



EN REGULARS

The **Salt** Issue

If you can't seem to shake the salt habit but feel safe because your blood pressure is normal, this news should give you pause.



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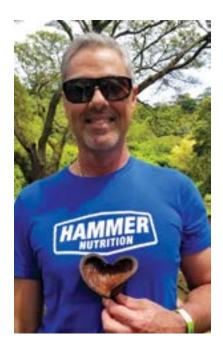


We are excited to tell you about our newest innovations: EnduroZyme and LSA Caps!



Hammer Nutrition is honored to be the official nutrition sponsor of The North Face Endurance Challenge—a series of two-day running events/festivals at locations across the U.S.





Since this is the first issue that about 4,000 of you are receiving in the mail, I encourage you to scan to the right a bit and read our Mission, Guiding Principles and Core Values in the masthead—abbreviated here. elaborated on our website. The website is also where you'll find the Hammer creation story, which answers the most frequently asked question I receive: How did it all start?

Reading these key articles will help you see what sets Hammer apart from every other nutrition brand on earth and why we hold a unique position atop the now cluttered endurance nutrition market. I'm aware of the magnitude of that statement, but remember that I have 31 years of history and a global community of dedicated Hammer athletes to youch for me. The other way you can verify our legitimacy is to call us! More on that later.

This issue is full, from cover to cover, with amazing athletes doing

Welcome to the 110th issue of Endurance News!

amazing things while fueling with Hammer, bracketed by two of the best athletes in the world, in their respective disciplines. Dean Karnazes and Brian Lopes are truly unique in their talents, but they are just like you when it comes to their fueling and nutrition—they choose to use Hammer products because they prefer them to everything else they've tried. They also see the value of the education we provide and have benefited from that as well.

This being our "salt" issue, it contains several important articles that discuss proper use of this lifesustaining compound and it's near universal abuse. Given the rising temperatures this time of year, it's a highly appropriate topic. The short version: Less is best!

You may wonder why we spend so much time talking about diet. and the three evils that need to be avoided, instead of just trying to sell you more products on these pages. Some detractors even accuse of us of "sugar/salt/wheat bashing" as a disingenuous way to sell my products.

Given the undeniable truth that reducing or eliminating these three common substances from your diet causes improved health, weight loss and improved athletic performance,

On the cover: Ultra Marathon Man, Dean Karnazes, running the Blue Mountain trails at The North Face Endurance Challenge Series in Ontario, Canada. Hammer Nutrition is excited to be a part of this incredible series for 2018, with Dean hosting. Read more on page 42! Photo: Ultra Race Photos

ENDURANCE NEWS

The informed athlete's advantage since 1993

AN EXCLUSIVE PUBLICATION OF:



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MISSION

Endurance News provides informative and 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 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 hammernutrition.com "Mission"





Legal Disclaimer: The contents of Endurance News are not intended to provide medical advice to individuals. For medical advice, please consult a licensed health care specialist.

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800.336.1977 hammernutrition.com I plead guilty to that charge. Whether you use Hammer or not, this is important information that is hard to come by anywhere else. Not coincidentally, all Hammer products are congruent with this approach to eating.

This publication is also a useful way to keep you updated on all of our new and improved products! Given our pace of innovation, reformulation and refinement, every issue gives you important insights in this area.

I'm excited to tell you about two brand new products—LSA (Liver Specific Advantage) Caps and EnduroZyme, two key supplements for athletes. We also reformulated all of the Endurolytes capsules to get rid of the rice bran odor they developed when heated for long periods of time—which is pretty common given their application.

You can also read about our newest flavor of Endurolytes Fizz—Cola, with 20mg of caffeine per tab. It will be in stock by mid June for consumer direct purchases and in stores shortly thereafter.

I'd also like to point out that our innovations transcend our product line and filter into others, which ultimately benefits consumers of those brands as well. When I introduced Fizz, it was the first effervescing electrolyte tablet made without artificial ingredients and chemical additives.

Since that time, competitors have reformulated their products and removed those harmful ingredients, replacing them with natural alternatives. I consider that a win for the consumer and hope that more companies will clean up their products in response to consumer demand, or because they have to in order to remain competitive.

OK, back to calling us. Many of you probably assume that my 800# goes to some boiler room call center, maybe in another country, where "operators" stand by to take your order and try to upsell you. This could not be further from the truth!

When you call 800-336-1977, it rings in our offices in Whitefish, Montana, and you will be greeted by a friendly person who has been extensively trained by me. They will help you understand exactly what you need—and just as importantly, what you don't need—and how to use it to achieve your athletic and health goals.

They are not paid on commission and are truly there to help you. Whether it takes 5 minutes or 45 minutes, you will get every question answered and every detail explained. If your situation is super complex, or you just want to talk to us, Steve or I will get on the phone with you.

So, if you still think:

- That sodium and water loading before a hot event is a good idea, you need to call us.
- That it's a good idea to eat a high sodium diet because you are an athlete and you sweat a lot, you need to call us.
- That you only need electrolytes to prevent cramping, you need to call us.
- That 300 or more calories per hour is a good goal, you need to call us.
- That you eat a "balanced" diet, therefore daily supplements are unnecessary, you need to call us
- That you can eat as much sugar as you want because you are a calorie-burning machine, you need to call us.

 You have ANY questions or uncertainties about your ideal fueling protocol for before, during or after your exercise/event of choice, you need to call us!

Or, if you just want to say hi and talk about the weather, you can still call us. The only thing better than calling us is stopping by for an in-person visit. So, if your travels bring you anywhere near Whitefish (Glacier National Park) this summer, please make a point of stopping in for a tour and some free samples!



When you call us, you will reach one of our knowlegeable in-house client advisors like Jesse Bennett. Jesse was a nationally ranked track & field runner for the 800-meter in college and he recently completed his Master's Degree in Physical Education and Sports Administration.

Because, at the end of the day, we are real people, selling real products, providing real useful information, with a singular desire to help you be a better you.

I know, lofty stuff from a perfectionist dreamer who still feels like he's only just getting started....

Enjoy the read and pass it on to a friend or two, or more.

Brin Frak

Brian Frank Owner/Founder

Starting Lines Letters from Hammer Nutrition Athletes & Clients

Hammer tailors itself to you



Luke and Brian from Joy Ride Bikes competed at the ABSA Cape Epic earlier this year. Photo: Hammer Nutrition South Africa

Joy Ride Bikes has been a strong supporter of Hammer for their ability to provide a broad spectrum of endurance fuels to help get the most out of your activity. Hammer isn't a one size fits all model. Some brands put everything into one package. Hammer Nutrition products give you the flexibility to tailor your endurance fuels to your body's needs.

- Luke Brechwald

Beat the Heat

I did a Century ride in Moab, Utah, the weather ended up perfectly cloudless and we rode in 90 degrees for 80+ miles. I consumed 18-20 Endurolytes capsules and about 2 gallons of water. The next day, no cramping no major fatigue. I believe in this product! My husband works outside a lot and he uses the capsules and Endurolytes Fizz.

-Peggy Shockley

A New Record For Energy

Did a 6 hour ride yesterday. I meticulously applied HN's approach with hydration, fuel, and electrolytes. Despite my fitness being way below normal because of injury downtime, I finished with more energy than I have ever felt. Thank you Hammer Nutrition!

-Daniel Mabie

Special Delivery

My wife (Kelly) recently gave birth to our son Kasper. Woohoo! During her 36 hours in labor, Hammer Gel helped immensely with getting energy without upsetting her stomach! Huckleberry and Nocciola were her flavors of choice. Thanks Hammer for helping Mom during a different kind of endurance event!

-Tiff Koehn

The Best By Far!

I am a runner and have type 1 diabetes. I am currently training for a half marathon. During my long runs, I have been using Hammer Gel, Montana Huckleberry to be specific. I just wanted to share with you how amazing this stuff is!! The Gel helps to keep my blood sugars level, gives me the energy I need... and tastes wonderful! Thank you Hammer Nutrition! This is the best stuff I have found, by far!

-Tammie Hunsucker

A True Lifesaver

When I'm bonking at the bottom of a hill, nothing enters my bloodstream and rejuvenates me as fast as a flask of Hammer Gel. But as much as I value Hammer fuel for sports, the REAL value for me and my diabetic friends is as a lifesaver. At work, in the car, at a party— whenever we get low blood sugars, we can gulp a mouthful of Hammer Gel and be all right. The consequences of low blood sugar can be catastrophic without it. I know at least 4 diabetics who now carry flasks of Hammer Gel at my advice.

-Sven (Nik) Dessle



SEND US YOUR LETTERS

We love hearing from you!

Drop us a line, share a tip, or tell us about your latest adventure.

letters@hammernutrition.com

Share your reviews on Facebook!

We welcome you to head over to our Facebook page and write a review! We check our page daily and enjoy hearing how Hammer Nutrition has helped vou. Hammer on!

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#howihammer

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@dye ultrarunner "This mountain, the arched back of the earth risen before us, it made me feel humble, like a beggar, just lucky to be here at all, even briefly." ---Bridget Asher A little climbing and a little yoga #howihammer



@ducpower89 Katie Oehler absolutely crushing her back fly this weekend at Skydive Mesquite. #howihammer



Opholczer It was an important #IMoveMe action on the morning run the day after Galatzó Trail marathon. The legs really felt better after the 10K in the morning, than before. #howihammer



@rjcooks Had a ton of fun at the Secca Racing race yesterday. I ended up going 1-1 for the overall #howihammer



@endurancesurgeon I can't believe this weather in the middle of March! #howihammer



@ tritom__ The organization, the route, the place, but above all, the volunteers and all the family who came out to support us, you were angels! Especially in the race with that infernal heat. Thank you all. I loved the event, and of course I'll be back. My result was not as planned but that's the Triathlon, there are no excuses so I'll continue working harder and see you in Monterrey in May for 70.3 Regioland. #howihammer

The Hammer Happiness continues...



