toxic substances in the bowels.

5. Alfalfa* is an excellent source of amino acids and is an ideal source of many vitamins and minerals, including vitamin K. Research suggests that vitamin K directs calcium to the bone, and keeps it out of the linings of arteries where it could lead to arteriosclerosis. Alfalfa is also considered helpful for maintaining healthy cholesterol levels.

*In the coming months, we will be phasing in a new Vegan Protein formulation. For improved mixability, organic pumpkin protein and organic sacha inchi will replace the brown rice and alfalfa proteins.

Customers Say It Best!



"Very tasty and nutrient dense! Hammer Vegan Protein is higher in protein than other mixes, and it tastes great in smoothies and recipes such as my buckwheat pancakes. Instead of adding extra vanilla, I add 1/3-1/2 scoop of Vegan Protein and some chia seeds to the mix. Tastes great!"

"I love Hammer Nutrition's vegan protein!! It's the perfect post-workout recovery drink for vegans. I have all three great tasting flavors on my shelf. After any workout longer than one hour, I enjoy a Chocolate Peanut Vegan Recovery Bar along with a Hammer Vegan Protein drink."

Main photo: Our popular plant-powered Vegan Protein flavors from left to right, Strawberry, Chocolate, and Vanilla.

THE SOLID CHOICE:

Hammer Vegan Recovery Bars are a delicious recovery option for those who prefer a bar after a workout or race. Hammer Vegan Recovery Bars give you 14-15 grams of the highest quality



plant proteins as well as nut butters. Both the Chocolate Peanut and Almond Cacao flavors combine organic tapioca, a healthy carbohydrate, two excellent protein sources — pea protein and organic brown rice protein — and other high-quality ingredients. Both are incredibly delicious and perfect after a workout, or as a healthy snack whenever a craving strikes.



26 Servings- \$44.95 3 or more - \$42.95 ea FROM THE KITCHEN OF

LAURA LABELLE

Plant proteins: more than enough!

Enjoy winning performances and health by following a plant-based diet



Laura Labelle, who studied at Ecole De Cordon Bleu in Paris, is an acclaimed California-based chef. She opened the popular Cafe Luna, was in-house chef for Mix This music studio, and operated her own catering company.

In recent years, the World Health Organization (WHO), the U.S. federal government, and the United Nations at the World Climate Summit in Paris all have recommended a vegetarian or vegan diet. According to a 2010 WHO report, "The evidence that such diets will prevent or delay a significant proportion of

> "The evidence that (vegetarian or vegan) diets will prevent or delay a significant proportion of noncommunicable chronic diseases is consistent. [The consumption of animal food products places an undue demand on land, water, and other resources ... which makes the typical Western diet not only undesirable from the standpoint of health but also environmentally unsustainable."

non-communicable chronic diseases is consistent." Furthermore, the report states that the consumption of animal food products "places an undue demand on land, water, and other resources . . . which makes the typical Western diet not only undesirable from the standpoint of health but also environmentally unsustainable."

After watching numerous documentaries on our food supply, my family has come to a similar conclusion: Raising animals commercially for human consumption is wreaking havoc on our health. Learning about the chemical pollutants, unethical treatment of animals, and environmental impacts of industrialized meat production has left us increasingly concerned about our food quality and more interested in eating a vegetarian/ vegan diet.

Whether you choose to follow a plant-based diet for health or some other reason, it is important to educate yourself to ensure that you obtain all of the necessary nutrients for health and athletic performance.

A protein-rich plant-based diet

Our bodies need protein to keep our "motor" running and make everything from new muscle tissue to hormones. What fascinates me is that so many educated people ask the same question about vegetarian diets: "How can you survive without protein?" The notion that you must eat meat to obtain protein is a complete fallacy.





Overnight Oat Shake

This shake is a fantastic and filling meal, and you can tailor it in many ways to keep things interesting.

- Bill Sirl, Hammer Nutrition dealer service rep

Dahl (Indian Lentil) Soup

You can use either yellow or red lentils; feel free to add spices, such as turmeric, cumin, cardamom, or coriander.

- Laura Labelle

Ingredients

3/4 cup oats (gluten-free oats if possible)

1 Tablespoon chia seed 1 cup milk (almond, rice, soy, coconut, etc.)

Optional: 1 teaspoon cinnamon, ginger, or other spice

1 scoop Hammer Vegan protein

1-2 tablespoons nut butter (sunflower, almond, peanut) 1/2 to 1 cup of frozen fruit

Preparation

Night before: Pre-mill the oats with the chia seed if you do not have a powerful blender (i.e, Vitamix or similar). Combine the oats, chia seed, and spices with the milk and store in an airtight container overnight, or at least for 6 to 8 hours. Next day: Add oat mixture, protein powder, and nut butter to blender. Process together; gradually add your favorite fruit.

Makes 1 serving

Ingredients

- 2 Tablespoons ghee or olive
- 1 large onion, diced
- 2 stalks celery, diced
- 2 medium carrots, diced
- 3 bay leaves
- 1 quart vegetable broth 2 cups split yellow or red

Sea salt and pepper to taste

Preparation

Heat the olive oil or ghee in

a soup pot. Add the onion, celery, carrots, and bay leaves, then sauté until vegetables soften and darken in color. Add optional spices and sauté 1 minute longer. Add broth. Stir in lentils and bring to a low simmer. Cover and simmer for an hour or until lentils are very soft. Season with sea salt and pepper to taste. Enjoy for lunch or dinner.

Makes 4 servings

12 PROTEIN-RICH PLANT FOODS

While the U.S. Department of Agriculture recommends that 10-35% of daily calories come from protein, athletes require an amount on the higher end of that range. When training, your daily protein intake should be: 2/3-3/4 gram of protein per pound of body weight.

