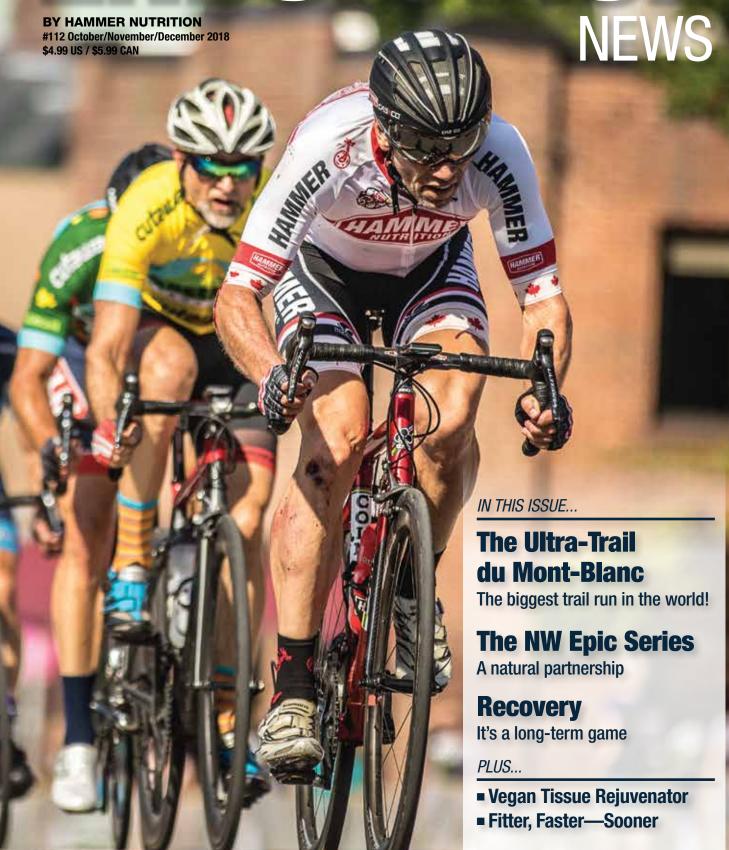
BY HAMMER NUTRITION #112 October/November/December 2018 \$4.99 US / \$5.99 CAN



Hammer Nutrition—Success once again at "The World's Toughest Footrace"

Over the years, Hammer Nutrition has been helping athletes succeed in the **Badwater® 135**, one of the most difficult races on the planet. Ultrarunning legends such as Marshall Ulrich, Connie Gardner, Ray Sanchez, Jamie Donaldson, Arthur Webb, Nikki Wynd, and Pete Kostelnick have relied on Hammer Nutrition supplements and fuels in this "harder than you could ever imagine" event. In 2018, we welcome Zandy Mangold as the newest member of the "Hammering at Badwater" club, with his outstanding time of 33:11:40 earning him 14th place out of 99 entrants.

I had 99 problems but race 'fuel wasn't one. Drank my usual 16oz of Hammer HEED + Fizz mix per hour and ate a **Hammer Gel** when I felt like it. Felt great the whole way - minus an unrelated stomach bug which plagued some other runners as well - and popped an espresso gel for a boost before the finish. Also, ate three bananas, [and] one peanut... Solid food was hard to handle in the extreme heat, hence only the one test peanut. I wore a Camelbak most of the race in order to have access to a constant drip.

Not an exciting menu, but I would rather keep it simple. effective and safe during the race.

-Zandy Mangold via instagram: @run_n_shoot

Zandy Mangold in the heat of the Badwater® 135 trying to keep cool with the help of his crew. Photo: John-Keith Wasson





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This series features five endurance mountain bike races across the state of Washington. They offer up some of the best trails, most challenging courses, and beautiful scenery in the country.



After years of requests, we're thrilled to announce the launch of Vegan Tissue Rejuvenator. When you ask, we deliver—time and time again!



Welcome to the $112^{ m th}$ issue of Endurance News!

This is our last issue for 2018 and wraps up another amazing year here at Hammer. Year 31 is almost in the bag and we are ready to make 2019 our best year ever. I hope this year was a good one for you as well—full of race PR's, new adventures, and growth in your journey towards optimal health. If you did

not answer with an emphatic YES, the coming offseason and next year is your opportunity to change all of that, and you know you can count on me and my staff to be there every step of the way to help you achieve your goals. Remember, besides selling the best products on the planet (IMHO), we have the knowledge and customer support to bring it all together for you!

For me, and Hammer, it was a huge year for new product introductions. It also proved to be a year of domestic growth, as well as abroad and across all channels. A couple of the new products were not even planned. Some were also vegan, which prompted some of you to wonder and ask us, "Did Hammer go vegan?" The answer is no, and more on that later. Liquid Endurance and Vegan Tissue Rejuvenator were the "accidental" new products—and Hammer Hemp CBD was easily the biggest on every level.

You can read all about these new products, as well as Vegan Recoverite, LSA Caps, EnduroZyme, Cola Fizz, and the return of Perpetuem Solids in this issue. We'll be talking more about these products next year, as well as introducing many more exciting, revolutionary, category-leading fuels and supplements in 2019 as well.

2018 also marked a milestone for me as my youngest child graduated from college and came to work with me full-time. Many of you who are sponsored athletes/teams and follow our social media have met Miles.

This was also a big year for Hammer sponsored athletes, ambassadors and customers around the world.

From #AP23 winning not one, but two National Championship titles in AMA 250 Supercross West and the Outdoor titles, to Akshay Nanavati (I'm reading his book now and thoroughly enjoying it!) running across several countries in his quest to become the first human to run across every country in the world. In between, there were dozens more State, District, and National Championship titles, and even a World Championship or two to top it all off. You can read more about these athletes and more on these pages. If you are using Hammer products and we don't know about it, by all means don't wait any longer to tell us. We want to hear from you!

Now, back to the vegan question. It's absolutely true that many of our existing products are vegan; we've brought out several new ones and will continue to do so in the future. The vegan diet is one that I can support, unlike the keto diet fad, or the low-carb diet, or the zone diet. I have witnessed amazing changes in athletes who went vegan—from fat loss to improvements in health indexes like blood pressure, cholesterol, etc. to disease remediation. I have not seen the same results from any other diet.

For endurance athletes who choose to go vegan, I encourage them to focus on protein intake all the time. That means getting really good at combining vegetables and legumes, seeking high protein grains like quinoa, etc. This is the only potential drawback that I have seen and it can become more of a problem when combined with very high training volumes, say in excess of 20-25 hours per week.