@wade_performance_coachingBike riding is all about the fun
times and laughter. Hitting
the roads and the challenging
profiles. #howihammer



@stedgeracing First in my age group for a 5K this morning with my middle child in the stroller and oldest running on his own! This was her first race in the stroller and she loved it! #howihammer



@renaissance.cyclist Access to wild places is so different in Alaska. The world opens up to bikes once the rivers freeze & the tundra is smoothed over by snow. #howihammer







Keep the conversation going!

Use **#howihammer** for a chance to be featured on Hammer Nutrition's social media pages and right here in Endurance News!



NSAIDs: For Short-Term Use Only

BY ANDREYA GROZIK

What are NSAIDs?

NSAIDs are in the news a lot lately—most of which has been pretty scary. But what are they exactly? NSAIDs are nonsteroidal anti-inflammatory drugs, and are a type of painkiller. While most people associate NSAIDs with ibuprofen, there are many others including aspirin, naproxen, celecoxib, diclofenac, indomethacin, oxaprozin, meloxicam, and piroxicam. Some NSAIDs are available overthe-counter, while others are available through prescription only.

These drugs are effective at reducing pain and inflammation, but are to be used for a short amount of time. Directions from Advil® read, "You should use the lowest effective dosage to treat your pain," and "do not use for more than 10 days."

It's important that you know whether or not you are taking an NSAID as awareness about the health risks are growing, and different drugs in this class carry different risks. Because NSAIDs are so prevalent, and many are available over the counter, people can easily exceed safe amounts without even knowing it because they are taking more than one at a time. More on that below.

Bottom line: Instead of reaching for pain relievers regularly, consider other options that are safer for you. If you must take an NSAID, use the least amount for the shortest amount of time possible.

Too much can be cause for concern

Doctors agree that these drugs are only to be used for a very short time. If they are needed for longer than 10 days, your doctor should be consulted. Some doctors advise not using NSAIDs for more than 3 days. Additionally, it's important to follow the dosing directions carefully and drink plenty of water with these drugs. Alcohol consumption is not recommended when taking NSAIDs; and with some NSAIDs it could be very dangerous (An example precaution: "Avoid. Very serious interactions can occur.")

Taking too much of this drug or taking it for too long-can have very serious adverse effects such as heart attack, stroke, severe gastrointestinal problems such as internal bleeding, high blood pressure, kidney failure, and more. According to a recent study published in Journal of Nephrology, NSAID use triples your risk of acute renal (kidney) failure. NSAIDs are the number one cause of drug-induced kidney disease.

Bottom line: Just because a medication is available over-the-counter does not mean it's safe. Always let your health professional know about all non-prescription medication you take, even if it's just occasionally.

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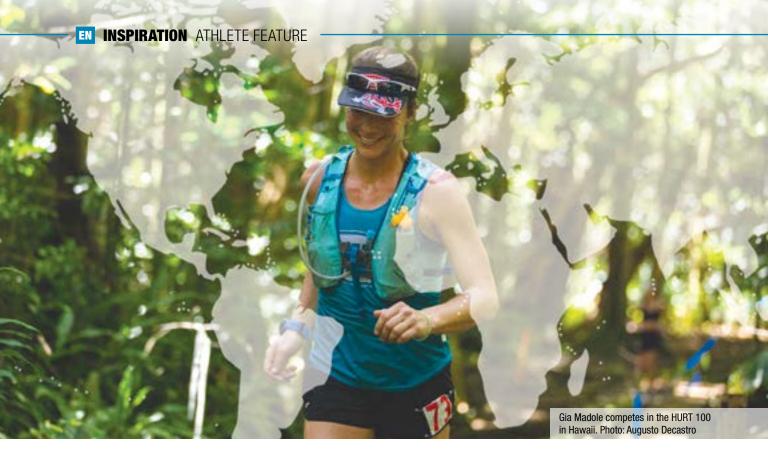
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Gia Madole's Adventures in Ultrarunning

BY ANDREYA GROZIK

The world of running is made up of people from all different backgrounds. Hammer Sponsored Athlete, Gia Madole, now an ultra runner, is someone who actually did not like running growing up. She said that back when she played basketball, running was more of a form of punishment.

Her first foray into running began in 2012 when a friend talked her into the 5K Turkey Trot. She was surprised that it ending up being "a lot of fun" but admits that she had no idea about fueling at that time. Once Gia started implementing proper fueling, she explains that it "makes a huge difference." She accomplished her first ultra one year later.

After the 5K, she ran a full marathon, an ultra, a 50 miler, and then a 200 miler. Gia's attitude was, "Why not me?" She says, "When I had signed up for my first 200, never having ran a 100, some people were skeptical about me doing it and why I would even do it. My response was, 'Why not me? Why can't I do it?"

Hammer Nutrition products have helped Gia

accomplish her goals. She says, "Hammer products allow me to train harder and race stronger." Recoverite and Tissue Reiuvenator are her "first and foremost go-to products."

Having recently relocated from Oklahoma City to a town in Colorado near Denver, Gia is making the most of her new location. "Denver has so many places to explore!" This June, she has an off-trail traverse planned that's about 50 miles long with 22-23 peaks—many of which are over 12,000 feet (one is 14,000 feet elevation.)

How Gia Hammers

- Endurolytes
- Essential Mg
- Hammer Bars
- Anti-Fatigue Caps
- · Endurance BCAA+
- Mito Caps
- Race Caps Supreme
- Recoverite
- Tissue Rejuvenator

Her spirit of adventure knows no bounds, and includes skyrunning. She came in 4th overall female at the SkyRun South Africa in 2016. "This was my first trip to South Africa and I had the privilege to run in one of the most beautiful, although hardest races in the country. The Salomon SkyRun, South Africa, is a self supported, unmarked and mostly off trail course with about 15,000 feet of gain over 100K. Runners have the option of any route they choose as long as they pass the 10 check points." She concludes, "The SkyRun South Africa is a race experience like no other I have ever had."

Gia recently ran the HURT 100 in Oahu, Hawaii. Even with the precarious tree roots, slippery rocks, and other obstacles, she never fell. In fact, she came in 4th overall female. She describes it as a really hard race factoring in the heat and humidity, and the fact that it was the most technical one that's she ran. "It was one of the harder courses, and one of the prettier ones," she adds.

Her goal is to go on a "runcation" every year, and the next one in her sites is in New Zealand next February. She wants to race in each continent three down, four to go.

Gia has been a personal trainer since 2013 and loves her job. She currently trains several athletes, and helped coach the USA Youth Swim Team while in Oklahoma City. She likes helping people accomplish their specific goals and enjoys being part of their journey. "The definition of true success is helping someone else achieve something they once thought was impossible," she says.

Her future plans include a 50-miler in May, Silver Rush in July, Kodiak 100 mile in August, and 24 The Hard Way in October—which is her first timed race ever, and she will be shooting for the record. In addition to those events, she will be pacing for a friend at Run Rabbit Run this September.

Gia's ultimate goal in life is to never stop learning or get stuck in a rut. She wants to continually experience new things and see new places. This joie de vivre must run in her blood. Her grandmother is turning 102 this year, and is as vital and involved in life as ever.

For those who are considering bucket-list adventures or more challenging athletic pursuits, Gia has some good advice: "You don't know until you try, so figure out what you want and make a plan."

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BY STEVE BORN

Recent research has shown that no matter how healthy your diet may be, if you're still consuming too much salt, all of your efforts are for naught—at least when it comes to high blood pressure and the negative health consequences associated with it.

In this study*, the researchers reviewed dietary data from a previous study, the INTERMAP study, which involved 4,680 people, aged 40-59, from the USA, UK, Japan and China. The results of this review revealed that the people who ate higher amounts of salt had higher blood pressure, no matter how healthy their diet was otherwise.

Previously, it was believed that eating high amounts of fruits and vegetables might help counteract the effect of high salt on blood pressure. However, while these foods do tend to lower blood pressure, this new research suggests that they do not counteract the adverse influence of salt intake.

In their review of the data, the researchers assessed concentrations of sodium and potassium in the urine samples of the 4,680 study participants. Sodium is a primary culprit for high blood pressure, while potassium has been linked to lower blood pressure. The intakes of 80 additional nutrients that are believed to help lower blood pressure—including vitamin C, fiber, and omega-3 fatty acids were also reviewed.

The results showed that in the participants who were consuming high amounts of potassium and other anti-high blood pressure nutrients, the researchers still found a correlation between high blood pressure and higher salt intake.

Emphasizing the importance of cutting salt intake, Dr. Queenie Chan, joint lead author of the research, states: "We currently have a global epidemic of high salt intake—and high blood pressure. This research shows there are no cheats when it comes to reducing

"There are no cheats when it comes to reducing bloodpressure. Having a low salt diet is key, even if your diet is otherwise healthy and balanced."

blood pressure. Having a low salt diet is key, even if your diet is otherwise healthy and balanced."

According to the Center for Disease Control (CDC), approximately 75 million American adults (29%) have high blood pressure—that's 1 in every 3 American adults. High blood pressure greatly increases the risk for heart disease and stroke, the first and third leading causes of death in the United States.

The American Heart Association recommends no more than 2,300 mg of sodium a day and

an ideal limit of no more than 1,500 mg per day for most adults. Unfortunately, Americans consume amounts that far exceed the AHA's recommendations. This is why it's crucial that you be more aware of your salt intake each day, and not just in your food. Salt is the primary ingredient in most electrolyte supplements and sport drinks on the market, oftentimes in amounts that are excessively high, and that's cause for concern. especially in light of this new study. Hammer Nutrition's fuels, however, contain a very modest

amount of salt, complemented by a balance of potassium and other important minerals

BOTTOM LINE: If you really want to lower your risk of having high blood pressure, you still have to eat the best possible diet; there's no getting around that. However, to get any value from the healthy foods you eat, helping to stave off high blood pressure and its harmful effects on your health, you absolutely MUST lower the salt you consume in your diet.