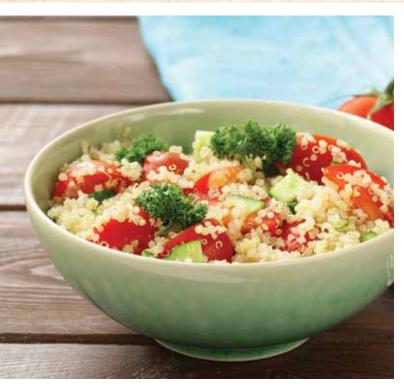
The amounts below are for cooked foods:

- **1. Lentils –** 18 g per 1 cup
- 2. Black beans 15 g per cup
- 3. Chia seeds 12 g per quarter cup

- 4. Hemp seeds 10 g per quarter cup
- **5. Pumpkin seeds** 7 g per quarter cup
- **6. Almonds –** 7 g per quarter cup
- 7. Amaranth 7 g per cup
- 8. Quinoa 5 g per cup
- **9. Peas –** 8 g per cup
- 10. Broccoli 4 g per cup
- 11. Artichokes 4 g per medium
- 12. Swiss chard 3 g per cup

FROM THE KITCHEN OF

LAURA LABELLE





Quinoa Salad

Although very healthy and high in protein, quinoa can be a bit bland on its own. This salad takes only a few minutes to make and adds flavor and crunch to the quinoa.

Miles Frank

Ingredients

3 cups cooked quinoa Handful of cilantro, chopped 1 Tablespoon olive oil Handful of cherry tomatoes (5-8)

1 small cucumber, diced 1 celery stalk, chopped Braggs Liquid Aminos, or a drizzle of soy sauce to taste

Preparation

In a large bowl, gently mix together all ingredients. Refrigerate until ready to eat; keeps up to three days.

Makes 4 servings

Almond Chia Seed Pudding

This vegan, sugar-free dessert is packed with protein and delicious flavor. – Laura Labelle

Ingredients

2 cups almond milk 6 Medjool dates, pitted 1/2 cup almonds 1/2 cup chia seeds

Preparation

Blend milk, dates, and almonds in blender. Add chia seeds. Mix at slow speed or manually stir. Chill in the refrigerator for 2 or more hours. Enjoy!

Makes 4-6 servings

CONTINUED FROM PAGE 54

The truth is, you can obtain all of the protein your body needs from plants, without ever eating meat. But you must choose your foods carefully. Proteins are composed of a combination of 20 amino acids, 11 of which our bodies can make. We need to get the other nine "essential" amino acids from our food, but we cannot get all nine of them from a single plant. This simply means that you must eat a variety of plants, including beans, nuts, and seeds. Many vegetables

in the cruciferous family also are good sources. It isn't necessary to combine beans with rice to make a "complete" protein, as once was believed. We know now that you can eat plants separately and still get an adequate amount of all of the amino acids. The key to good nutrition is to choose the highest quality food available. Buy organic whenever possible, eat a wide variety of plant foods in a rainbow of colors, and have fun trying new combinations! [HN]

healthy recipe inspiration





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Coffee's longevity benefits confirmed

Raise a cup to longer life! Studies show link between consumption, lower death risk

BY STEVE BORN

About three years ago we published an article in *Endurance News 81* discussing the impressive findings from a National Cancer Institute study that suggested a link between coffee consumption and a lower risk of death from a variety of causes and lower risk of death overall. New research, reported in the journal *Circulation*, appears to confirm coffee's positive effects on longevity.

Analyzing data from three large studies — the Nurses' Health Study (74,890 women), the Nurses' Health Study II (93,054 women), and the Health Professionals Follow-Up Study (40,557 men) — along with 20-30 years of follow-up, researchers "were able to provide solid evidence for the association between coffee drinking and the risk of mortality..." according to Dr. Ming Ding of the Harvard School of Public Health.

Compared to study participants who did not drink coffee, consumption of one to five cups of coffee daily — either caffeinated or decaffeinated — was associated with a 5% - 9% lower risk of mortality. Re-analyzing the data, researchers noted an increase of coffee's beneficial effects — up to a 15% decreased risk for premature death — for coffee drinkers who were non-smokers.

Because both caffeinated and decaffeinated coffee confer benefits, it is believed that specific substances

in coffee — including bioflavonoids, chlorogenic acid, lignins, and others — may be responsible for coffee's positive effects on many aspects of health.

The findings from this new study echo those of Neal D. Freedman, Ph.D., lead researcher in the previous coffee/mortality study: "We found coffee consumption to be associated with lower risk of death overall, and of death from a number of different causes."

Delicious, organic coffee delivered fresh to your door

For your daily shot of good health, choose delicious 53x11 Coffee: Fair Trade Certified, 100% organic, and micro-roasted daily to our exact specifications. Available ground or as whole beans, 53x11 is delivered fresh to your door within a week or two of roasting. That freshness is your guarantee of maximum flavor and maximum health benefits.

53x11 is available in four savory varieties — the Big Ring (full-bodied Sumatra varietal), the Early Break (a bright blend), the Chain Breaker (a darker, more full-bodied roast), and the Down Shift (a smooth, water-processed decaf). Compare 53x11 to supermarket beans or expensive coffees from trendy chains. You'll find that 53x11 is superior coffee at a terrific value. Enjoy it in good health. *[HN]*



BY ATHLETES, FOR ATHLETES*













MSRP \$13.95 - 12 oz. bag The Big Ring, The Chain Breaker, The Early Break, The Down Shift.

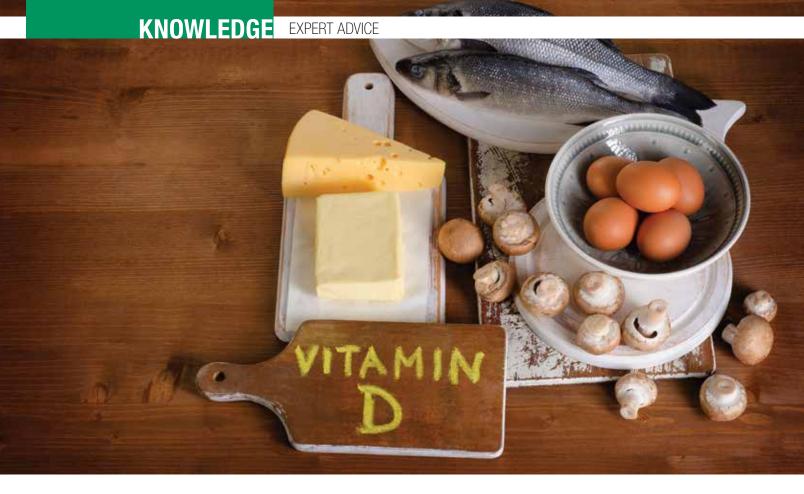
*AND ANYBODY ELSE WHO LOVES TASTY, ORGANIC, FAIR-TRADE COFFEE ROASTED IN SMALL BATCHES AND DELIVERED FRESH TO THEIR DOOR.