Continued on page 48...

On the cover: Team Hammer/53x11 rider, Ron Amos, leaves them gasping over four tough days of racing and takes the General Classification win (50+ Masters) at the Green Mountain Stage Race. Photo: Angelica Dixon

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 https://maiorico.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 https://manages.com "Mission"





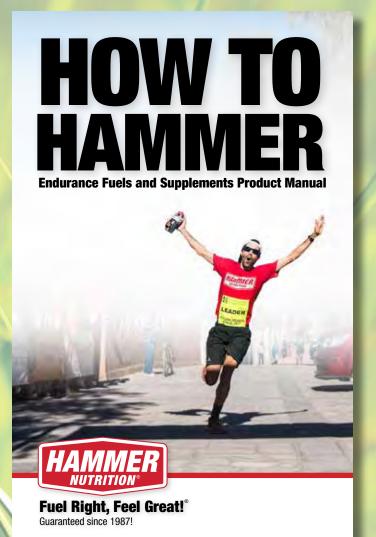
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Starting Lines

Letters from Hammer Nutrition Athletes & Clients



"Here is the photo of me at the Col du Galibier sign. By the way, I really like the long sleeve summer weight jersey for hot, sunny days."

I got to enjoy a 'Bucket List' trip this summer, cycling in France. We climbed Mount Ventoux, Alpe d'Huez and Col du Galibier. My friend, Cleve Branick, and I used a bottle of HEED and a bottle of Endurolytes Fizz during the climbs and had Chocolate Recoverite post ride. Worked great for both of us putting in more miles and elevation than we were used to. Thanks for your help.

-Steve Gardner

Crushed That 100 Miler!

I have had a very positive experience adding Essential Mg to my daily supplementation and I just used Race Day Boost with a 4-day pre load period. I absolutely crushed my 100 miler! PRs in the 50 mile and 100 mile distance! Hammer Fizz gave me additional electrolytes and helped my stomach out. That aside I relied mostly on HEED with Endurolytes Extreme Powder mixed in. Looking forward to the next 100 miler!

-Tony Deluca

All About the Details

I just received my order and I had to write this email. I cannot tell you how impressed I am with all the goodies received. It's so rare to find companies, especially when shopping online, that take the time to do what your company does. All the informational pieces and stickers and even a magnet. It's all about the details and you guys got it down! Thank you!

-Lani Kercado

Keeps Getting Better

I just wanted to thank you again for setting us up with the military discount! I placed another order just the other day and the discount was on my account, all ready to go. Our experience with Hammer Nutrition has been outstanding from that first Gel fuel sample order and it just keeps getting better! I rave about you guys to all of our friends and family. So thanks for being awesome and making great products for us active peeps.

-The Broers

My Specific Needs

As a so-called bariatric athlete (had gastric bypass 10/2017), finding the right fuel for my long training runs and my first half marathon was very important. Hammer Gels have no added sugar and super low sugar content that they don't shock my system like other gels would. Sooo glad my running store recommended Hammer to me for my specific needs. They took me through my first half marathon, plus will be my training fuel of choice for my next challenge—10K on day 1, half marathon on day 2!:)

-Karen Williams



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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!

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Juliette Blanchet trekking in Nepal. Picture taken on the summit of Gokyo Ri. Photo: Cyril Pérot

#howihammer

HAMMER HAPPENINGS ON FACEBOOK, INSTAGRAM & TWITTER. USE THE HASHTAG TO SHARE YOUR PHOTOS!

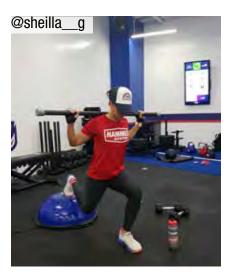


When Professional Nordic Skier Benjamin Lustgarten isn't competing on his XC skis, you can find him on a bike! Ben conquered the trails during stage 3 of The VT3 in Craftsbury, Vermont to finish in 3rd place in the Overall Men's Class. Photo: Wes Vear

@celsofonseca25

In 2017, Celso Fonseca smashed the world 100K, 200K, 300K, 300 mile, and 500K cycling records. Celso relies on Hammer Nutrition to fuel his record attemps and training sessions and plans to break even more records in the future.

Photo: Celso Fonseca



After a strenuous day of strength training, swimming, and running, Sheilla Gagui relies on proper recovery with Recoverite to reduce soreness and fatigue.

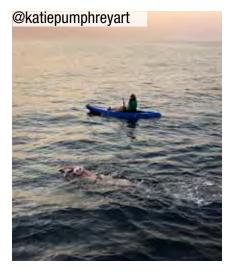
Photo: Mark Limchoa

@matthiasscherer

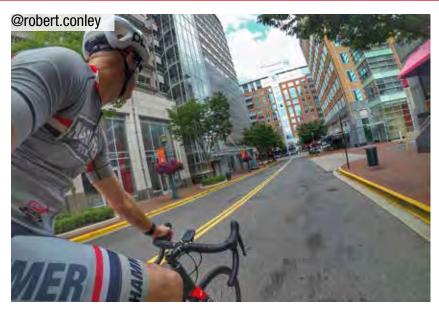


Matthias Scherer enjoys the mountain terrain of Cogne, Italy. Matthias is a world-renowned iceclimber and as the season creeps closer, he is training with winter in mind!

Photo: Matthias Scherer



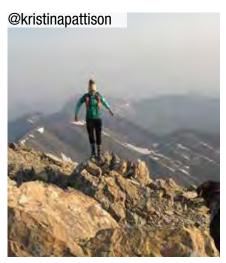
After crossing the Catalina Channel, Katie Pumphrey became a Triple Crown Swimmer, joining a small club of open water swimmers who have crossed the Catalina Channel, the English Channel, and completed the 20 Bridges Swim. Photo: Zach Margolis



Although you'll often find Hammer Nutrition sponsored athlete, Robert Conley, on the trails, he found the time to enjoy a summer ride through downtown Fairfax in his home state of Virginia. Photo: Rob Conley



As Sawyer Brown prepares for the North American Obstacle Course Racing Championships in Stratton, Vermont, he organizes his fueling and recovery for the physically challenging course ahead. Photo: Sawyer Brown



A spontaneous weekend trip to Condon, Montana, allowed Kristina Pattison and her pup, Blaze, to summit Holland Peak during a sunrise hike. Photo: Kristina Pattison







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!