*References available upon request



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Teeth in Trouble

BY ANDREYA GROZIK

After perusing several articles with fitting and humorous titles such as "Your Teeth Are Probably Better Than An Olympian's" and "Energy Drinks Help Athletes Go for Gold Fillings," it's evident that dental health is often a problem for athletes. Since it's such an important component of overall health, it's worth examining the cause.

A likely culprit is frequent use of sports drinks. Most sports drinks are loaded with sugar and citric acid, which can cause tooth decay and damage tooth enamel. Dr. Tony Clough, a leader in dentistry, confirms this, having witnessed athletes "refueling with teeth-eroding acidic sugary drinks."

According to Paul Piccininni, an expert in sport

dentistry, "The oral health of athletes is worse than the oral health of the general population. Considerably worse."

Studies have shown just how serious this problem is. One such study, published in the British Journal of Sports Medicine, reveals that Olympic athletes have such poor oral health

"Tooth decay is always caused by sugar."

that it impacts their performance: 28% of athletes said their poor oral health affected their quality of life and 18% said it had an impact on their training and performance. The authors of the study state:

The association that we found between caries [tooth decay] and well-being and performance might be explained by the experience of pain and interference with eating, drinking, and sleep due to the caries. Previous studies of younger populations have found similar impacts of caries on life quality. Caries risk and disease levels have repeatedly been found to be high in athletes.

Dr. Anne Twomey says, "Tooth decay is always caused by sugar." She says people are often not aware of how much sugar they are drinking in their sports drinks and protein shakes—that these drinks "can contain anything from five to a dozen teaspoons of sugar. We've even come across one drink which contained 14 teaspoons of sugar."

Sugary drinks and beverages with citric acid are destined to cause dental damage. Even worse are the sports drinks that contain an insidious combination of the two. Hammer Nutrition's HEED is sugar-free and citric acid free. With HEED, you will not get tooth decay or damage to your tooth enamel, but you will get energy, electrolytes, and hydration. 🕮





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Updated SOS

So many successful athletes turn to Hammer Nutrition for fueling and supplements, along with the educational materials we provide free of charge. If you are not familiar with S.O.S. 5 Secrets of Success, it is one of the resources we have created to help you maximize your athletic performance. In this issue of Endurance News, we will give you a sample of this informational guide, taken from section four: Electrolyte Replinshment.

The other sections are as follows: Pre-Exercise Fueling, Calories Count, Proper Hydration, and Recovery Done Right.

Updates to this version include a new overall sequence, sidebars with quick tips that are now easier to reference when on-the-go, and improved fueling information. We've included a tear-out back cover to help you plan your race strategy.

If you have an older version of our S.O.S. or have not yet received a guide, be sure to get your copy now to Fuel Right, Feel Great!®



Electrolyte Replenishment



Our fueling recommendations:

To keep your body functioning smoothly through a long workout or race, replenish the full spectrum of electrolytes consistently and completely.

*Extreme conditions may warrant higher levels of electrolyte replenishment. Use the tear sheet on page 23 of the SOS booklet (shown at right) to plan your intake.

Think of electrolytes as the motor oil in your car—they don't make the engine run, but they're absolutely necessary to keep everything operating smoothly. Just as you wouldn't wait for your engine to seize before you top off the oil, don't wait to cramp before you replenish electrolytes. Long before you cramp, your output has been suffering due to mineral depletion.

Electrolytes 101

The goal of electrolyte replenishment is smooth, uninterrupted, uncompromising performance. Without the proper levels of electrolytes, your body can't carry out critical body functions such as muscle contractions, normal heart rhythms, and nerve impulses—all of which are critical for performance and health.

Coming this summer: Endurolytes® Fizz: Cola

Read more about our newest flavor innovation on page 28



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Race Report Winning the JC Stone 50K



Josh celebrating his finish as the overall winner of the JC Stone 50K. Photo: Max Petrosky

The first race of the season is always an adventurous one—you never know guite how in shape you are until you actually go out and race. Sure, you can kind of gauge yourself based on workouts and long runs and recovery time, but those are far removed from actually racing. The JC Stone 50K was at North Park in Pennsylvania. an awesome bike path surrounding a lake.

As we drove up to check in, the weather was 20 degrees, but there was no wind, which made it much better than last year (the race director went to the hospital with hypothermia). The race consisted

of a 1.1 mile little loop followed by six "5" mile loops (my watch tallied the race at about 31.5 miles, longer than a 50K.) As I started this little pre-loop, the field quickly separated, so I was alone out front.

Even though I was still pretty nervous at the uncertainty of this race, running by myself wasn't necessarily bad since I didn't have someone pushing me faster than I should have been going.

I picked Ellis up, my pacer, after that pre-loop, and we sauntered off through the gently rolling hills. Per MapMyRun, the race ended up having 2,000' of gain with no climb bigger than 50', so it's essentially continuous elevation change through the race. The pace felt very comfortable, although instead of running at 6:45s, we were going at 6:35s. This is what makes shorter road races weirdthe pace is not uncomfortable by any means, but it starts to add up quickly at a point that is difficult to predict.

We did the first two laps together with these 6:35s, and at the start/ finish of every lap, I grabbed a water bottle of HEED. I was still feeling pretty good, and my watch was telling me that I was still holding good pace around 6:35. It wasn't until one of the small climbs toward the end of the loop that I started feeling it a little—I could tell from this hill, about 20-21 miles in, that the rest of the race may be tougher than I thought. The idea of a negative split started to go out the window. I ate one of my Peanut Butter Hammer Gels in my pocket.

I came through the start/finish and turned out of sight of my crew and the others, to one of the three climbs on the course. After trying to maintain pace up the climb for about ten seconds, I realized my folly and started walking. I really wanted to make it without walking, but with how sneakily hilly the course was, and the fact that I wasn't quite in the shape

that I thought, it turned out that wasn't going to be feasible. Now, the race just became a war of attrition, with me trying as best as I could to not let my average pace jump up too high.

I moved through the loop, running decently hard through everything but the three bigger climbs. At the halfway aid station, I was pretty hungry (I should have had the Gel sooner). I came toward the end of the fifth loop, and glanced down at my watch just as I was crossing the 26.2 threshold—2:57:45. If I could run a 2:57 marathon with a little bit of walking and still (hopefully) have enough in the tank to finish somewhat decent, I guess I wasn't doing too badly. This gave me a little boost towards the beginning of the final lap.

At the first hill, some people were moving at a pretty good pace in front of me. I used them as motivation to not walk. Then at one of the bigger downhills, I started to feel good and took off. I climbed the second of the three climbs on the loop, and could finally start seeing (figuratively and literally) the finish line.

As I rounded the final turn before the finish, I was still maintaining a 6:58 average pace. Setting a sub-7 pace as an arbitrary goal, I halfran, half-walked up the last climb, crested the hill, and then started barreling down to the finish. I crossed the finish line at 3:40:06. This time comes out to just slower than 7 minute miles, but since the course was about 31.5 miles instead of 31.1, it came out to

averaging 6:59 across the course, with 2,000+ feet of gain.

I collected my finisher's medal and winner plaque, and wobbled about the finish line. I ended up winning by about 15 minutes, although I was 20 minutes off of the record. While the record was definitely unobtainable, I think that if I laid off the pace a little bit at the beginning, I may have been able to shave 5 or so minutes off of my time. Even still, I improved on my time from last year by 10 minutes on a course that was longer and hillier than Caumsett. For a first race of the season, it was definitely positive, and gives me confidence going into the Ironmasters 50K in April and then the Mohican 100M in June.

Complete Daily multi-vitamin support



Skip the Salt, Save Your Health

BY ENDURANCE NEWS STAFF

If you can't seem to shake the salt habit but feel safe because your blood pressure is normal, this news should give you pause. According to a scientific report, your daily dose of salty snacks, packaged convenience foods, and cured meats could be wrecking your health without causing any external warning signs.

The insidious effects of excess dietary sodium on the body's internal organs have been detailed in the paper "Dietary Sodium and Health: More Than Just Blood Pressure." published in the Journal of the American College of Cardiology. Authored by faculty members of the University of Delaware College of Health Sciences and physicians at Christiana Care Health Systems, the article points to evidence of adverse effects on multiple organs, including the blood vessels, heart, kidneys, and brain—even when blood pressure remains normal. The researchers cite more than 100 studies to support their conclusions:

■ Blood vessels: Potential effects include reduced function of endothelial cells (those that form the lining of the blood vessels), which are involved in

coagulation, platelet adhesion, and immune function. According to the researchers, in studies of both animals and humans, high sodium intake reduced endothelial function and increased arterial stiffness independent of blood pressure. In addition, the researchers say "sodium's deleterious effects on endothelial function likely result from reactive oxygen species, such as superoxide, resulting in reduced nitric oxide bioavailability." (As discussed in past issues of Endurance News, nitric oxide dilates blood vessels and benefits endurance.)

■ **Heart:** The researchers cite studies showing that high dietary sodium intake can lead to enlargement of the muscle tissue that makes up the heart's main pumping chamber (left ventricle), independent of blood

pressure. In fact, among a group of people who had only mildly elevated blood pressure, those who excreted the most sodium showed greater enlargement.

- Kidneys: Although "there are a limited number of studies of subjects without kidney disease ... evidence suggests that high sodium is associated with reduced renal function." One animal study showed a decline in renal function with only a minimal increase in blood pressure.
- Brain/nervous system:

Chronically elevated dietary sodium may sensitize sympathetic neurons and increase response to a variety of stimuli. Even without increased blood pressure, "chronically increased sympathetic outflow may have deleterious target organ effects," say the researchers.

Limit Your Sodium Intake

- Avoid processed foods. About 70% of dietary sodium comes from processed and prepared foods, including breads, cheeses, processed meats, and sauces. When you do buy packaged foods, check the label for sodium content.
- Don't add salt at the dinner table. If you must, use a low/no-sodium salt substitute, or enhance flavor with spices, herbs, vinegar, or lemon juice.
- When replenishing 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.