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Vitamin D delivers!

Enhanced exercise performance, disease defense are among this nutrient's list of benefits

BY STEVE BORN

Over the past several years, perhaps no nutrient has received more glowing press than vitamin D.

That should come as no surprise, given the wealth of ongoing research that reveals its wide-ranging benefits for numerous health issues.

In fact, pick pretty much any condition — hypertension, type 2 diabetes, heart disease, asthma, depression, rheumatoid arthritis, various types of cancer, and many more — and chances are that vitamin D plays a protective/preventative role against such disorders.

But what about vitamin D's potential athletic performance benefits? Could vitamin D supplementation increase performance? According to a preliminary study performed by researchers at Queen Margaret University in Edinburgh, the evidence is very promising.

Previous research suggests that vitamin D can block the action of a specific enzyme needed to make cortisol, often

SOURCES OF VITAMIN D

FOOD SOURCES

- Fortified milk Cheese Yogurt Eggs Fish
- Mushrooms

NATURAL SOURCES

Sunlight

SUPPLEMENT SOURCES

Premium Insurance Caps

(Every 7-capsule dose of Premium Insurance Caps supplies 500 IU of vitamin D3 (the preferred form), which provides a good start. Supplementing with additional amounts is easy as vitamin D3 supplements are readily available and relatively inexpensive.)





Our pilot study suggests that taking vitamin D supplements can improve fitness levels and lower cardiovascular risk factors such as blood pressure."

- Dr. Raquel Revuelta Iniesta

referred to as the "stress hormone." It is believed that high levels of cortisol may be implicated in high blood pressure, as cortisol restricts arteries, narrows blood cells, and causes the kidneys to retain water. Because vitamin D is purported to reduce cortisol levels, it may help improve exercise performance as well as cardiovascular health.

In this particular study, researchers gave 13 healthy adults 2,000 IU of vitamin D daily or a placebo over a two-week period. Study participants who supplemented with vitamin D had lower blood pressure readings compared to participants who received the placebo. Vitamin D-supplemented participants also had lower levels of cortisol in their urine.

Additionally, at the beginning of the study the group taking vitamin D was able to cycle 5 kilometers in 20 minutes; at the end of the study they were able to cover 6.5 kilometers in the same time. The researchers noted that in spite of cycling significantly farther in the same amount of time, the participants taking vitamin D showed lower signs of physical exertion compared to those who took the placebo.

Dr. Raquel Revuelta Iniesta, co-author of the study, stated "Our pilot study suggests that taking vitamin D supplements can improve fitness levels and lower cardiovascular risk factors such as blood pressure. Our next step is to perform a

larger clinical trial for a longer period of time in both healthy individuals and large groups of athletes such as cyclists or long-distance runners."

Vitamin D expert, Dr. Michael F. Holick, PhD, has stated that vitamin D is the most common nutrient deficiency in the world, and that three out of every four Americans are deficient in vitamin D.

Aside from fortified milk, cheese, yogurt, some fish, and mushrooms, there aren't a lot of food sources that contain appreciable amounts of vitamin D, which makes supplementation necessary, especially in the winter months in areas of the country where available sunlight is minimal.

The best way to know how much vitamin D you need is via a 25-hydroxyvitamin D blood test, also called a 25(OH) D test. Dr. Holick suggests that an ideal 25-hydroxyvitamin D blood level is 50 ng/mL.

Supplement with vitamin D

Every 7-capsule dose of Premium Insurance Caps supplies 500IU of vitamin D3 (the preferred form), which provides a good start. Supplementing with additional amounts is easy as vitamin D3 supplements are readily available and relatively inexpensive. [HN]

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ASK HAMMER



Other than PSA Caps, what Hammer supplements should I be taking for prostate health?

Boron is a trace mineral that usually gets more notice for its role in bone health, but an increasing number of studies are showing that it also might be a valuable ally for prostate health. One study found that this mineral lowers PSA. Several other studies suggested that the mineral might help provide protection against prostate cancer.

While there is not yet an established recommended dietary allowance for boron, the general consensus suggests a minimum daily amount of 3 mg, with an optimal amount in the range of 6-9 mg daily. Though found in fruits such as apples, grapes, and plums, as well as nuts and some vegetables, boron is difficult to obtain in sufficient amounts from diet alone.

Every 7-capsule dose of **Premium Insurance Caps** supplies 2.5 mg of boron, and our **Boron** supplement provides an additional 5 mg.

It's the easy way to ensure that you get an optimal amount of this beneficial mineral.



BY ENDURANCE NEWS STAFF

I'll soon be doing a 50-mile race at an elevation above 9,500 feet. I've read that our body chemistry becomes more alkaline when running at a high elevation. Since Race Day Boost is already alkaline, could it hinder my performance?

Everyone breathes faster and deeper at higher elevations. This increases the flow of fresh oxygen through the lungs, which in turn increases the rate at which carbon dioxide is lost. Because carbon dioxide is believed to be an acidic gas, losing more of it from the blood could leave your blood relatively

alkaline. Since your body will eventually regulate its acid/alkaline balance, the temporary increase in alkalinity caused by the sodium tribasic phosphate in Race Day Boost should not be a problem. Additionally, sodium phosphate increases levels of 2,3-DPG in the blood, which increases oxygen transfer from the hemoglobin of red blood cells into the mitochondria. This should be highly beneficial when exercising at higher elevations.

Also consider the supplements Anti-Fatigue Caps and Race Caps Supreme. Anti-Fatigue Caps have been designed to delay the onset of fatigue associated with lactic acid build-up, which is common during high-elevation exercise. Race Caps Supreme contains idebenone, which your body can use to produce energy even under lowoxygen conditions. Note: We recommend thoroughly testing any new supplement, fuel, or protocol in training to see how your body responds well before the race.

Shelly Koenig gets in some fall mountain trail running with her training buddy in tow. Photo: Courtesy Shelly Koenig

?

What are the main differences between HEED and Endurolytes Fizz?

HEED is a powdered sports drink that contains calories and a full-spectrum electrolyte profile. **Endurolytes Fizz** is a nearly-calorie-free, full-spectrum electrolyte replenishment product in effervescent tablet form.