RACE RECIPE

JULIETTE BLANCHET

ULTRA-TRAIL DU MONT-BLANC



Juliette Blanchet [see page 58] stops in the aid station to refuel before heading back out to tackle the unforgiving UTMB Course.
Photo: Buddy van Vugt

30 Minutes prior:

Endurolytes Anti-Fatigue Caps

During:

Perpetuem
Hammer Gel
HEED
Fully Charged
Hammer Bars
Endurolytes
Anti-Fatigue Caps

After:

Recoverite Whey Protein Endurolytes

RESULTS

6th Female Overall

After last year's DNF, Juliette Blanchet was hungry to cross the finish line at UTMB. This year, she conquered the course, finishing 6th place female out of over 2,500 runners!

Winning Balance

As a husband, father of four, and Circuit Layout Designer at Intel, finding time to be the Undefeated 2018 Champion of the MBAA's (Mountain Bike Association of Arizona) XC Series is a juggling act.

> With the help from his wife and ease of access to the South Mountain Park Trails in Phoenix, Arizona, Ryan is able to cater to his competitive obsession.

Ryan began competing at the age of four in motocross and quickly raced his way up to the professional level. In 2008, he decided to step away from motocross and began competing in triathlons with the Hammersponsored FCA (Fellowship of Christian Athletes) Endurance Team. Ryan has been a Hammer Nutrition Athlete for the duration of his endurance racing career.

As he made the transition to dominating the Arizona mountain bike racing scene, Ryan kept Hammer

Nutrition close at hand. "For race days, I have my nutrition dialed in... My XC races in the MBAA Series range from 1.5 to 2 hours long. I take Anti-Fatigue Caps about 1 hour before the race. Then, on my warm up ride before the race, I drink a bottle with a scoop of Fully Charged. While sitting in staging (just before the start) I generally take one Hammer Gel. During the race, I have a 26 oz. bottle with two scoops of HEED. In years past, I would need two bottles, but now the single bottle is perfect."

Rvan relies on Hammer daily as he balances keeping up his household, working a full-time job, and maintaining his elite level of fitness. "I would have to say Recoverite is definitely

my favorite, because I feel it is one of the key components of the training session. It helps me get the most out of my workout that I just finished and prepares me for tomorrow's workout. Also, with four kids and always being on the run, the Hammer Bars are a great on-the-go snack. From there, I would say Premium Insurance Caps, Tissue Rejuvenator, and EndurOmega are the supplements I take daily."

It is no surprise to any competitive athlete that proper fueling and supplementation is a cornerstone to Ryan's long and successful elite career. When asked about his motivation to succeed, Ryan spoke of his family. "I want to be a positive role model for my kids that hard work pays off. Whether or not they stay with cycling. I know it will teach them to work hard to achieve success in life."

In closing, Ryan shared some thoughts behind his longstanding devotion to Hammer Nutrition. "There is so much about Hammer that I like. I truly believe in their products and their approach to nutrition and training. Second, I have always had the feeling of a more family run business. I believe that Hammer wants endurance athletes to perform to the best of their abilities."

Congratulations to Ryan on an undefeated season in the MBAA XC Series!

Ryan Mortensen finishes strong on day 3 of the Cactus Cup stage race. When it comes to multi-day events, few things are as important as recovering right! Photo: Mark Belanger

Real Endurance Fuel

"MAKING OTHER BRANDS 'GEL'OUS"



"I had heard good things about Hammer and my local bike shop had a jug of banana **Hammer** Gel; they explained the Hammer Flask to me and I was elated because this is exactly what I had been looking for for long trail runs/etc. So much cheaper to buy in bulk and you can carry six shots of gel in a **Hammer Flask**, vs. actually carrying six gels... Banana, orange, apple cinnamon, chocolate, vanilla, and hazelnut are my go-to flavors, but the remaining flavors are all solid. I never get a stomach ache from these gels and you can combine them with any Hammer product with no negative effects. I recommend Hammer Gel to people all the time."

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- No sugar crash
- **Easy to digest**



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-Online Reviewer

Total Recovery

For peak performance next season, take time for body and mind now.

BY LOREN MASON-GERE

Exercise should make you feel good. You might not think that we would need this reminder, but the drive to compete, perform, dig deep, and deliver results often overshadows the most important reasons we train and compete. While we are all in this to test our limits, when the dust settles and the day is done, our sports shouldn't just make us stronger, they should also make us healthier and happier.

Unfortunately, we often lose this balance. Hard training takes a toll not only on the physical body, but also on mood, motivation, and energy levels, which are regulated by the endocrine system. As a result, many athletes face periods of malaise and depression (often deemed "burnout") throughout the season.

Without sufficient downtime, your performance will decline, along with your zest for life. Now is the time to shift your focus, recover completely, and prepare yourself—mentally and physically—for the productive season to come:

Most importantly, get some rest. In addition to taking time away from training, be sure to get adequate, high-quality sleep. Don't fight your body's need for extra rest, now that the days are shorter and the warm days are behind us. Though sleeping through a morning workout is bad news for much

of the year, such flexibility is now exactly what you need. Sleeping well will improve your mood and your immune system. Establishing good sleep habits also will support your performance, recovery, and motivation year-round. If you have trouble getting eight hours of sound, uninterrupted sleep, consider supplementing with Hammer Nutrition's **REM Caps**, which contains the antioxidant melatonin.

Eat well. During race season, carving out time for cooking can be a challenge, and eating on the run can derail even the most conscientious athlete. Now is the time to reestablish good habits. Choose anti-inflammatory, nutrient-rich, fresh foods to strengthen your immune system and help control weight through the winter. A diet that emphasizes quality foods is also associated with improved mood, lower levels of anxiety, and increased mental clarity. Preparing and sharing these foods with friends and family amplifies this effect. Now is also a great time to develop ideas for quick meals to prepare when training volume ramps up. Keep in mind that even the healthiest, whole food diet cannot provide all of the nutrients needed for year-round wellness. A quality supplement like **Premium Insurance Caps** is the best way to cover nutrient gaps and get the full range of antioxidants needed for complete recovery.

Pay attention to your gut. The foods and supplements you consume should also support optimal digestive health. The complex microbiome of the gut is crucial for proper assimilation of nutrients. In addition, recent studies show that it plays a key role in managing body composition and mental health. In fact, low levels of intestinal flora translate to higher rates of depression, anxiety, insomnia, and mental illness. For optimal digestive health, eat whole organic produce as much as possible, as well as naturally fermented foods, which will allow healthy bacteria to flourish. Supplementing with **Digest Caps** will further ensure a healthy balance of beneficial bacteria. Should you experience stomach sickness, or any ailment that requires the use of antibiotics, a cycle of **i-Flora** is an absolute necessity.