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Steven Terry on his way to finishing his first Ultra Trail Run, the Colossal Vail 55K. Photo: GOATographer



BY LAURA LABELLE

This is a difficult topic for me, because I love salt. I will choose potato chips or olives over sweets, any time. The question is, do we really need salt in our daily diet? Of course we do! The problem is that like sugar, salt has been added to everything we eat in great amounts, even though we only need less than 1 gram per day. Children need even less. The average American intake is over six times that amount! The thing is, the more salt we eat, like sugar, the more our brains tell us we need. If you eat a high sodium diet, chances are that any unsalted food will have very little taste or appeal at all.

Our focus should be on optimum health, just as we focus on optimum performance as athletes. We have been lead to believe that salt is the answer for hydration. yet when I eat too much sodium, I feel pretty lousy. I get bloated, lethargic, nauseous, and even have headacheshardly what I want when I'm racing. At Hammer Nutrition, we believe a full balance of minerals is needed to address the issues of hydration. Sodium is only one of an array of minerals our bodies need for full hydration and performance. Our Endurolytes formulas have sodium, chloride, calcium, magnesium, potassium, and manganese.

Here are a few reasons why we encourage our readers and customers to choose a lower sodium diet. A high sodium diet can have an adverse affect on our cardiovascular system, and increase risk of stroke in adults. Some studies show that high sodium intake can affect our brain, impair our cognitive function, and contribute to hypertension. High sodium intake can also cause edema, or water retention, causing swelling in our legs, joints, and abdomen. Stomach cancer and kidney dysfunction are among the lethal side effects of too much sodium in our diet. It is also linked to obesity.

Since cutting down on sodium is almost as difficult as getting off sugar, I suggest you start slow by trying to decrease your intake gradually. Stay away from fast food and processed foods. Many restaurants use enormous amounts of sodium. Cooking your own meals is key to controlling your sodium intake. One trick is to cook with no salt at all. Many foods lose the salty taste by absorbing the salt as you cook it, and then you need to add even more. Another tip is to use more herbs and spices to make your food more flavorful. While you may experience bland tasting food for a couple of weeks, the health benefits outweigh the risks of continuing to consume too much salt.

The thing is, the more salt we eat, like sugar, the more our brains tell us we need.

Whether you play hockey, race horses, ski, wind surf, or run marathons, everyone has the same biological needs, and hydration is key to your success. Water lubricates your joints and regulates body temperature. If you are not hydrated, you can't expect your body to perform at your highest potential. Proper hydration has been shown to alleviate cramping, dizziness, and fatigue. All of these are common signs of the dreaded "bonk" during races. Help your body help itself by supporting it with the proper electrolyte balance.

In addition to eating less salt, try Hammer Nutrition's Endurolytes, Endurolytes Extreme, and Fizz. There's even a new Endurolytes Extreme Powder. All endurance athletes need to be mindful of hydration. No matter what your electrolytic needs are, we have something for everyone. If you are not sure how much you need or what to take for your personal needs, please consult our amazing staff for a personalized protocol.



Laura Labelle studied at *Ecole De Cordon Bleu* in Paris, and 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.

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David Larpenteur on his way to a first overall win at the Runnin' O' the Green 5K in Bellingham, Washington. Photo: David Penrose

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Marinated Shrimp for the Grill

3 large shallots peeled and chopped 2 garlic cloves peeled and minced 1/4 cup green onions finely chopped 1/2 cup lime juice 2/3 cup coconut animos 1/4 cup avocado oil 1 tsp. red chili flakes 1/2 tsp. black cracked pepper 2 lbs. giant/jumbo shrimp

Mix all ingredients in a bowl and marinate for an hour in the fridge, then bring to room temperature. Throw on a hot grill for about three minutes on each side. Goes great topped on Peas and Carrots Salad with Almond Butter Tumeric Dressing.

Peas and Carrots Salad with Almond Butter Turmeric Dressing

For the salad:

1 large head butter lettuce 2 medium Belgian endive 1/2 cup raw English peas or sliced sugar snap peas 1 large carrot grated or cut thinly For the dressing:

1/3 cup lemon juice

3 Tbs. water

1 Tbs. honey

3 Tbs. raw almond butter

2 tsp. powdered tumeric

1 clove garlic

1 piece fresh ginger (1 inch peeled) Optional: fresh cilantro or parsley

Wash veggies and dry. Put lettuce in a salad bowl. Slice endives in cross-cut slivers, and add peas and carrots.

For dressing: add all ingredients to a blender and blend until smooth. Add more water or lemon juice if too thick.

This salad is a colorful and flavorful addition to any meal, or it can be a meal by itself if you add steak, chicken, salmon, or shrimp.



These recipes are just a few examples of how you can create a delicous, salt free meal. Have fun experimenting with herbs and spices to pep up your meals. Photo: Endurance News Staff

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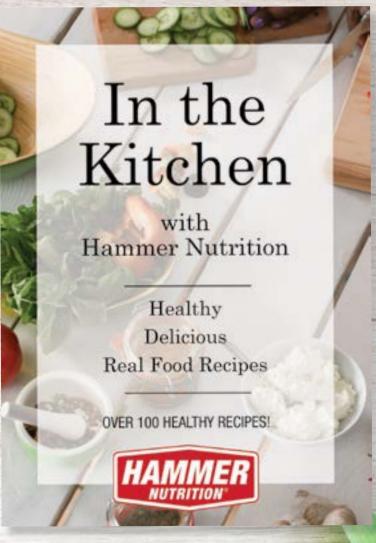


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Product Spotlight

Meet the Newest Fizz Flavor!

Plus: Endurolytes Capsules get an Odorless Upgrade

BY ENDURANCE NEWS STAFF



We're excited to announce a new flavor of Fizz!

Now you can enjoy the taste of cola—along with 20 mg caffeine without the guilt! Cola Endurolytes Fizz is a much healthier alternative to the real thing, giving you a much-needed mix of electrolytes. It will keep you hydrated and going strong, without the G.I. distress that often comes with drinking actual cola. Instead of a sugar crash, give your body what it needs. Electrolytes are necessary for many things, including muscle contractions and nerve impulses. They keep everything running smoothly.

Whether you simply like cola flavor or are a cola drinker during training and events, give Cola Fizz a try. Your body—and athletic performance will thank you.

An improved formula for Endurolytes and Endurolytes Extreme!

Despite the resounding success of this product, it had one weakness: The rice bran used as a natural and nutritious filler had a tendency to develop an odor when exposed to heat. While not a hindrance to product efficacy, it was suboptimal—especially given the products' intended use.

We're pleased to announced that after thorough research, we've chosen a new filler. Nu-FLOW[®], derived of rice hull, is just as healthy, natural and useful, but eliminates odor concerns.

They say "nothing is perfect," but the Endurolytes product line is pretty dang close!



Fire up your workout instantly, with Fully Charged

Grab a pack and go

- EASY, on-the-go fuel
- Increases energy
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NEW 24 Singles \$34.95 30 Serving tub \$34.95 6 Single-serving packets \$9.95





Hammer athlete Shalini Kovach. Photo Credit: Rick Mayo, Mile 90 Photography

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You can't be Hammering all the time, but with this coozie, you can fly the Hammer flag even when your feet are up. Made in the USA.

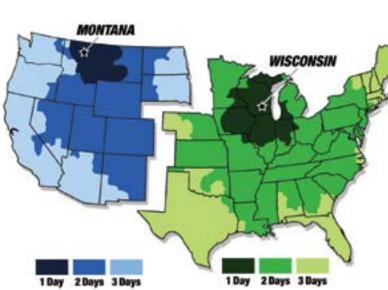
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New Product Spotlight

EnduroZyme: The Way Nature Intended

Efficient digestion and maximum absorption

BY STEVE BORN

The quality of the food you eat is undeniably important and so is making sure you're efficiently digesting your food and absorbing the nutrients it contains. That's where enzymes come in, their powerful catalysts maintain efficient digestion and maximize nutrient absorption. Enzymes help digest our food and play a vital role in every chemical reaction that goes on in our body.

The typical American diet contains a high volume of enzyme-devoid processed foods. Cooking also destroys the enzymes that naturally occur in food. Add to that the natural age-related decrease in bodily enzyme production, and it's no wonder that so many people are dealing with numerous health issues, particularly GI health. Without a sufficient supply of enzymes, metabolism becomes sluggish-to-nonfunctioning, greatly disrupting effective assimilation of fats. carbohydrates and protein. healthy detoxification, immunity, and more. Without efficient metabolism, healthy cellular function becomes virtually impossible.

It's no wonder that so many people are dealing with numerous health issues, particularly GI health.

A digestive enzyme supplement that contains multiple enzymes to break down and digest can solve this issue. Hammer Nutrition's EnduroZyme is that vital supplement. It supplies an impressively wide range of non-animal enzymes, and effective amounts of each of these enzymes.



Optimal health relies on whole food and depends on proper digestion and metabolism.

Hammer Nutrition's **EnduroZyme** is a groundbreaking blend of non-animal-derived digestive enzymes and cofactors. By ensuring full breakdown of your meals, you will experience immediate improvements in your digestion, while alleviating numerous symptoms of indigestion and irritable bowel syndrome. As your body consistently makes better use of the foods you eat, you will feel steady improvement in your health, energy levels, and athletic performance.

Pop a couple of EnduroZyme capsules before a meal, enjoy your food, and feel great afterwards—just the way nature intended.



Reduces fatigue

Restores glycogen

No artificial ingredients

"Since I started drinking Recoverite, I've noticed a huge improvement in energy levels, muscle recovery, and even injury prevention. AND it tastes awesome! I recommend this Hammer product to everyone."

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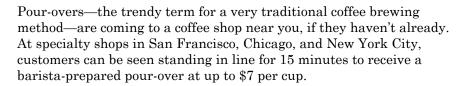
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Pour it on

BY ENDURANCE NEWS STAFF



Why the fuss? Pour-over coffee, often described as "handcrafted," is simply drip coffee made one cup at a time by hand. No coffee machine required—or desired. The technique involves slowly pouring hot water over freshly ground coffee to bring out the coffee's true essence. Aficionados say the superior flavor makes the price well worth paying. But there is a less expensive option: make your own perfect pour-over and save at least \$1,400 a year! Here's how.