Every scoop of HEED contains 100 calories and about the same amount of electrolytes as one-half tablet of Endurolytes Fizz. While taking into account the

many variables that determine how much electrolytic mineral support you need, our general recommendation is one-half tablet of Endurolytes Fizz (or one Endurolytes capsule) for every 50-60 pounds of body weight per hour. Using that gauge, lighter-weight athletes will oftentimes find that 1-2 scoops of HEED in a water bottle will cover their entire fueling requirements — fluids, calories, and electrolytes — for an hour or so. The same is true for most athletes who are doing short-duration workouts and require only minimal amounts of calories and electrolytes.

During longer bouts of exercise, when Sustained Energy or Perpetuem is the primary fuel (and especially when concentrated, multi-hour bottles of either product are being used), Endurolytes Fizz is an ideal alternative to Endurolytes capsules, primarily for athletes who are either unable to swallow capsules during exercise, or who prefer to fulfill their electrolytic mineral needs via lightly flavored, effervescent ("fizzy") electrolyte water.

A key point to remember is that if you put "X" amount of scoops of HEED or "X" number of Endurolytes Fizz is your water bottle, your dose is preset . . . you've basically put a ceiling on it, which can become an issue if what you've put in your bottle is proving to be insufficient (such as if the weather gets hotter). Therefore, we highly

gets hotter). Therefore, we highly recommend that you carry extra Endurolytes Fizz tablets or Endurolytes capsules. You may end up not needing them, but you'll feel better knowing that you have them within easy reach, should the conditions require more electrolytic mineral support than what you're obtaining from however many scoops of HEED or Endurolytes Fizz tablets you've put in your bottle.

Lastly, you can most definitely add Endurolytes Fizz tablets to your bottle(s) of HEED to bolster the electrolyte content. If you're adventurous, you can create a new flavor by, for example, adding Grape Endurolytes Fizz to Melon HEED, or numerous other creative combinations.

Bottom line: HEED = Calories + electrolytes; Endurolytes Fizz = Electrolytes only. Now you know the differences between these two great fuels! *[HN]*





13 Tablet Tube \$ 4.95 3 or more \$ 4.75 ea



"Since I started using Endurolytes Fizz my riding has improved 100%. I wish I had discovered Fizz years ago."

- online reviewer



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Walking the Walk

Hammer Brand Ambasador Howie Nordström shares his knowlege of proper fueling with fellow athletes

BY HOWIE NORDSTRÖM

Being a Hammer Nutrition Ambassador is an honour. Hammer provides healthy fuels and supplements that work, its core company values speak to me, and the staff is a pleasure to interact with. Being a Hammer Ambassador is also a responsibility, because Hammer puts its faith in me to represent them with class and respect when I interact with competitors, sports enthusiasts, storeowners, and the general public. I was introduced to the core Hammer fuels shortly after discovering triathlon. Having no idea how to fuel for endurance events, I dove into the Hammer online knowledge base where I found a wealth of information regarding the how-to and why behind the products. Using the Hammer guidelines, the next step was to realize the benefits for myself, testing each item, and then testing combinations to learn how they affected my body in training and racing.



BRAND AMBASSADOR

Howie Nordström Triathlete Hammering since 2014 @HowieTriathlete 2

Fuel Right, Feel Great!® 1.800.336.1977 / www.hammernutrition.com

My past education and interest in nutrition and exercise science allowed me to be rather methodical in my approach to learning the Hammer product line. (Admittedly, I'm a bit pedantic.) Now I often find myself in online and face-to-face discussions sharing my knowledge and experience, helping

Are you a Hammer Brand Ambassador?

If you're a Hammer fan who loves to help other athletes learn to fuel properly with Hammer Nutrition products and methods, we want to hear from you. Email us at ambassador@hammernutrition. We will set you up with a personal business card, extra samples and literature, and access to our exclusive online community. -Brian Frank

others find what works best for them — and often, it's not what they thought!

I always carry extra fuels and basic supplements with me to races and training camps to share with those who need them, or who are interested in trying the products themselves or enhancing their athletic performance. Sometimes I'm even able to provide simple things like a gel flask to a competitor passing by who notices my Hammer kit, or a water bottle to an unsuspecting race spectator. It puts a smile on all of our faces and in our hearts. Thanks Hammer Nutrition! [HN]



This page: Howie at the 2015 Ironman World Championship in Salzburger Land, Austria Opposite page: Howie celebrates after a strong finish at the Ironman World Championships tos: Hella Nordström/Curtesy of Howie Nordström



Hammer Nutrition Race Rescue Stories

Hammer athletes lend a helping hand to athletes who haven't learned the secrets of proper fueling . . .

"When helping a friend with her swimming, I asked what she had to refuel her body. 'Nothing,' she said. Since I always carry extra Vegan Recovery Bars, I gave her a Peanut Butter-Chocolate. She was immediatel hooked. After our next workout she asked if I had more Hammer Bars. Of course! I had one ready but wanted to see if she remembered the importance of refueling!

"While doing some final work on my bike at Ironman Victoria 70.3, I set my big, red Hammer Gear Bag on my Kuüa rack; my Forester also has Hammer stickers on all sides. A guy walked by and asked if I am a Hammer rep. Responding that I was a Hammer Ambassador and sponsored athlete, I offered to help in any way I could. He had several questions about HEED, Sustained Energy, and Perpetuem, so I explained their uses and gave him fueling suggestions. After the race he said it was by far his best yet and he felt that his nutrition was much better! We've stayed in contact since then." - Howie Nordström

What's your race rescue story? Email us at ambassador@hammernutrition.com

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TRIATHLON **WE SUPPORT:** YOUR SPORT

We're psyched about the events we are sponsoring in early 2016, and there are many more to come. It's going to be a banner year for Hammer Nutrition's event support program ... here are just a few of those happening in the coming months:

CYCLING SWIMMING MOTOCROSS



Participants line up at the start of the Ultraman Florida 52.4-mile run in 2015. Photo: Courtesy Ultraman Florida

ULTRAMAN FLORIDA

ORLANDO, FLORIDA

A 3-day, 320-mile (514.5 kilometer) individual ultra-endurance event (swim 6.2 miles, bike 261.4 miles, run 52.4 miles) http://ultramanflorida.com/