The love of sport and determination to improve can be a two-edged sword. Now is the time to put your competitive drive and laser-like focus to rest. Enjoy the simpler things in life, and recover deeply.

A more balanced, focused, productive season ahead will be your reward.





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Brooklyn Flores, Suzy Degazon and Dylan Flores at the 2018 Green Valley Lake Aquathon. Photo: Rocky Ehrich, rockyehrichsports.com





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NW Epic Series:

A Natural Partnership

BY LOREN MASON-GERE

At Hammer, we take our event sponsorships seriously. We work hand-in-hand with our race director partners to help build, promote, and of course fuel their events. For 25 years, we've led the way in supporting grassroots, local events—from Iron-distance tri's to ultra runs, mountain bike races, gravel grinders, obstacle course racing, and everything in between. We're in it to grow the sports and ensure every participant can "fuel right" and finish strong.

One of our favorite new partners for 2018 is NW Epic Series. This series features five endurance mountain bike races across the state of Washington. They offer up some of the best trails, most challenging courses, and beautiful scenery in the country. As good stewards of the trail, NW Epic works to keep their events' ecological footprints as small as possible.

In order to support the cause and help their racers "go green," we partnered to make a switch from **Hammer Gel pouches** to Jug and Flask combos. We staffed the registration table to help racers fill their flasks and develop fueling plans to ensure they had the fuel and know-how they needed to finish strong—without any risk of accidentally littering the trails.

With Hammer Gel's absence of artificial ingredients or added refined sugars, it doesn't upset the stomach and can be consumed hour after hour. But when riders use pouches for long events like these, that can equate to a whole lot of trash and some messy jersey pockets!

It was a huge hit!

Riders loved that they could easily fuel an entire race on a single flask, and the one-handed, no-mess flask

> solution made it simple and easy to do so. Even better, the cleanup on the trail was a breeze! No dropped packets on the trail and not even any trash in the cans.

Moving forward, all NW Epic races will feature free Hammer Gel and Flasks for riders! Their trails will be clean, and so will participants' laundry. Give the flask a shot yourself, or better yet—come grab one at one of their awesome races! Check out nwepicseries.com to sign up for 2019!

Photo: Juan Montermoso, Fast Focus Photography NW

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Daily Essentials

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Hammer athlete Sibyl Govan at the HITS 70.3 in Palm Springs, California. Photo: CaptivatingPhotos

The Exercise Inflammation Connection

BY STEVE BORN AND LOREN MASON-GERE

A customer recently called in with some very good questions regarding exercise and inflammation. Having read this publication for some time and followed our discussions on exercise, inflammation, and it's role in health decline, they were confused. "Wait a minute," they said, "I thought exercise was good for your health, and have read that it reduces inflammation. But you're saying it can be a cause—what's the deal?"

This is a common source of confusion and well worth some explanation. Follow along on this short science lesson and you'll be armed with the knowledge you need to make exercise—and its role in inflammation—work for, not against, your health.

First, you need to understand that inflammation is part of the body's immune response. The body sees a problem such as stress, injury, or foreign invaders (such as bacterial or viral infection) and enacts this response as a defense. This is not necessarily a bad thing. It all depends on the type of inflammation and how much time the body remains in that state.

Acute inflammation is short-term, with effects subsiding after a few days. It occurs from things like minor injuries (e.g. cuts, scrapes, sprains) and minor sicknesses (sore throats, etc.), as well as after bouts of exercise. In fact, some inflammation is actually necessary to benefit from your workouts. It's part of the natural recovery process and the body compensating from the stress the workout caused.

> Chronic inflammation (a.k.a. systemic inflammation) is long-term, persistent, and unhealthy, even if it is only low-grade. Though damaged body tissues rely on the inflammatory response in order to heal, when that cycle becomes chronic and inflammation does not resolve, health issues emerge. In fact, research shows that inflammation is an underlying culprit behind virtually all age-related diseases.

> > In each situation, white blood cell counts are increased in order to accelerate

healing. This is a healthful, natural process and a good thing so long as it passes quickly. In chronic inflammation, white blood cell activity is increased more than necessary and remains elevated for long periods of time. This prolonged "state of emergency" can trigger disease processes, causing lasting damage to heart, brain, and other organs. It also slows recovery, increases rates of inflection and sickness, and sets you up for over-use related injuries. As Dr. Peter Libby, cardiovascular specialist and inflammation authority, states, "Our own defenses literally bombard us with friendly fire."

The scariest thing about this process is that it happens slowly and silently. According to integrative medical expert, Dr. James Dillard, "One of the most dangerous things about chronic inflammation is that you can't feel it happening."

Fortunately, steps to preventing and addressing all forms of inflammation are within your grasp. Apply the following tips to ensure that your body quickly moves through the inflammation process, thus building up stronger and healthier all the time.

Exercise regularly and recover completely. Exercise decreases levels of TNF (tumor necrosis factor) and CRP (C-reactive protein), both of which are involved in systemic inflammation. The key to reaping the benefits of exercise and avoiding chronic inflammation is making sure that you allow enough time for the body to recover after every strenuous session.

Eliminate sugar from your diet. Cytokines are "small secreted proteins released by cells that have a specific effect on the interactions and communications between cells." Diets high in sugar (and refined starches) cause excessive production of pro-inflammatory cytokines, thus reducing the body's natural anti-inflammatory processes, and leaving you in a state of crisis.

Reduce stress. A 2012 study from The Rockefeller University showed that chronic stress diminishes the ability of cortisol—the "stress hormone"—to help regulate the inflammatory response associated with stress, allowing inflammation to run rampant.

Continued from previous page

Drink enough water. Without adequate water, toxins linger in the body, leading to inflammation. We recommend drinking water in amounts that equal half your body weight in pounds each day (e.g. A 180-pound person should drink 90 ounces of water daily).

Optimizing gut health by consuming cultured foods and taking probiotic supplements (Digest Caps or iFlora). Research shows a strong link between gut microorganism imbalance and chronic inflammation. This inexpensive, easy step will also support nutrient assimilation and all other aspects of health.