Pour yourself the perfect cup

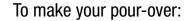
It all starts with the beans. The reason pour-overs are catching on is that coffee drinkers are acquiring a taste for excellence beans that have been organically grown, carefully selected, and micro-roasted to order, ensuring maximum freshness and flavor.

For a do-it-yourself pour-over, start with the 53x11 Coffee of your choice. Whether you grind your 53x11 Coffee beans yourself or buy 53x11 pre-ground, the quality and freshness are guaranteed. 53x11 Coffee is roasted to our exact specs, packaged for your order, and immediately shipped to your door. You'll also need: a cup or mug; kettle (ideally with a long spout for slow, controlled pouring);

a single-serve drip cone; and coffee filters.

The rewards

By developing your inner barista, you'll experience the satisfaction of making your own perfect coffee and save more than a few bucks in the process. Consider: if you bought two \$2.50 cups of pour-over coffee a day at a specialty coffee shop, you'd spend about \$1,825 a year. OR, brew your own 53x11 single-serve coffee for about 58 cents per 6-oz. cup. Drink two cups per day for just \$425 a year—a savings of more than \$1,400 per year versus coffee shop pour-overs! Pouring your own 53x11 Coffee is a bold move that will yield rich rewards.



- 1. Heat twice as much water as your cup will hold (e.g., 24 ounces if your cup holds 12 ounces). Use only pure, fresh water. If using whole beans, grind them to the coarseness of sea salt, as the water heats.
- 2. Fit the single-cup cone over your cup, then add a filter. When the water comes to a boil, slowly pour about half of it through the filter into your cup. This will pre-moisten the filter and heat your cup. Wait about one minute.
- 3. Pour out the water from the cup; replace the cone, then add the ground coffee to the filter. For a bracing brew, start with 2 rounded tablespoons of ground coffee for a 6-ounce cup.
- 4. Slowly pour 2-3 tablespoons of the hot water over the center of the grounds. This will cause the coffee to expand, or "bloom." Wait 30-45 seconds, and then very slowly pour the remaining water into the grounds. This should take several minutes altogether. Remove the cone and grounds, and enjoy pure coffee flavor at its best!



TIP:

Join the 53x11 Coffee of the Month Club, and get a FREE "Perfect Cup of Coffee Kit"—mug, Melitta Single Cup Coffee Brewer, and 40-count box of unbleached #2 filters.

Go to hammernutrition.com/53x11-coffee-of-the-month-club to join!



- Fair-trade
- 100% organic
- Micro-batch roasted



USDA

Our organic, fair-trade coffee is guaranteed fresh and delicious, no matter which of our palette-pleasing blends you choose. Our beans are roasted in micro-batches to order and are shipped within 1-2 weeks of roasting.

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Be Green, Use a Flask

BY BRIAN FRANK

Despite the fact that most of our clients have an earnest desire to be "green" and less wasteful, we are seeing an ever-increasing number of athletes using disposable singleserving gel packets in the name of convenience. Meanwhile, jug, and therefore flask, usage has remained flat or declined during the same period. Having originated the refillable flask and jug concept in 1995 as a highly favorable alternative to single-use, mylar foil pouches, I find this to be more than a little troubling. Finding discarded gel pouches, Hammer Nutrition and other brands alike, on the side of the road everywhere I go is the most bothersome of all. Getting phone calls and emails from irate people complaining about it being our fault that someone dropped an empty pouch on the trail is no fun either.

With certainty, this trend is not good for the environment. However, the preference for pouches is formidable. When pressed for a reason why they use the singleserving packets rather than the more economical, reusable flask, gel users cite a variety of reasons: They

say that they don't want to waste gel by filling the flask and only using a portion of it during their workout. Only putting one or two servings in the flask is a problem too, because the gel does not come out easily. Then there are the logistical reasons: "I have nowhere to put the flask", "I don't want to carry it while running," etc.

But the reasons don't hold up to critical analysis. I'll posit that flasks are actually more convenient, if given some serious thought. If you are exercising for less than one hour, there's not much need to bring calories with you; just take a good serving of gel before you leave and then drink water, maybe with an Endurolytes Fizz or two. For exercise over one hour, the flask is actually easier to use than having to retrieve, open, dispose of the tab, consume, replace the spent gel pouch somewhere, etc.

When purchased in a 26 serving jug, Hammer Gel is only 77 cents per serving! The reality is that using a jug and flask is more economical, better for the

Pouch or Flask? Do the Math

Pouch: \$1.40 per serving Jug: \$0.77 per serving

You save 45% by choosing jug-and-flask delivery over pouches!

If you use 30 servings per month you save about \$227.00 per vear!



Continued from previous page

environment and, ultimately, even simpler than single-serve pouches. If you must use singleservings PLEASE dispose of your empty pouch properly. Hammer trash is not our idea of good advertising.

Flask use made easy - no matter the duration of your workout or event

All one has to do is pour in the desired number of servings for the next workout, A one-hour workout would require one or a bit more servings (as shown below); top off with water, shake a couple of times, and then consume the entire contents during that hour workout. As shown below, the same goes for two-hour or threehour workouts as well.

How to use your Hammer flask



The first step:

Fill your flask with Hammer Gel. Serving sizes are marked on the outside of the flask. Adjust serving size based on duration of your workout. The flask can hold a maximum of 5 servings.



Next:

Top off your Hammer flask with water and give it a good shake. The water gives the gel an easy-to-sip consistency and makes for a refreshing energy boost.

Rock-solid energy

Easy to digest



Purchase a 26 Serving Jug and get a

FREE HAMMER FLASK!

26 Serving Jug **\$19.95** Single-Serving Packets \$1.40 ea



"I have been using **Hammer Gel** for several years. I really enjoy the variety of flavors and that I can get the multi-serving container and use a flask, rather than individual packets. There is much less waste and it's easier to use."



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Answers to frequently asked questions about **Hammer Fuels**

BY ENDURANCE NEWS STAFF

Does Perpetuem contain electrolytes? If so, do I need to take other Endurolytes products with it?

Yes, Perpetuem does contain some electrolytic minerals. But unlike HEED (which is formulated to include electrolytes), the electrolytes in Perpetuem were not added by design. The minerals in Perpetuem occur naturally as a result of the product's other components, primarily the sodium phosphate and soy.

Perpetuem is a complete calorie source—complex carbohydrates, soy protein, and a healthy, soy-derived fat—but it does not contain a wellbalanced profile of electrolytes. That's why you should use Endurolytes to supply electrolytes when using Perpetuem. Keeping your intake of calories and electrolytes separate allows you to regulate them with greater precision on an hourly basis.

Bottom Line:

Perpetuem = calories, Endurolytes = electrolytes

Electrolytes in Perpetuem vs. Endurolytes		
Mineral	Perpetuem (1 scoop)	Endurolytes (1 capsule)
Calcium	18 mg	50 mg
Magnesium	4 mg	25 mg
Potassium	60 mg	25 mg
Sodium	110 mg	40 mg
Chloride	0 mg	60 mg

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 nearly calorie-free, complete electrolyte replenishment in effervescent tablet form.

Every scoop of HEED contains 100 calories, and the electrolyte amounts similar to one-half tablet of Endurolytes Fizz. Our general recommendation is one-half tablet of Endurolytes Fizz (or one Endurolytes capsule) for every 50-60 pounds of body weight per hour. Lighter-weight athletes will find that 1-2 scoops of HEED in a water bottle will probably 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.

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. This is also the case for athletes who are either unable to swallow capsules during exercise, or who prefer lightly flavored water.

We highly recommend that you carry extra Endurolytes Fizz tablets or Endurolytes capsules with you so you'll have them if conditions require more electrolytic mineral support.

You can definitely add Endurolytes Fizz tablets to your bottle(s) of HEED to boost electrolytes... and create a flavor of your own!

Bottom Line:

HEED = calories + electrolytes Endurolytes Fizz = electrolytes only

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in France. Photo: Courtesy Buddy van Vugt, Hammer EU



180Softgels \$29.95

"These are wonderful Omega supplements - the first that allow me to exercise without burping fish oil!"

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BY STEVE BORN

Twelve years ago, company founder and owner Brian Frank wrote, "Show me an athlete with salt crust on their skin and clothing and I'll show you an athlete that consumes a high-sodium diet. The more you eat, the more you will excrete; it really is that simple. High sodium intake is not only contrary to optimal health; it contravenes normal body mechanisms that regulate sodium excretion and recirculation during exercise. This is why we have always advocated a lowsodium diet and moderate sodium intake during exercise."

High sodium intake is not only contrary to optimal health; it contravenes normal body mechanisms that regulate sodium excretion and recirculation during exercise.

Brian's sage words are spot on. He's never deviated from his stance, and he never will. Neither does anyone here at Hammer Nutrition. Our position on dietary and exercise sodium intake is exactly the same.

Back when Brian made that statement, a handful of "experts" were recommending that athletes increase their sodium intakeeither on a daily basis, in the week leading up to an event, during an event, or all three combined—to prevent heat-related problems. At the same time, a lot

of companies seemed to be in a competition to see who could include the most salt/sodium in their product. It was as though the more sodium, the better, and this was the key to resolving heat-related issues during exercise.

Sadly, the excess-sodium products are still on the rise. The "expert" advocates haven't changed their position, which is why athletes continue to suffer diminishedto-ruined performance in their training sessions and

There is no doubt that sodium is an important mineral for maintaining optimal exercise performance, and it's important to note that during exercise you excrete sodium faster than any other electrolyte. In addition, if sodium gets too diluted (usually from overhydration), hyponatremia, a medical emergency, may result. However, the kidneys have specific and complex mechanisms to regulate sodium excretion. When sodium concentration gets too low, you secrete hormones that help retain the remaining sodium and keep it circulating within the system. Your body knows how to regulate itself!