FEBRUARY 19-21

ORANGE CURTAIN 100K/50K/20K

CERRITOS, CALIFORNIA

The 100K ultrarun is a 10K out and back (repeated 10 times) along an asphalt and dirt bike path on the east side of the San Gabriel River in Cerritos, Lakewood, and Long Beach. http://www.orangecurtainrun.com/

FEBRUARY 27

MAYHEM FAT FOUR ENDURANCE CHALLENGE / MEDFORD, NEW JERSEY

The Fat Bike Community asked for it and here it is ... yes, fat bikes only (that 3.8 or bigger tire!) for a 4-hour endurance challenge.

www.facebook.com/spreadthemayhem/

FEBRUARY 28

WASATCH POWDER KEG

BRIGHTON, UTAH

To our knowledge, the Powder Keg is the largest skimo race, and the second oldest, in the U.S.

http://wasatchpowderkeg.com/

MARCH 4-6



Wasatch Powder Keg gives racers all they can handle, Photo: Blake Bekken

NE RANDO RACE SERIES

LONDONDERRY, VERMONT

Using climbing skins with alpine touring or telemark bindings, racers ascend then descend as fast as possible over multiple laps, up to 7,000 feet cumulative vertical, in the truest test of the most complete skier overall. http://nerandorace.blogspot.com/

MARCH 12-13, MARCH 19

OLD WEST TRAILS 50K ULTRA AND 30K FUN RUN

JULIAN, CALIFORNIA

The desert in spring displays its scenic wonders at their finest and brings the most comfortable weather for running, camping, and other fun.

http://www.oldwesttrails50kultra30kfunrun.com/

MARCH 19

HAULIN' IN THE HOLLER

ELEANOR, WEST VIRGINIA

This 25K, 50K, and 5K Trail Race and Kids Fun Run, held in the foothills of West Virginia, has something to offer runners of all ages and skill levels. The hills and trails are easy enough for beginners but challenging enough for the most advanced.

http://www.active.com/eleanor-wv/running/races/haulin-in-the-holler-2015

MARCH 26

CASTELL GRIND

CASTELL, TEXAS

Bring your mountain bike, competitive spirit, and sense of adventure. Miles of rolling hills on remote gravel roads in the middle of nowhere: Welcome to gravel grinding, Central Texas style. http://www.castellgrind.com/

APRIL 2

REBEL MAN SPRINT TRIATHLON

OXFORD, MISSISSIPPI

The Rebel Man Sprint Triathlon winds through Oxford's beautiful countryside and the Ole Miss campus. http://rebelman.olemiss.edu/

APRIL 3

COOPERS ROCK 50K

BRUCETOWN MILLS, WEST VIRGINIA

This rocky and rugged ultra run will take you through aweinspiring rock formations and dazzling views of the Cheat Canyon. Challenging, rough trails with plenty of elevation gain and loss.

http://coopersrock.org/coopers-rock-50k-half-marathon-trail-runs

APRIL 16



I use Hammer Whey every night before bed to boost HGH and aid recovery. I am hooked on Hammer."

- ZACHARY HILTON



- Maintains and repairs lean muscle tissue
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A Young Champion's Road

Athlete, his coaches, mentors, sponsors team up for title



BY LANCE LARSEN, TIENI DURO JUNIOR CYCLING DEVELOPMENT

Growing up in a fairly remote part of of San Francisco's East Bay watershed, 16-year-old Jason Frost (a.k.a., "Frosty") took to riding bikes at a young age as a means to get around his semi-rural setting. His parents encouraged his healthy active lifestyle, and by age 12 or so he was putting in 100-mile weeks on his road bike. At about age 14, that weekly mileage had nearly doubled. He loved being on his bike. One day, Frosty was out on a solo ride when he ran into Jason Kent, Directeur Sportif for Lafayette-based Tieni Duro Junior Cycling Development, Before long, Frosty joined Tieni Duro on its twiceweekly training rides. He fit right in, and has been riding and racing with Tieni Duro ever since then.

Tieni Duro is a Hammer Nutritionsponsored program now in its 15th year. The program enjoys a reputation as a fun, productive, well-coached and managed Junior Development team of boys and girls ages 12-18. Most years, the team is about 15-20 kids strong.

Tieni Duro races all across the Western U.S. in more than 600 aggregate racedays per year, and the program has produced many California State and U.S. National Champions. But Tieni Duro is not only about results. We also strive to have fun, share successes on and off the bike, and create well-rounded, respectful athletes prepared for college and life. It seems to be working.

Talent + Coaching

I clearly remember the first training ride for Frosty. He stood out. He was strong, and he seemed super passionate



State 15/16 Road Race Champion Jason Frost celebrates on the podium with Hammer Nutrition-Tieni Duro teammates Hans Poulsen (3rd) and Leonard Schummer (5th) in the big team effort and win! Photo: Courtesy of Tiene Duro Junior Cycling Development

about riding his bike everywhere — to train, for basic transportation, and just for fun. He took instruction from his coaches well, something we look for in all of our new riders. On Frosty's first day out with us, I recall leaning over in the pace line and saying, "this kid is going to be really good, maybe even a champion one day."

Frosty had raw talent but needed more structure in his training. Enter Shawn Rosenthal, principal at Provantage Fitness and an accomplished former junior, collegiate, and professional bicycle racer. A two-time collegiate National Team Time Trial Champion at U.C. Davis and the California Pro-1 Road Race Champion in 2013, Shawn rode as a junior for Tieni Duro so he knows the

program, its culture, and goals.

Shawn recently commented on Frosty's progression: "Well, Lance, it is really interesting. I actually have been working with him on riding less, not more, and focusing on recovery and peaking at the right times."

Regarding nutrition, "...he gets the garbage in, garbage out concept. So we are focusing on race day feeding and hydrating, working with Jason Kent and Hammer Nutrition. Junior athlete's bodies are different than fully developed athletes . . . like shedding body heat and the related hydration needs. So we create a detailed race-day hydration / fuel strategy that involves Perpetuem, HEED, and Endurolytes to great effect."