Consumption of anti-inflammatory foods. High on the list are green leafy vegetables, nuts, fruits (especially berries and cherries), and fatty fish such as salmon. See the article "Fight Inflammation With These 7 Superfoods" in Endurance News #94 for more details at hammernutrition.com/knowledge/endurance-news/fight-inflammation/

Supplement with anti-inflammatory nutrients. Effectively tame both acute and chronic inflammation with consistent use of the following supplements:

- Tissue Rejuvenator is the premier product for joint health; every single nutrient in Tissue Rejuvenator has potent anti-inflammatory properties.
- **EndurOmega** supplies the body with omega-3 fatty acids, well-known for their superior anti-inflammatory benefits.
- **AO Booster** is a dual-benefit product with potent anti-inflammatory and antioxidant properties.

- **EnduroZyme** not only helps you digest the food you eat more thoroughly and completely, many of its ingredients are also superb anti-inflammatories.
- **CBD Oil.** An ever-increasing body of research is showing that the naturally occurring compound, cannabidiol (pronounced can-uh-bih-DIE-all), also known as CBD, provides extraordinary relief from pain and inflammation, with no tolerance build-up or a kind of dependence commonly found with opioid use. SEE PAGE 18 for more details.
- Hammer Whey. While whey protein isolate's primary function is to support muscular recovery—which will help to ensure acute inflammation passes quickly—it also supplies anti-inflammatory benefits.

While exercise does cause acute inflammation, when properly addressed and balanced with recovery, the results are positive for your health—and performance. When left unchecked and/or combined with life and dietary stressors, your training can quickly become a health liability. The harder you're pushing your body, the more you need to look after yourself. Eliminate sugar from your diet, increase anti-inflammatory foods, and use the tools at your disposal. Most important among those is the newly available **Hammer Hemp**—the highest quality CBD oil available.

By faithfully following the steps we've outlined, you can alleviate the pain and inflammation that oftentimes occurs after workouts, while keeping harmful, healthnegating chronic inflammation at bay.

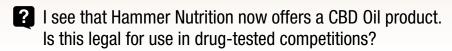






Answers to frequently asked questions about **Hammer Supplements and Fuels**

BY ENDURANCE NEWS STAFF



Yes, Hammer Hemp CBD Oil is legal for use in all WADA/USADA drug-tested competitions. At the World Anti-Doping Association's 2018 Prohibited List "Summary of Major Changes" (see: usada. org/2018-prohibited-list-summary-of-major-changes/), the following is stated:

Starting in 2018, cannabidiol (i.e. CBD oil) is no longer

prohibited under the S8 Cannabinoids category. Synthetic cannabidiol is not a cannabimimetic; however, cannabidiol extracted from cannabis plants may contain varying concentrations of THC, which remains a prohibited substance.

Synthetic cannabinoids, e.g. Δ9-tetrahydrocannabinol (THC)

and other cannabimimetics, continue to be prohibited.

Hammer Hemp CBD Oil is produced using a proprietary extraction process that incorporates a chromatography method. This method identifies the naturally occurring THC and allows for complete separation of THC out of the extract. There is no THC in Hammer Hemp CBD Oil.

Why do you use maltodextrin in your fuels? I have read some negative comments about it.

Some folks (us included) have read some fairly one-sided, not-so-positive articles written about maltodextrin as a food additive and ingredient. However, in correct application—that is, as a fuel source for use during and shortly after exercise—maltodextrin offers unmatched advantages.

A high-glycemic index (GI) carbohydrate, maltodextrin raises blood sugar rapidly. While undesirable during regular life, that is actually exactly what you want while working out. With a GI index rating the same as pure glucose (100), it will get carbohydrates to working muscles very quickly. However, unlike glucose or other simple sugars (those ending in "ose"), that blood sugar rise is sustained. While sugars cause "flash and crash" type of energy, maltodextrin enters the system quickly, but breaks down more slowly, thus yielding more sustainable energy and output.

Another great thing about maltodextrin is that your body is able to digest it in a much more

concentrated solution than sugars. In fact, digestion of maltodextrin requires three times less water than simple sugars. This helps prevent dehydration, allows undisrupted digestion, and perhaps most importantly, eliminates the GI issues—bloating, cramping, gas, nausea or diarrhea—commonly associated with simple-sugar fuels during exercise.

Shortly after exercise, your body has a prime "recovery window," during which time your system is primed to store carbohydrates as glycogen. At these times, maltodextrin is again the perfect solution, as its rapid absorption and processing will help refill the muscle cells with fuel—but without the sugar spike that'll leave you dragging for the hours to come.

While we have never promoted consuming high-GI carbohydrates during daily life, exercise fueling is another matter. At these times, maltodextrin is the perfect choice.



We set the standard

for purity, bioavailability, and health benefits.

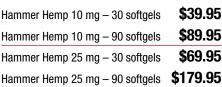
GUARANTEED!

Helps with:

- Soreness/Aches
- Sleep quality



- Made from organically grown hemp
- Water soluble
- Nanoemulsified
- Manufactured in USA



Hammer Hemp Hydro – 500 mg \$59.95



Patent-pending nanoemulsion process increases absorption rate 4-5 times compared to regular full spectrum oil or isolates.



"With a new product, it's always a question of 'should I or shouldn't I?' YES you should. I've been using **Hammer Hemp** since it was released and it's nothing short of awesome! I've noticed a decrease in muscle soreness and also improved sleep quality, as well.

As usual, Hammer hit the nail on the head with this great product!"

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High Sugar Intake Starts Too Soon

BY STEVE BORN AND LOREN MASON-GERE



Sugar is bad for everyone no less so for children.

Research recently presented by the American Society for Nutrition revealed an alarming and disturbing trend: On average, infants and toddlers between the ages of 6-23 months old consume up to 7.1 teaspoons of sugar every single day.

That figure is terrifying, surpassing even the American Heart Association's judicious allowance of 6 teaspoons—for adults!

Researchers led by Dr. Kirsten Herrick, PhD, reviewed data from over 800 infants and toddlers for the 2011-2014 National Health and Nutrition Examination Survey, looking at the amounts of added sugars-including cane sugar, high-fructose corn syrup, honey, and other forms of sugarto determine these

numbers. The study did not include artificial zero-calorie sweeteners or the sugars that occur naturally in fruits and vegetables.

They found that by 23 months of age, 99% of children were consuming 7.1 teaspoons of added sugar per day.

Dr. Herrick states: "This is the first time we have looked at added sugar consumption among children vounger than two vears old. Our results show that added sugar consumption begins early in life and exceeds current recommendations."