Before you buy into the "more is better" sodium rationale, consider this: Excess sodium (e.g. from your diet or a high-sodium electrolyte fuel) might temporarily relieve symptoms of hyponatremia, but it will also effectively hinder, even neutralize, the very mechanisms that are in place to help conserve the body's sodium levels and recirculate sodium back in to the blood.

You may still hear a lot of so-called experts telling you "that to ensure best performances in the heat" (or something to that effect) you'll want to increase your

sodium (salt) intake in your diet, especially in the days leading up to a hot-weather event. Of course, that's not our position and it shouldn't be yours. By consuming a high-sodium diet, all you'll be doing is increasing the sodium concentration in your sweat and impairing your body's sodium-regulating mechanisms. Does that sound performance-enhancing to you?

Instead, limit your sodium

intake to no more than 2,300 mg a day. Your body is very adept at storing sodium, so you'll have plenty on board to serve you during your workouts and races. By consuming a lower-sodium diet, the benefit is that your body will become very efficient at using its stores of sodium, much more so than the person who consumes a high-sodium diet, or who practices "sodium loading." This means that you will only need a minimal

amount of sodium to keep you going. In addition, and even more importantly, the consumption of a low-sodium diet will help protect you from a number of negative health consequences associated with excess sodium consumption. This includes, but is not limited to, high blood pressure, heart attack, and stroke, as well as damage to the kidneys, gastric ulcers, liver disorders, and stomach cancer.



New Product Spotlight

LSA (Liver Specific Advantage) Caps

Supporting "The General"

BY ENDURANCE NEWS STAFF

Hammer Nutrition is excited to tell you about our newest innovation: LSA Caps. All adults, (athletes especially!) put many demands on their liver, which is why we developed LSA Caps. Because this mostimportant organ is responsible for so many vital functions, LSA Caps offers wide-ranging benefits. This unique and potent formula provides a number of nutrients that are well known for providing strong support for healthy liver function.

The liver is not only the largest organ in the human body; it's unquestionably the hardest working one, responsible for performing more functions than any other organ. Perhaps its most well-known function is to detoxify, filter, and help remove harmful toxins, chemicals, and bacteria in the blood, as well as toxins that we are exposed to on a daily basis. These are some of the other many functions of the liver:

- Carbohydrate, protein, and fat metabolism
- Bile production, which helps to break down fats
- Assists in the assimilation and storage of fat-soluble vitamins such as A, D, E, and K
- Maintains electrolyte and water balance
- Helps to maintain proper blood pressure
- Creates "Glucose Tolerance Factor" (GTF) from chromium. GTF is vitally important for insulin to function properly in regulating optimum blood sugar
- Converts B vitamins into their co-enzyme form, the biologically active form
- Manufactures carnitine, which is the nutrient that shuttles fatty acids into the mitochondria to be converted to ATP.

Traditional Chinese Medicine refers to the liver as "The General," which is a great analogy because, like a strong general, the liver protects the rest of the body's organs and



systems (the soldiers) against external invasions (toxins) and attacks (pathogens, any number of microorganisms that can cause disease). Highly respected herbalist Dr. Michael Tierra states that "the liver serves as an important citadel for the function of the immune system as it is primarily responsible for detoxification and elimination of various metabolic poisons."

You need your liver to work at top efficiency. When your liver is not functioning optimally, it

can negatively affect almost every area in the body. Just some of the symptoms of less-thanideal liver function include:

- Physical and mental fatigue and exhaustion
- Decreased sleep quality
- Weakened resistance to disease
- Poor digestion
- GI issues such as nausea, constipation, and IBS

Suggested Dosage: Take 2 capsules twice daily with food

NOTE: Other nutrients suggested for promoting liver health are the branchedchain amino acids (found in Endurance BCAA+). These branched chain amino acids can enhance protein synthesis in liver and muscle cells, help restore liver function, and prevent chronic encephalopathy (Shimazu 1990; Chalasani et al. 1996) In studies, BCAAs have also been shown to have therapeutic value in adults with cirrhosis of the liver.





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BY JOHN KELLY

I grew up at least knowing that things like sodium can be a problem, which they say is half the battle. My dad has high blood pressure, so most of our meals at home were low on salt. But as I started making my own meals and getting more fast food, nothing was off limits. After all, I ran cross country. With all that exercise, surely I could eat anything. I would have been happy eating frozen pizza with a side of fries for every lunch.

It wasn't until after college that I realized that our input is much more important than our output for our health, weight, and overall well-being. Ideally, we want both good nutrition and good exercise, but no amount of exercise can protect against repeated poor food choices. Atherosclerosis runs in my family, and after seeing multiple otherwise healthy family members have scares from that, I ditched my fried chicken and milkshake diet and started actually paying attention to what I ate.

This decision happened around the same time I started running seriously again. I mostly expected the change in diet to just have an internal

impact, but I found it also had a large affect on my outward well-being and athletic performance. I shed the extra weight I had gained during grad school, I had more sustained energy throughout the day, and I experienced a rapid improvement in race results. I was also improving my training. I had trained as well as anyone in high school and never experienced results then that even approached what I was starting to achieve.

As someone with a background in science, I wanted to identify which changes in my diet had been the most important, so I allowed parts of it to fluctuate at times so I could observe the effect. Salt was one of those variables. There are of course the latent but wellknown and dangerous health effects of excess sodium intake: but when I've consumed excess sodium, I've also ended up with excess water retention, an overall feeling of bloat and heaviness, and an increased requirement for sodium intake to feel right during intense exercise. If the sodium concentration in our cells is greater than the concentration in our stomach, our body is unable to actually rehydrate using ingested fluids.

I'm likely to continue experimenting with parts of my diet. We all have slight variations in what works best for us, and it's beneficial and fun to discover those. But with salt, the evidence is clear. I'll continue to consume it in moderation, and enjoy the health and athletic benefits that come from that choice. Yes, I'll also continue to enjoy the occasional fried chicken and milkshake. Just like money, health requires smart choices, but it also isn't worth much if we can't enjoy splurging a little every once in a while. We just can't afford to go into debt.



John Kelly is an ultrarunning data scientist with a triathlon habit. He has won the Barkley Marathons, finished top 10 in M30-34 at Kona. He also holds a Ph.D. from Carnegie Mellon University and works as the Director of Analytics at QxBranch. This proud father of three (including twins!) resides in Rockville, MD, Follow John's running saga at randomforestrunner.com.

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AID STATION

A roundup of nutritional news, tips and tidbits

Stop Aging in its Tracks

Two new recent studies from England show that adults who cycle regularly are turning back the hands of time. Dr. Gabe Mirkin says that these studies "show that older men and women who have cycled for many years do not have the markers of aging found in non-exercising people. Their muscle strength and size, amount of body fat, levels of hormones such as testosterone, and blood cholesterol levels were close to those of much younger people. Their maximal ability to take in and use oxygen was more like that of people in their twenties than that of nonexercisers of their own age. Incredibly, the cyclists' immunity did not show the deterioration that is expected with aging." It's also worth noting that the participants made the same amount of T-cells as those in their twenties. which is important for immunity.



Easy on the NSAIDs

A new study from Boston University School of Medicine revealed that 15% of people are taking NSAIDs (Nonsteroidal Anti-Inflammatory Drugs) in dangerous quantities—levels considered "overdoses." This comes from not only taking too much of one NSAID, but also taking more than one kind. From the same study, it was discovered that nearly 40% of participants were taking more than one NSAID, and half of them were not even aware that they were. Read more about this on page 10.



Tart Cherry Has Sweet Benefits

Tart cherries are not just for natural flavoring; they also offer plenty of health benefits including powerful anti-inflammatory properties from the bioflavonoids, anthocyanins, and high amounts of vitamin C.

According to Dr. Joseph Mercola, tart cherries can help with general muscle soreness. He says, "A study involving long-distance runners found that tart cherry juice significantly reduced post-exertion pain. Other research has confirmed tart cherry juice is a valuable endurance sports drink."

You may have noticed the Tart Cherry flavor of Fully Charged, which is no accident. Along with adding a natural and delicious cherry taste, the tart cherry extract supplies beneficial nutrients.



Go the Distance in American-Made Hammer Apparel



For more details on these products, and more, call 800.336.1977 or visit hammernutrition.com



Aero Undershirt Short Sleeves \$22.95 S-XL | Slim Fit

> Women's Sport Top \$19.95 S-XL | Slim Fit



Convenient stuff sack or carry as a backpack

Durable, versatile, and roomy, the **Hammer Sack** is made from heavy-duty canvas, and has plenty of room to store your Hammer Nutrition fuels, supplements, and your training/racing gear as well. Can be carried like a duffel bag or, utilizing the cinch top, worn as a backnack



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The Endurance Challenge Series has grown into one of the largest trail running events in North America, and the globe. We now work with a roster of marquee partners, such as Hammer Nutrition and Gore-Tex. who contribute not only their great products, but also education and expertise.

- Dean Karnazes, Ultra Marathon legend and host of The North Face Endurance Challenge Series

Hammer Nutrition is Honored to be the Official Nutrition Sponsor of The North Face Endurance Challenge Series

BY ENDURANCE NEWS STAFF

The North Face Endurance Challenge Series (aka ECS) is a renowned, wellsupported, two-day running event and festival that attracts thousands of people from all over! It currently features five trail racing events at beautiful locations across the U.S.

Hosted by Ultra Marathon Man Dean Karnazes, the ECS boasts the most competitive fields in trail running. The ECS has quickly become the premier event in Ultra Trail Running.

Multiple race distances are offered in this prestigious series: 50-Mile, 50K, Marathon, Marathon Relay, Half Marathon, 10K, 5K, Kid's Run.

This comment from one race participant reflects the sentiments of the overwhelming majority of all participants: "Adventurous, technical, high-spirited, and well organized. This is a great race to step-up your competition in mountain/trail running."