Jason Frost (left) in a long breakaway beats his season-long rival at the line for the State 15/16 Road Race Championship at Fort Ord, California. **Photo:** Courtesy of Tiene Duro Junior Cycling Development

Learning to race

Our coaches and management like to say it takes most kids about three years to become a "true bike racer." The first year they learn to ride their bikes safely in a group through camps, clinics, and weekly training rides. They also learn how to fuel, with the help of Hammer Nutrition.

The second year they learn how to race: how to pin a number, prerace warming up, how to recover, and where to stay the night before a race. They also learn tactics and race-day fueling and recovery. In this second year, the racers often play a supporting role to another teammate. For Frosty, this meant working many races for others — paying his dues.

By year three, we like to say the kids learn "how to win." They begin to put it all together . . . the camps and clinics, the coaching, the nutrition, the training plans, and the teamwork. Throughout the 2015 campaign, Frosty had some shots, only to be pipped at the line, or to flat a tire with 1 km to go on a solo breakaway. But that's bike racing in a nutshell. A lot of planning goes into winning, but you also need luck and teamwork.

Putting it all together for the championship

And so it was, on race day at Ford Ord for the California Junior Road Race Championship in late September, Jason Frost and his 15-16-year-old teammates Leonard Schummer and Hans Poulsen gathered around to talk about winning.

They knew each other well, and together they felt that Jason had the best shot at winning since the race culminated on a long uphill grinding sprint finish, one of his strengths. Tactics were discussed with their Directeur Sportif, Jason Kent. Hans was battling a virus and not feeling

great, racing only to help a teammate, knowing he could not win. But he would do whatever he could do for as long as he could do it.

Leonard would be the workhorse that day. Leonard and Hans kept the pace high early to fend off solo attacks, and even attacked the field themselves. And when somebody got off the front, they chased and countered, saving Frosty's legs for when it mattered most. Teammate Ian Dicksen was also there, swapping long pulls and bearing a lot of the workload.

With less than two laps to go, Frosty jumped with one rival rider and the two went up the road alone. With 20-30 minutes to go, Frosty topped off his reserves by finishing his flask of Montana Huckleberry Hammer Gel, washed it back with some Grapefruit Fizz, and prepared for the long, uphill sprint finale.

The two season-long rivals worked together to keep the field away, and agreed it would come down to the final sprint. Both wanted that State Champions Jersey. Both had prepared long and hard, but in the end, only one could wear it.

By the distance of a few centimeters, Jason Frost pulled off his biggest win, coming around his rival in the final few meters to take the Championship. As icing on that cake, his friends and close teammates, Hans and Leonard, took 3rd and 5th. Well done, sirs! [HN]

Lance Larsen grew up in the East Bay riding and racing bikes. He is the father of a Tieni Duro alumnus and has served as group ride mentor, leadership and training camp designer, adventure ride instigator, and Chairman of the Board of Directors.



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-online reviewer

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UPDATES INTERNATIONAL



HAMMER NUTRITION CANADA

2015: Year in Review

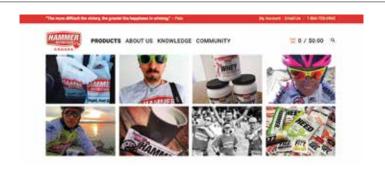
BY RYAN CORREY

This past November our Hammer family of four met for a two-day strategy session in Edmonton, Alberta. Beginning with a review of 2015, we detailed the highs, the lows, and the somewhat unexpected. Chief among the latter was the continued decline of the Canadian dollar (and our need to raise our prices). Thankfully, we know that Hammerheads will remain loyal to the superior fuels and supplements they have come to know as Hammer.

As I mentioned in the last issue of EN, Sarah and I were on the road for much of the summer with our 50+-stop Big Rig tour, following my sequel run of the 4,418 km Tour Divide race. Sarah and I spent countless hours at sponsored events, handing out samples, sharing stories from my newly released cycling autobiography, A Purpose Ridden, and conducting regular fueling seminars throughout our retail network.

On route across the country, we continued to hone our filmmaking skills by producing a series of fun monthly product spotlight videos (follow us on YouTube). I also created a lengthier companion series just for retailers. We paired these videos with a new in-store ambassador program to jump start fueling leadership and sales — more than 200% growth in a few cases.

My final project of the year was to rebuild www.hammernutrition.ca, a tremendous leap forward for the e-commerce side of our business. It also serves as an important link between our



community hub and knowledge base, which includes a deep pool of fueling resources (courtesy of Hammer HQ) in one, easily digested page. Check it out!

"Thanks for all your help and advice this year. With your help and the info on the website. I have really dialed in my nutrition for my long MTB races, my CX season, and my training rides and workouts."

- Richard B.



There's Gold in Them Hills

Leading what we now refer to as the Hammer lifestyle charge, Sarah and I are in the process of moving west to the mountain town of Canmore, Alberta. Look for us at all the major bike shows soon: Edmonton (February 27-28), Toronto (March 4-6), and Calgary (March 12-13).

Next on the ambition list, I plan to tackle the 1,200 km Arizona Trail in April, Sarah and I will be getting married in June, I return to the 24 Hours of Adrenalin in July, Sarah has a possible solo trek (her first) along the GR5 expanse in Europe, and we hope to complete a first draft of a bikepacking guidebook.

We look forward to sharing these adventures, as well as those of our newly selected athlete ambassador team!

#HammerCAN



Above: Ryan and Sarah living the Hammer lifestyle. **Opposite page:** Ryan Correy (right) and his Hammer family plan 2016: fiancee Sarah, Darren Thompson (foreground), and Sajeev Kappukatt. **Photos:** Courtesy of Hammer Canada

Ryan is an accomplished Adventure Cyclist, Author, and the Fueling Guru for Hammer Nutrition Canada. You can reach him by email at ryan@hammernutrition.ca

Hammer Canada's 2016 Athlete Ambassadors



Hailey Van Dyk Endurance Squamish, BC



Leigh McClurg Adventure Racer Squamish, BC



Spring McClurg Adventure Racer Squamish, BC



Lesley Maisey Triathlete North Vancouver, BC



Ron Amos National Cycling Champion Ottawa, ON



"Feeling grateful, setting my sights on what's to come, and welcoming an abundance of meaningful adventures and good company in 2016! I am thrilled to have the support of Hammer Nutrition Canada and proud to be an ambassador among a team of so many inspiring athletes."