For 31 years, we at Hammer have urged our clients to limit sugar intake to the greatest degree possible—and designed unrefined sugar alternatives to support this cause. The net health impact of sugar elimination will be substantial. You will increase energy levels. improve athletic performance, and improve cognitive function, while decreasing risk of diabetes, heart disease, cancer, all chronic inflammation related illnesses. and so much more.

As with any health-related decision, good habits start young, and bad habits are hardest to break when developed during formative years. This is especially true when it comes to consuming an addictive and destructive substance such as sugar.

> As Dr. Nancy Appleton, author of "146 Reasons Why Sugar Ruins Your



Health," (which can be found at hammernutrition. com/knowledge/endurance-library/146-reasons-sugar-ruins-your-health/) has shown, there are also child specific sugar-related health issues. These include increased instance of hyperactivity, anxiety, and focus-related learning challenges, increased risk of diabetes (the number seven cause of premature death in the US), obesity, and skin issues such as eczema and acne.

With so much at stake, this study serves as a

GOOD HABITS START YOUNG & BAD HABITS ARE HARD TO BREAK. potent reminder that adults bear the responsibility of ensuring that young lives are set on the path of health and wellness from a young age. We must all set strong examples for children—our own or others'—by making wise health choices ourselves and encouraging them to follow suit.

For those in position of direct influence—such as coaches, teachers, and our retailers' sales staff—it is all the more important that they spread the word. If you know of a team or youth organization currently "fueling" with neon sports drinks, candy and the like, do them a favor and speak up. If there is something we can do to help make the switch to HEED and other fuels free of refined sugars, please reach out.

We've been helping people of all walks of life kick the sugar, and "Fuel Right, Feel Great®" since 1987—and plan to do so for generations to come. Let's get the next round of athletes off on the right foot, starting today!



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Product Spotlight

Vegans Rejoice!

Your Tissue Rejuvenator is Here!

BY ENDURANCE NEWS STAFF

Since its introduction, Tissue Rejuvenator has consistently been one of Hammer Nutrition's top-selling supplements. The reason is simple: the stuff just works. Until this time, however, we lacked an option for those who choose not to consume animal-derived products. For all of our valued clients who've requested a veganfriendly version of Tissue Rejuvenator, your ship has come in!

Though many of the ingredients in the existing Tissue Rejuvenator formula are vegan-friendly, the following three ingredients are not:

- · Shellfish-derived glucosamine sulfate
- Bovine cartilage-derived chondroitin sulfate
- Chicken sternum-derived undenatured type II collagen (UC-II)

Never satisfied to rest on our laurels, we've worked tirelessly to bring another option to the table. And while a vegan-friendly chondroitin sulfate is simply not available—it's been attempted but never perfected—we were able to source a great non-animal glucosamine sulfate, and then bolstered the formula with other key nutrients to arrive at a wildly effective, yet animal-free, option.

GreenGrown® is a 100%

vegan source glucosamine, derived from GMO-free corn. GreenGrown® provides the same benefits as shark cartilage derived glucosamine sulfate, is kosher certified. and requires no shellfish allergen warning. Every 4-capsule dose of Vegan Tissue Rejuvenator supplies your body with the same 500 mg of glucosamine that you'll find in our original Tissue Rejuvenator.

Along with GreenGrown® glucosamine sulfate, we've added two superb, vegan-friendly jointhealth nutrients:

Horsetail Leaf is a wild perennial herb, and one of the richest plant sources of silica, which is required for collagen formation. Collagen, often referred to as "the glue that holds us together," is primarily known for its beneficial effects on bone health. Silica also plays a major role in supporting strong, healthy, flexible joints.

Additionally, horsetail leaf is a natural source of potassium, manganese, magnesium, sulfur, and calcium. Every 4-capsule dose of Vegan Tissue Rejuvenator provides 200 mg of Horsetail Leaf, yielding a total of 14 mg of elemental silica.

Hyaluronic Acid (HA) is a type of carbohydrate known as mucopolysaccharides (aka glycosaminoglycans) that occurs naturally throughout the human body. HA is found primarily in connective tissue, and serves to lubricate and cushion body tissue, such as in the joints and eyes. Non-animal-sourced hyaluronic acid is synthesized through bacterial vegan-acceptable fermentation of sugars. Every 4-capsule dose of Vegan Tissue Rejuvenator supplies 80 mg of vegan-friendly hyaluronic acid.

Beyond these ingredient changes, the Vegan Tissue Rejuvenator formula contains the same nutrients and quantities found in the bestselling original Tissue Rejuvenator.

Of course, the question you'll ask is, "Which product works better?" The answer may vary—or simply be equal. Both are extremely effective formulas, so if you're already using and benefiting from the original—just keep it up! If you're curious, we suggest swapping for a onemonth supply to decide for yourself, or try using them together at a rate of 2-4 capsules of each in divided doses.

VEGAN upprior Receivery HE MATURAL

> After years of requests, we're thrilled to announce the launch of Vegan Tissue Rejuvenator. When you ask, we deliver—time and time again!



This little guy was wearing his father's police shirt while boldly marching forward with an incredibly warm smile.

"I don't think he spoke much English so we didn't say anything to each other, but we didn't need to. It was such a beautiful moment of connection." - Akshay Nanavati

From FEAR to Fulfillment

Fearvana: The Revolutionary Science of How to Turn Fear into Health, Wealth and Happiness

AKSHAY NANAVATI

BY ENDURANCE NEWS STAFF

As an Indian-born Marine Corps Veteran, Akshay Nanavati is no stranger to struggle. Upon his return from Iraq, Akshay was faced with the crippling symptoms of PTSD and alcohol addiction. In overcoming and embracing his struggles, Akshay discovered the path of chasing his fears to find a life filled with joy, meaning, and purpose. As a result, Akshay wrote Fearvana: The Revolutionary Science of How to Turn Fear into Health, Wealth and Happiness.

...the world is but one country and mankind its citizen. These moments are one of the core reasons why I am on this journey. On October 2nd, 2018, Akshay embarked on a journey to Liberia, Africa, to run 167 miles across the country to help bring clean water to those that need it, raise awareness for notable projects, and build the first sustainable school in post-war Liberia.

After hearing his story and ambitions, Hammer Nutrition partnered with Akshay to provide him with proper nutrition, supplements, and guidance to fuel him along the way. On October 8th, Akshay completed his goal and arrived in the coastal city of Monrovia. To date, he is involved in multiple projects to raise money for educational and community support in post-war Liberia, which continue to receive donations daily!