Hammer Nutrition fuels will be available for the participants at the aid stations of all of the series races. Hammer Nutrition Founder/Owner Brian Frank and Fueling Expert Steve Born will be there discussing topics and answering questions at the Panel Event, and at the Hammer Nutrition booth at the Finish Line Festival.

Don't let this awesome experience pass you by! There is something for everyone. 💷

For more details or to register, visit thenorthface.com/get-outdoors/ endurance-challenge.html



2018 Schedule:

April 28-29: Washington DC Algonkian Regional Park,

Sterling, VA

May 5-6: New York

Bear Mountain State Park, Bear Mountain, NY

June 9-10: Massachusetts

DCR Wachusett Mountain. Princeton, MA

September 15-16: Wisconsin

Kettle Moraine State Park. Dousman, WI

November 17-18: California

Golden Gate National Recreation Area-Crissy Field, San Francisco, CA



ADVENTURE RACING, PADDLE SPORTS, RUNNING, TRIATHLON, CYCLING, SWIMMING, MOTOCROSS, SKIING

WE SUPPORT: YOUR SPORT

Whatever your sport, you'll find plenty of challenging Hammer Nutrition-sponsored events to choose from this summer. We already have more than 160 events on our calendar for the upcoming months, covering practically everything associated with endurance, and more requests for sponsorship support are pouring in daily. Here's just a sampling of the exciting summer events that we are honored to support:

THE MIGHTY NORTH FORK TRI

SOUTHOLD, NY

This is one of the best first-timer courses with a calm Peconic Bay swim, a mostly-flat scenic 7-mile bike, and an equally scenic 3.5-mile run. This event has something for both athletes and spectators alike. Swim: 500 meters, Bike: 8 miles, Run: 3.5 miles

http://eventpowerli.com/mighty-north-fork-sprint-triathlon/

5/27/18

MOUNTAINS OF MISERY-ROAD CYCLE

NEWPORT, VA

The annual timed event features century (100+ mi) and double-metric century (200 km/124+ mi) options—both ending in a tough, four-mile 12%–16% graded climb to the finish. http://www.mountainsofmisery.com/5/27/18

END-TICK – EXTREME NORTH DAKOTA TERRIFICALLY INTENSE COUNTRY KLASSIC GG

HAWLEY, MN Rural Minnesota gravel grinder (bike race). 200M/100m & 50M https://endracing.com/end-tick 6/2/18

LEGRANGE CLASSIC - MTB

WEAVERVILLE, CA

At the foot of the Trinity Alps, this new race route will take you through forests and across historic mining ditches. Race on miles of challenging singletrack. Every effort has been made to avoid forest roads.

https://www.trinitytrailalliance.com/lagrangeclassic.html

6/9/18



24 HRS IN THE CANYON - MTB

CANYON, TX

24 Hours in the Canyon is ever evolving. We try to keep things fresh and make changes that benefit the event as a whole. This year, there are 7 new things that you need to know for the 2018 event!

http://www.24hoursinthecanyon.org/ 6/2/18



CRAWLMAN SWIM & RUN RACE - OWS

WINDER, GA

Swimrun teams start out with a run, transition to a swim, and continue to alternate between swimming and running. http://crawlman.com/

6/2/18

GOLD RUSH/MOTHERLODE GG 110M & 210M

SPEARFISH, SD

This 210-mile ride will take you on a tour through both the Northern and Southern Black Hills of South Dakota. There is a total of approx. 185-190 miles of gravel, with the rest being pavement. It is a challenging course with about 13,000 ft. of climbing!

https://www.goldrushgravelgrinder.com/copyof-gold-rush

6/9/18

Continued from previous page

VOLCANO FIRE RD 120K GG

VEYO. UT

Starting in Veyo, you'll have a short, mostly downhill warm-up before you hit the dirt climbing towards Enterprise Reservoir. There are some mighty steep pitches along this section! At mile 22, you'll hit the pavement and get a nice reprieve as you hammer towards the town of Enterprise. You're back on the dirt again at mile 40, and will spend some time enjoying the beautiful views in the Pine Valley Wilderness. It's a fast and fun descent back to the finish line.

http://gravelgrinder.com/volcano-fire-road-120k/

6/9/18

GRANITE MAN OFF ROAD TRIATHLON

JACKSONVILLE, OR

Granite Man takes place in the Rogue River National Forest at Applegate Lake. It's a full weekend of off-road sports. This year we are offering a SUP triathlon option for those who don't want to swim. We have added a cyclocross race, and an ultra run that will be about 28M. Come see for yourself why this event is a Southern Oregon favorite.

http://granite-man.com/

6/9/18

HALFMAX TRIATHLON

INNSBROOK, MO

Be a part of the biggest multi-sport weekend in Missouri. With multiple distance options to choose from, there is sure to be an event for every type and skill level of triathlete!

http://ultramaxsports.com/races/halfmax/ 6/16/18

THE MUTT ULTRA RUN

BIRCH RUN. MI

Team trail races that require 4 team members to start and stay together at the beginning of the race, and one by one turn around at the halfway point of each individual distance.

https://tritofinish.com/the-mutt/

6/16/18

BATTLE OF BERRYMAN - MTB

POTOSI, MO

Great for beginners and pros, the race accommodates all categories of racers. The 25-mile loop is 99% singletrack. Plus, tons of schwag from great sponsors and a true "event" atmosphere.

http://otfracing.com/our-races/battle-ofberryman-2550/

6/16/18

MILE HIGH 100 ROAD RACE

CHESTER, CA

The Mile High 100 offers three rides to accommodate cyclists of all abilities; a century ride, metric century ride, and half-metric century ride—all of which include lakeside views of Lake Almanor.

http://www.milehigh100.com/

6/16/18

RUNNING WITH THE DEVIL

LAS VEGAS. NV

Pure Mojave Desert running at its finest! Come join us on this PAVED and scenic course which covers rolling terrain.

http://calicoracing.com/events/running-withthe-devil/

6/23/18

SEVENTY48 - PADDLE SPORT

PORT TOWNSEND, WA SEVENTY48 aka 70 miles in 48 hours. Rules are simple: no motors, no support, and no wind. HUMAN POWER ONLY. Pedal, paddle, or row, it's up to you. https://www.seventv48.com/race-explained/ 6/11/18

OPAL WAPOO GG 100M/52M

EXCELSIOR SPRINGS, MO

Situated 30 minutes northeast of Kansas City, Missouri, the roads of Excelsior Springs give quick access to a huge network of gravel roads. The views give way to hills, tree-lined roads, streams, farmland, and river flats. Both the 52-mile and 100-mile courses follow challenging routes that will leave you with an appreciation of the area.

https://www.opalwapoo.com/

6/23/18

HIGH CLIFF TRIATHLON

APPI FTON, WI

- · Half: 1.2 mile swim, 56 mile bike, 13.1 mile run
- · Half Aqua Bike: 1.2 mile swim, 56 mile bike
- · Olympic: 0.5 mile swim, 22 mile bike, 6 mile run
- Olympic Aqua Bike: 0.5 mile swim, 22 mile bike

http://www.dutrirun.com/hctri 6/23/18

NW TANDEM RALLY (ROAD CYCLE)

ALBANY, OR

Welcome to the 2018 edition of the Northwest Tandem Rally hosted by the Mid Valley Bicycle Club. NWTR has been an annual event since 1986. https://nwtr.org/2018/

6/29/18

IN HOT PURSUIT (DUATHLON)

BAY ST. LOUIS, MI

Race one event or race them all. Every participant, of every event, receives: a finishers medal, top notch swag, and entry to a killer after-party!

https://www.quadburners.com/

6/30/18

NORTH AMERICAN ENDURO CUP (MTB)

KELLOGG, ID

The North American Enduro Cup is a collaboration between the Northwest's three premiere enduro mountain bike race series—the Cascadia Dirt Cup, Idaho Enduro Series, and Montana Enduro Series.

http://www.naenduro.com/ 6/30 -7/01/18

DARK 2 DAWN NIGHT TRAIL RACE – NIGHT ULTRA RUN

ST. LOUIS, MO

An all-night trail run at Indian Camp Creek in St. Charles County, offering 10K and six-hour timed ultra options. Each race takes place on a route featuring a combination of open-field crossings and wooded singletrack, consisting mainly of dirt with a bit of rock mixed in. Dark 2 Dawn will be held after the Sunset Sizzler Mountain Bike Race in 2018, and overnight camping, photos by Marcus Janzow, and breakfast are included in the registration fee.

https://dark-2-dawn.weebly.com/7/1/18

FREEDOM SPRING TRIATHLON

MARIANNA, FL

The triathlon is traditionally held at the beautiful Blue Springs Recreation Park in Marianna in celebration of July 4th. Take a break from traffic and beach crowds.

http://www.beachblasttriathlon.com/freedom-tri 7/7/18

MCCALL CLASSIC - ULTRA RUN

MCCALL, ID

Visit McCall, Idaho, this summer and throw down on 10, 20 or 40 miles of the finest trails in Idaho.

http://mccalltrailrunningclassic.blogspot.com/7/14/18

ROCK CREEK ROUBAIX GRAVEL GRINDER

ROCK CREEK. OH

50ish miles of dirt, mud, gravel and paved roads. It's laid out to be FAST,

so don't expect a whole lot of steep climbs or crazy descents. Do expect potholes, loose gravel, and maybe a critter crossing here and there.

https://www.bikereg.com/rock-creek-roubaix 7/14/18

BEAR LAKE MONSTER SWIM

GARDEN CITY, UT

The Bear Lake Monster Swim is a 10K point-to-point race across the width of Bear Lake. It is one of three swims in the Utah Triple Crown. http://www.bearlakemonsterswim.com/

HAMR – HURON ADVENTURE MTB GG RACE

MARQUETTE, MI

Enhanced Gravel. Singletrack. Checkpoints. Taking place on the gravel, singletrack, and barely-maintained logging roads of the Huron Mountains in Michigan's Upper Peninsula, the HAMR (Huron Adventure Mountain Bike Race) is an experience unlike the rest.