— Rene Unser



Cam McLellan Ski Guide Invermere, BC



Brad Jennings Explorer Delaware, ON



Kyle Nesbitt Adventure Racer *Stratford, ON*



Rene Unser Trail Runner Kelowna. BC



Soren Olympic MTB Hopeful Orillia, ON



Hammer Europe

Welcome, Buddy van Vugt!

Hammer Europe recently joined our growing list of international distributors

BY ENDURANCE NEWS STAFF

Buddy van Vugt, a Netherlands native, has spent more than 10 years living abroad in Aruba and New York. The quintessential athlete, Buddy has competed in motocross, soccer, mixed martial arts, running, and triathlon, and has coached some of the world's leading charity endurance programs for the Leukemia & Lymphoma Society Team in Training and Ronald McDonald House.

Upon returning to the Netherlands in 2013, Buddy was looking for a new challenge. After running out of the Hammer products he had brought with him from the U.S., he ordered products from other brands but was quickly dissatisfied. A few months later, he and Brian Frank began talking about working together to establish Hammer in Europe.

Buddy's entrepreneurship and product knowledge help make what Hammer Nutrition Austria, Germany, and BeNeLux is today. The business is based in Breda, the Netherlands, where Buddy grew up and now lives with his family. These days, he rides mostly road bikes or runs. When he's not working or playing outdoors, Buddy can be found with his wife, Liesbeth, and his son, David.

Buddy's palmares in the past decade include eight marathon finishes (including Ultra-Marathon 75K in Aruba) and more than three dozen triathlon finishes, from sprint to full distance, with six podium places.

Hammer Europe Athlete Updates



Sandra Wassink-Hitzert Event: Cold Polderrun, Nijkerk, Netherlands Result: 2nd place women



Photo: Courtesy Hammer Europe Jerry Kenbeek **Event:** Nikolaus Duathlon, Frankfurt, Germany Result: 1st place 40+, 5th Overall

Calendar of Upcoming Events

February 26-28 – Triathlon Convention Europe, Langen, Germany March 13 - Triathlon (sprint), Hederen, Belgium April 17 - Trail Running Marathon, Bilstein, Germany April 24 - 24-hour MTB event, Gits, Belgium

April 30 - WHEW 100 (100K run), Wuppertal, Germany







TRIStore in Panama is fully stocked with Hammer products. Photo: Brian Frank

Hammer Panama

Our Hammer Panama team's active autumn season included a visit from Hammer Nutrition founder Brian Frank in November. Other season highlights: the Morning Ride Team participated in a cycling event in in Panama Oeste; an MTB event in Plantation, co-sponsored by Get One Bike; and a TRIStore ride for sponsored athletes and customers. TRIStore employees also participated in a community outreach event, working at their local food bank.



Hammer Philippines

Representatives from our Hammer Philippines distributor visited Hammer headquarters in Whitefish, Montana in November. Outside of the office, the team took time out to visit beautiful Glacier National Park, which is located about 30 miles from our office.

From left: Hammer Philippines distributors Harvie De Baron, Alex Panlilio, and Jose Antonio Mapa (Tonton) enjoy a day hike at Glacier National Park.

Photo: Clay Lundgren

FROM **OUR ATHLETES**

Our athletes are the heart and soul of Hammer Nutrition. They include elite pros who have been competing for decades as well as amateurs training for their very first race. We love to celebrate your achievements, large and small, whatever your sport. The athletes we feature on these pages are just a small sample of the thousands of Hammer clients who are "fueling right, and feeling great." Cheers to all!





A Brian Zahm

USAT Duathlon National Championships/ 10th AG

I never stray from my regimen of Hammer Nutrition products for training and racing - Hammer Gel, HEED, Endurolytes, and Recoverite. I used them during my training leading up to Nationals and on race day.

Photo: Angela Lewis

B Luke Sinak

St. Louis Track Club Frostbite Series 12K/17th overall

Premium Insurance Caps helped to get me to the starting line HEALTHY, and Espresso Hammer Gels did the trick!

Photo: Michael Sinak

C Jennie Phillips

Training ride

My brother-in-law Mark (also a Hammer client!) and I enjoy a great morning ride prior to Thanksgiving dinner in San Diego!

Photo: Courtesy Jennie Phillips

D Mindy Przeor

Arizona Road Racers Series/ 5th female Summers in Arizona get up into the 120s F and August and September add in a little humidity. I wouldn't have been able to perform well in the 5Ks without being properly hydrated. Endurolytes Fizz helped make this possible. I also took a Tropical Hammer Gel prior to every race and it gave me the boost I needed to push through! I followed the races and my summer training with Xobaline along with either Recoverite or a Vegan Recovery Bar.

Photo: Stefanie Veal

E Nick Matthews

North Face Endurance Challenge Marathon

I ran a solid race due to good training and proper fueling. I was in 20th place after 24 miles and passed seven people in the last 1.5 miles. You can't do that without proper fueling, and HEED and Hammer Gel put me in a position to do that!

Photo: Courtesy Nick Matthews









A Mario Mendoza

USA Marathon Trail Championships/1st Hammer Bars helped power me to a National Championship in the open division. Photo: Steven Heinrichs

B Suzanne Endsley

Hayden Lake Half Marathon/3rd female Keeping it simple with Hammer Gel Raspberry pre-race and then 1 Hammer Gel Peanut Butter at 5 miles and 10 miles. Post-race go-to: Recoverite! Photo: Todd Conley

C Alyssa Coe and Charlie Coe

Foot Locker Midwest Cross Country Championships

Hammer Sponsored Athlete Charlie Coe and daughter Alyssa celebrate their podium finishes at the Foot Locker Midwest Cross Country Championships. Both credit HEED for providing the punch needed to power through a very challenging course. Hammer on! Photo: Laura Coe







D Jannine Myers

Beat The Heat Half Marathon/2nd female

Given the extremely hot and humid conditions, I would not have been able to maintain the pace that I did without relying on Hammer Nutrition products.

Photo: Jade Myers

E Christine DiGangi and Kelly Henris

ITU Sprint World Championships

Christine DiGangi (left) and Kelly Henris (right) — both Hammer Sponsored Athletes — get ready for ITU Sprint World Championships in Chicago.