HOW HAMMER HELPED TO FUEL THE JOURNEY:

While Running:

Perpetuem **Hammer Gels** Tissue Reiuvenator Endurance BCAA+ **Anti-Fatigue Caps Fully Charged Endurolytes Extreme**

Pre- and Post-Run:

Recoverite Race Caps Supreme Tissue Rejuvenator Endur0mega **Super Antioxidant Premium Insurance Caps Hammer Hemp**



Fitter, Faster – Sooner

Understanding and Overcoming Delayed Onset Muscle Soreness



You've finished a grueling training session or just completed an intense endurance event and vou just know what's coming the following days—sore, tight, heavy muscles. While some degree of soreness is inevitable, here are things you can do to accelerate recovery, minimize the pain, and get back to action as quickly as possible.

Delayed Onset Muscle Soreness, or "DOMS," occurs most often with runners, and follows weight and strength sessions, but can show up after any strenuous bout of exercise. It can take you by surprise, as DOMS is normally at its worst on the second and third days after an intensive session. It is the result of repeated eccentric muscle contractions—when you use a muscle to repeatedly slow or stop a movement (think running downhill, jumping off a box, or lowering the weight in a squat). These repetitive motions cause small tears in the membranes of the muscle and require sufficient time and nutrient support in order to heal.

In response to the damage, the body increases inflammation by sending inflammatory markers to the damaged tissues. This might seem like a bad thing, but some pro-inflammatory markers are necessary for muscle regeneration. This inflammation is part of the muscle's adaptation process. In order to get stronger, we exercise

the muscle and introduce stress. The muscle then works to accommodate to the load, which often causes breakdown and damage. During the healing process, the muscle rebuilds and is able to perform under higher loads of stress. So in this sense, there is some truth behind the phrase "no pain, no gain"—but it can be minimized.

Given how uncomfortable DOMS can be, it's understandable that those experiencing it gravitate towards any solution within reach—including over-the-counter drugs. While nonsteroidal antiinflammatory drugs (NSAIDs) are a common choice when it comes to reducing inflammation and pain, they should be avoided. Not only are they toxic, they have been shown to slow down the healing and muscle regeneration process.

Proper supplementation offers a superior path, as you can reduce the pain without limiting training adaptations. Branchedchain amino acids, and antiinflammatories such as curcumin and boswellia serrata, are good choices for this purpose, as they both help reduce inflammation in damaged muscles. These herbs do not have any effect on the regeneration process (which means you keep all the benefits from training), and BCAAs take things a step further. They promote muscular adaptation, while also improving performance after strenuous exercise.

This makes Hammer Nutrition's Endurance BCAA+ and Tissue Reiuvenator an effective duo for tackling DOMS. Endurance BCAA+ is a great, easy-to-take source of amino acids. It will help the body rebuild the damaged muscle tissue, leaving you with fewer days sore, while also maintaining all of the benefits of a hard training session.

Tissue Rejuvenator is packed with all of the best anti-inflammatory nutrients available. It is an ideal choice for reducing the inflammation and pain associated with DOMS, as well as for addressing joint pain or chronic injuries.

Minimize DOMS and decrease the pain but keep the gain by adding these two nutrients to your training and daily routine. Hammer on!



Dr. Kirstin Lauritzen. DC is a Chiropractor in Portland, OR. She holds bachelor degrees in Psychology and Neuroscience, Spanish, and Human Biology. Dr. Lauritzen specializes in educating others about nutrition and its importance in life. especially in the lives of athletes. For more information: gym-call.com or find her practice at lauritzenchiropractic.com.



"I was taking multiple supplements prior to using **Premium Insurance Caps**. Now one great daily dose with all the ingredients and half the price of what I had been spending. Thank you, Hammer Nutrition."

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Ryan Ingham completing the Silver Rush 50 in Leadville, CO, with his daughter, Bryn. Photo: Sean P. Walkinshaw/Athlinks





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Eating Walnuts May Slash Risk of

Type 2 Diabetes

BY ENDURANCE NEWS STAFF

For 31 years, we have been advocating a diet rich in whole, unprocessed, organic, and local (when possible) foods as the key to feeling your best, improving your performance, and slowing age-related decline. In every instance, these suggestions check out. Today we'd like to review the science and thought behind some fascinating studies outlining the health benefits of one of our favorite nuts-the walnut-and explain how to best put this science to work for you.

First, let us recall our 2012 coverage on walnuts (Endurance News #78), which followed Dr. Paul Davis' findings that walnut consumption slowed the rate of progression in prostate cancer. One of the top causes of premature death in men in the US, prostate cancer exists at higher rates among male cyclists. Thus, this topic holds a special place for us here at Hammer. Beyond formulating PSA Caps, a potent prostate support supplement to help combat this issue, we are keen to learn, apply, and share all known dietary interventions.

This study showed that the high levels of polyphenols in walnuts were responsible for this anti-carcinogenic impact. Additionally, the bountiful supply of magnesium (arguably the most commonly deficient mineral in modern mankind. and one everyone should be supplementing), gammatocopherol (a member of the vitamin E family, also featured in our AO Booster supplement), and omega-3 fatty acids (most abundant in fish, and a wise product to supplement with—see EndurOmega) rounded out the incredible health-supporting properties of this delicious nut. Together, these features neutralize free radicals and reduce inflammation—a perfect one-two punch for minimizing cancer risk. Recent findings suggest they do even more.

Whole foods yield consistent results.

Flash forward to 2018, and we're excited to report that a University of California, Los Angeles, study has shown that three tablespoons of walnuts daily is associated with a 47% lower prevalence of type 2 diabetes. In this study. researchers reviewed data and interviewed over 34,000 adults of all ages and backgrounds. They found that regardless of age,

gender, race, education, body mass index, and physical activity levels, those who regularly consumed walnuts had a lower prevalence of type 2 diabetes than those who did not.

Head researcher, Dr. Lenore Arab, states, "These findings provide more evidence for foodbased guidance to help reduce the risk for diabetes. The strong connection we see in this study between walnut consumers and lower prevalence of type 2 diabetes is additional justification for including walnuts in the diet."

Indeed, based on our three decades of following "food-based guidance" for addressing all manner of health concerns from reducing risk of cancer to preventing diabetes—we can confidently state that Dr. Arab's approach is a wise one. And of course, walnuts are just one of the delicious foods that you should seek out that will contribute to health and longevity. Follow along our ongoing reporting as we continue to share the best whole food solutions for modern ailments. and the potent supplements which

accompany and

maximize their impacts.