https://hamrrace.com/ 7/21/18



DARK 2 DAWN NIGHT TRAIL RACE - NIGHT ULTRA RUN

ST. LOUIS, MO

An all-night trail run at Indian Camp Creek in St. Charles County, offering 10K and six-hour timed ultra options. Each race takes place on a route featuring a combination of open-field crossings and wooded singletrack, consisting mainly of dirt with a bit of rock mixed in. Dark 2 Dawn will be held after the Sunset Sizzler Mountain Bike Race in 2018, and overnight camping, photos by Marcus Janzow, and breakfast are included in the registration fee.

https://dark-2-dawn.weebly.com/ 7/1/18

LUNATIC ULTRA SERIES (ULTRA RUN)

KEWASKUM, WI

Trail running races and events for anyone interested in running off the road.

https://www.traildogrunning.com/ 7/21/18



TATANKA MTB

STURGIS, SD

Epic, Marathon, or Sprint
3 Distances to choose from, including a kid friendly short distance.
http://www.tatanka100.com
7/7/18

WAUSAU24 ENDURANCE MTB

RIVER FALLS, WI

We have added quite a few categories (89) to give people choices in all events including many more options for our junior racers. See you Summer 2018! https://www.wausau24.com/page/show/175723-home

7/28-29/18

TURTLEMAN TRIATHLON

SHOREVIEW, MN

In 2016, Tri Fitness, along with the City of Shoreview, revived the wildly popular event named after the lake and county park where the event is hosted, Turtle Lake located in Shoreview.

https://trifitnesswbl.wixsite.com/trifitnesswbl/turtlemantriathlon

7/28/18

Ready to Ride

Strengthen & stabilize those cycling muscles!

BY DRS. RYAN WIGNESS & TORBEN JENSEN

Cyclists share in common specific areas of weakness or instability, but there are simple exercises that can help strengthen and stabilize these areas to keep you comfortable, strong, and efficient for a great day on the bike. Below is Part 3, continued from the last issue of Endurance News.



Derrick Britton in the transition zone at the High Desert Triathlon, Edwards Air Force Base, Antelope Valley, California. Photo: High Desert Tri Volunteers

PART THREE: HIPS, GLUTES, AND LOWER BACK

Most cyclists have an extremely difficult time engaging their gluteus maximus muscles at all. This is most likely because we concentrate on pushing through the quad and pulling through the hamstring in an attempt to create smooth circular pedal strokes. Unfortunately, not using the glute max muscle prevents us from using one of the strongest muscles in our body and our most powerful hip extensor muscle, thereby reducing our maximal power output significantly. Also, because the cyclist is always moving their

body in the saggital plane (in a line parallel to the midline, forward and backward) and rarely laterally, we become unstable with lateral movements and open ourselves up to injuries of the lateral hip once we hop off of our bikes and start walking.

Performing these exercises will help improve respiration, stability, and endurance on the bike thereby increasing power, efficiency, and enjoyment for those awesome summer rides coming up. Have fun and ride fast!

To strengthen and activate the glutes in the lateral plane:

- Lay on your right side and elbow with right elbow placed beneath right shoulder with your weight on your right elbow, forearm, and open hand.
- Flex knees and hips slightly with head, hip, and shoulder lined up. Rest your left hand on your left thigh. Keep shoulders and hips perpendicular to the floor and not rolling forward or backward.
- Belly breathe and elongate your spine while you draw your right shoulder down and back toward your back right pocket (spine straight and relaxed).
- Press your right knee downward toward the floor; your right hip should lift from the floor. If possible, do not add support with your up-side leg, and lift your leg and knee slightly.
- Lift your hip until your body forms a straight line from your spine to a point between your ankles. Hold for 10 seconds and lower yourself to the floor. Repeat 10 times. (After you can easily perform 10 reps for 10 seconds, add movement with your arm like you are reaching forward and move your leg forward into flexion slowly. Repeat 10 times.)

ANTIOXIDANT ARSENAL

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- Increases workload capacity

90 Capsules: **\$49.95** 3 or more: **\$45.85 ea**

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Mito Caps

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- Superior antioxidant support
- Increases fat metabolism

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Daily Essentials Kit includes:

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1-month kit: **\$94.95** Save **\$14.90** 3-month kit: **\$269.95** Save **\$47.30**

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Seven Years in the Making Zandy Mangold wins the Atacama Crossing

BY ENDURANCE NEWS STAFF

Everyone loves a good success story. Busy ultrarunner and Hammer Sponsored Athlete Zandy Mangold has quite a story tell.

Zandy's recent feature in National Geographic by Joseph Bien-Kahn tells the tale—from his unfortunate introduction to ultramarathons in 2010 to how he evolved his nutrition and training to win the seven day, 155-mile Atacama Crossing. It entails suffering, obstacles, obsession, perseverance, disasters, brutal climate conditions, competition, surviving in nature,

sprained ankles, fine tuning fuel consumption and pushing himself.

Here at Hammer, we always enjoy Zandy's sense of humor, especially through his photos. The Hammer Family is very proud of Zandy and his hardearned victory. He is an inspiration to us all! Hammer on!

For more about Zandy's rise to success read "Zandy Mangold-From Worst to First" at hammernutrition.com/knowledge/ endurance-news/ and download issue 108.

Hour before: 2 Race Caps Supreme, 2 Endurance BCAA+

15 minutes prior: Nocciola Hammer Gel

During: Water bottle with Fizz, 1 Gel every 60 minutes, 1 Sustained Energy

After: Chocolate Recoverite, Premium Insurance Caps, Race Caps Supreme

Before bed: Hammer Whey

Recoverite today, Feel great tomorrow



- Reduces soreness
- Builds muscle tissue
- Minimizes fatigue

"I love Recoverite! It's easy to use, easy on the stomach, and boosts recovery to a whole new level!"

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From Our Athletes

Our "From Our Athletes" section features submissions from athletes at every level, ranging from elite pros who have been competing for decades to beginners completing their very first race. This is just a small cross section of the thousands of Hammer athletes around the world who are establishing Hammer's reputation for having safe, natural, and performance-proven results. Congratulations to everyone here on their accomplishments!



Dale Glover

51st Cameron County Canoe and Kayak Classic

"A 12.25 mile race down the Sinnemahoning River was a good time. Hammer Nutrition was a vital part of keeping me fresh and in the game. I used Perpetuem, Race Cap Supremes, Anti-Fatigue Caps. Hammer Gel, Fully Charged, HEED and Endurolytes. Post race was the usual Recoverite. No soreness the next day."

Photo: Kelli Anthony - Shutter Photography by Kelli



Amber Reece-Young

Asheville Super Run 5K

"My daughter & I did this race last year & she wanted to do it again. Since she's not quite 3, we dressed up as Wonder Woman & I pushed her to race in the Bob stroller. We passed a lot of people as the race went on & ended up finishing as 1st female & 2nd outright (we had one man ahead of us)! What a fun race!'

Photo: Chris Reece-Young



John Cox

Hemet Double Century

"Although I've done doubles in less time. This was still a personal best for me in a different way as I probably had one of my smartest rides ever. I used a mixture of Sustained Energy and HEED in my water bottles. I took two Endurance Aminos, two Anti-Fatigue Caps, one Endurolyte Extreme, one Mito Cap, one Super-Antioxidant, and one Race Cap Supreme every hour and a half."

Photo: Courtesy John Cox



Joel Kinnunen

Marana-Tucson Shamrock 5K

"Great weather in Tucson for the Shamrock 5K. The race was held in conjunction with a half marathon and 10K, which had the effect of reducing the field size for the 5K. I started conservatively and led after a half mile all the way to the end. Finished in 18:58, ahead of 150 other racers."

Photo: Stephanie Kinnunen



Erica Lazarus

Winter Park Road Race 10K

"I went into the race with a little cold but was feeling pretty good race morning. It was a pretty course but tons of turns and 70% of it was on cobblestone brick so it did not make for an easy or fast race. However, I fought hard to stay on pace and actually got a PR by 20 seconds. I was really happy and even captured a first place age group win in a very competitive race.'

Photo: Jamie Rogers



Trey Jones

2018 Fluvanna Red Canyon Enduro

"Hammer HEED, Gel, and Perpetuem kept me fueled and feeling great during the race. Recoverite helped me after. This was a good race for me. I felt energized and was able to take 3rd for the weekend."

Photo: Chata Segich



Jeremy Johnson

2018 Zydeco Half Marathon

"I started the race with a nice and easy pace then slowly began to settle in and push it. I used Hammer Gels throughout the race as my source of nutrition. They are easy on the stomach and provide the fuel I need to sustain race pace. I ended up finishing in 1:22:30 and a new PR for my half marathon! Thank you Hammer Nutrition for keeping me healthy and providing the fuel I need to maximize my performance!!"

Photo: Lisa Johnson



Gabrielle Suver

Great Clermont Triathlon

"This past weekend I had my first "shakeout" triathlon of the season at the Great Clermont Triathlon - Olympic distance (also first race coming back from my run injury that had kept me from running for 7 weeks earlier this year). Pulled off the fastest T1 &T2 of the day for females, 6th overall, and first in my division! Thanks Hammer Nutrition!!"

Photo: Kenyon S. Congdon



Kim Matthews

Masters of All Terrain 50K

"So happy and honoured to be awarded Asia Trail Master champion 2017. Looking forward to exploring more trails, making new friends and catching up with old ones in the year ahead. Thank you to Asia Trail Master for organizing a fantastic competition and for all your support in getting me where I am today. Thanks also to Hammer Nutrition Vietnam for your generosity and your belief in me."

Photo: Adventure III

"

Airing into a rough rut requires precision and sometimes a bit of body language. One of the reasons I love riding in my hometown of Laguna Beach so much, trails are technical and the ocean views are always amazing. If you're not focused

"

this, they can eat you up.

when entering sections like

-Brian Lopes, 6X time Overall World Cup and 4X World Champ





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"This is the first time I have never had a headache at a regatta!"