Photo: Margie DiGangi



JESSICA CULVER'S THE RUT MOUNTAIN RUN RACE RECIPE



Jessica Culver bounds down Headwater Ridge towards the finish Photo: Crystal Images



3 HOURS BEFORE: 3 Race Caps Supreme; banana; Almond Raisin Hammer Bar

DURING: 1 Hammer Gel, 2 Race Caps Supreme, and 1 Endurolytes every hour; plus sips of Sustained Energy in a paste; water

AFTER: I always have a bottle of Chocolate Recoverite waiting for me as soon as I finish followed by a Montucky Cold Snack Beer!

RESULTS

"I'm not sure if 'Ouch' or 'Wow' sums up this race better! The 25K race was nothing short of a test in mental toughness, from the steep climbs up Bone Crusher Ridge to the grueling descent off of Lone Peak summit. There wasn't much running, but it sure was a fun/hard endurance event if there ever was one." -Jessica Culver

A Eric Bruce

Ironman Louisville

Hammer Gel along with a Sustained Energy/Perpetuem mix helped me feel strong through my first Ironman. Of course, I finished the day with Recoverite. Photo: Phillip Rogers

B Richard Ling

Moses Lake Sprint Triathlon/ 1st AG

Moses Lake has become a tradition for my son, David, and me since 2012. HEED, Race Caps Supreme, Mito Caps, Super Antioxidant, Endurolytes, Anti-Fatique Caps were taken pre-race to maximize my race performance Postrace awards with David Ling (right), **Bryan Brosious** (center), and me. Photo: Tracy Ling

C Jenn Halladay

YMCA Triathlon-Spring Sprint

When I have to race early in the morning Perpetuem is the only product that will get me through. The best part about this race is I get to race with my very fast daughter Lexy (left). She had the second fastest running split.

Photo: Scot Halladay

D Connie Inks

Iowa Trestle Trail Hammer Nutrition is absolutely the biggest factor in my ability to train and recover.

Photo: William Allen









Friends don't let friends fuel wrong



From left: Coach Jeff Cuddeback and his athletes, Charlie St Cyr –Paul, Justin Burrows, Paul Chard, and Brian Forgue, after an 82-mile ride fueled by Hammer Nutrition. Photo: Courtesy Jeff Cuddeback

"I have a been Hammer athlete since at least 1991. I joined the *Hammer Referral Program* as soon as it became available. As a full-time triathlon coach I receive a lot of nutrition questions. I always recommend Hammer Nutrition, because I believe so strongly in Hammer products. They work and perform as advertised!

I would recommend Hammer to my athletes even without the referral program. However, it is especially easy to refer because the athlete receives 15% off their first order and I receive 25% of their order credited to my future Hammer purchases. Using the Hammer Referral program is a no brainer. Everybody wins!"

 Jeff Cuddeback, triathlon coach and three-time Ironman World Champion

Hammer Referral Program: **SHARE THE LOVE!**

- 1. You tell a friend about Hammer Nutrition.
- They get 15% off their first order when they mention your name/client number.
- 3. You get 25% of the value of their first order credited to your account (free Hammer stuff)!



For complete details visit: bit.ly/hammerlove

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You gotta try Hammer Nutrition! SAVE 15% ON YOUR FIRST ORDER! TELL THEM Name Client # SENT YOU!

Sheldon claims cyclocross national championship

'The Slasher' claims 1st title in Masters 50-54 division

Victor Sheldon

2016 USA Cycling Cyclocross National Championship

On a cold morning in Asheville, North Carolina, before the Cyclocross National Championship, I fueled my machine with a decent size breakfast. mainly protein, 3 and half hours before the aun went off.

Once I started my warm up an hour from the start time, I switched to HEED and took 2 ENDUROLYTES one hour out as well. After a great warm up on the trainer, I headed to the start line and about five minutes before I hit one Hammer Gel pack of tasty Nocciola.

I might add that I raced with a Hammer water bottle. Cyclocross Magazine took notice in its reporting from the race:

"Sheldon chose to race with a water bottle, giving hydration precedence over weight. He was one of several winners on Wednesday to choose this option."

Top: Sheldon on a training ride. Photo: Wadley Photography

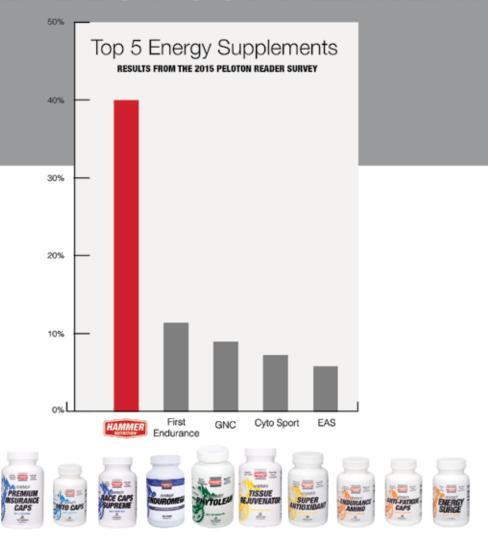
Bottom: Sheldon raced with a Hammer water bottle giving proper fueling precedence over Photo: Cyclocross Magazine via YouTube







VOTED BEST SUPPLEMENTS



Hammer Nutrition endurance supplements aren't only ahead of the competition, it turns out they are WAY ahead of the competition. A recent survey conducted by Peloton magazine found respondents preferred Hammer Nutrition supplements nearly 4-to-1 over the next closest competitor. Out of 14 brands, more than 40% of those surveyed declared Hammer as their supplement of choice in the "Favorite Energy Supplements" category. In fact, Hammer trumped all the other companies in the top five (First Endurance, GNC, Cytosport, and EAS) combined.



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FINISH CHUTE



Snowy Strides
Hammer Nutirtion Brand Ambassador Howie Nordström (see page 64) during a training session on a wintry day.

Photo: Karen Rice

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Sucrose, glucose, fructose, dextrose. Look at your endurance nutrition labels. If they contain any "-ose" sugars, we've got bad news: You're running on candy. Forget the flash-and-crash energy spikes. Experience sustained energy, smooth digestion, and peak performance with Hammer Nutrition! From fueling and hydration, to electrolyte replenishment and recovery, our products are ...

- Made with premium, natural ingredients
- Free of added simple sugars
- · Researched and manufactured in the USA

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