2018 AMA 250 Outdoor and Supercross West National Champion Aaron Plessinger takes Fully Charged, along with Hammer Gel and Endurolytes, before every moto! In addition, AP relies on a whole host of Hammer fuels and Supplements for his daily training needs. Photo: LT Photography

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Product Spotlight

The Cognitive Function Stack

BY ENDURANCE NEWS STAFF

If you're familiar with Hammer's work, you know we're all about supporting maximum health and performance. We advocate a whole foods diet, prudent supplementation, diligent attention to recovery, and use of natural, complex carbohydrate fuels (not sugar). These things combined with intelligent training and balanced activity lead to optimal health, and therefore peak performance.

But at the end of the day, our mental state holds the key to unlocking the potential of our bodies.

The stressful nature of modern life doesn't always make this easy. If you're stressed, not sleeping, anxious or depressed, or simply not thinking clearly, it's impossible to be your best self—or even enjoy your life.

By combining the following supplements as a nootropic (brain health) stack, you'll improve your mood, energy, motivation, and stress response. When you feel better, you perform better and have more fun.



MITO CAPS (acetyl-L-carnitine)

Research demonstrates a link between low levels of acetyl-L-carnitine and increased rates of depression. In fact, it has been shown that this "brain-specific" form of L-carnitine is as effective in treating clinical mood disorders as prescription antidepressant medications—but without the horrible side effects.



ENDUROMEGA (omega-3 fatty acids)

The essential fatty acids in fish oil—eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA)—have been shown time and time again to have a positive influence on brain function and mood. This includes alleviation of anxiety, insomnia, mental fatigue, stress, depression, and more. As a major component of brain cells themselves, omega-3's help to maintain cell membranes, thus supporting proper firing and wiring of intercellular communications.



XOBALINE (folate & vitamin b12)

Low blood levels of folate have been consistently proven to lead to poor moods, mental fog, anxiety, and depression. Clearly, supplementation is important if you want to feel your best. But it's important to supplement with the proper form: 5-methyltetrahydrofolate (5-MTHF). Unlike synthetic folic acid, this is the bioactive, "body ready" form that can cross the blood-brain barrier without delay.

Research also demonstrates vitamin B12's role in cognitive health. One researcher on the topic writes, "Vitamin B12 should always be measured in the event of depression (or any other psychological problems) as a vitamin B12 deficiency can be a reversible cause of various neuropsychiatric disorders." The role B12 plays in energy production and cellular regeneration also help you feel (and think) your best.



ESSENTIAL MG (magnesium)

Incontrovertible evidence continues to clearly demonstrate this "spark of life" mineral's cognitive and emotional benefits. These include reducing symptoms of anxiety and depression, improving sleep quality, and improving mental clarity and focus.

For best results, we suggest combining these supplements together twice daily—once in the morning and another in early afternoon—at the following dosage:

- 2 Mito Caps
- 2-3 Endur0mega

- 1 Xobaline
- 1-2 Essential Mg

Don't Stop There

Of course, nothing can replace the quality of deep, restful, and rejuvenating sleep. Round out this supplementation regimen with *Hammer Hemp* before bed. Regular users of CBD experience profound improvements in levels of chronic pain and inflammation, faster athletic recovery, deeper and more restful sleep, improved stress response, and reduced anxiety levels.

We offer two potencies/strengths of Hammer Hemp—10 mg and 25 mg. Most people respond well to daily doses within this range. Those experienced with other brands of CBD generally find that the unparalleled bioavailability of Hammer's offering allows them to decrease their dosages. While individual needs will vary, consider the following as you dial in your plan:

- 1. BODY WEIGHT Smaller/lighter-weight people will find that a higher potency may not be needed; 10 mg per day may be ideal. Larger/heavier people (roughly 160+lbs., though that is not a "set in stone" figure) will most likely receive the desired benefits with a daily dose of 25 mg.
- **2. CURRENT PHYSICAL STATUS/CONDITION** People dealing with injuries and/or chronic issues regarding inflammation, poor sleep, or both, will find that a 25 mg daily dose will be best for them. If your physical status/condition is mild, a 10 mg dose may be completely sufficient.

If quality sleep is historically a struggle for you, we suggest an additional dose of magnesium with your CBD at bedtime. If struggles persist, *REM Caps* can be used to get things back in order.

Our cognitive health is an integral part of our overall health and should not be neglected. While it's important to attend to our bodies and sports performance, a healthy brain is necessary for all functions. Use this program to maximize your mind, and all else will follow!





This has been a great year for Hammer Nutrition in so many ways-

- One being that we introduced more new products than ever before. 2018 will also be remembered as the year when a favorite of many, Perpetuem Solids, was finally back in stock and once again selling briskly.
- We welcomed back a venerable favorite to the Hammer Nutrition lineup as well—Liquid Endurance. The formula is simple yet extraordinarily effective in helping maintain exercise performance in hot-weather conditions. Needless to say, we're very happy to have this great product back!
- Space limits going into greater detail, but here is a synopsis of the new supplements and fuels that we introduced this year:

EnduroZyme

While the quality of the food you eat is undeniably important, even more so is making sure you're efficiently digesting your food and absorbing the nutrients it contains. Unfortunately, the typical American diet contains too many 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 GI health issues. EnduroZyme to the rescue! Containing an impressively wide range of non-animal enzymes—and effective amounts of each of these enzymes—EnduroZyme greatly enhances digestion and allows you to get the most from what you eat.

Hammer Hemp

With science continuing to reveal the plethora of benefits attributed to CBD oil, it's no stretch for us to say that Hammer Hemp may very well be the most important product we've ever offered. The pure, 100% THC-free CBD oil in Hammer Hemp supplies powerful recovery-enhancing benefits. It's ideal for helping reduce soreness and pain, supporting the immune system, and promoting better quality sleep—all of which enhance recovery. Available in softgel capsules as well as tincture, we guarantee that Hammer Hemp is the finest hemp oil product available.

LSA Caps (Liver Specific Advantage)

The liver is the hardest working organ inside the human body. Responsible for performing more functions than any other organ, it gets pushed to its limits on an almost constant basis. We need our liver to function properly in order 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. When your liver is not functioning optimally, it can negatively affect almost every area in the body. The extraordinary LSA Caps formula is powerful, effective, and complete in helping keep your liver healthy and working optimally.

Vegan Recoverite

It took several weeks of testing to get the flavor profile dialed in, but once we did, we knew that we'd hit this one out of the park! Vegan Recoverite contains the same super beneficial nutrients found in the original Recoverite, but we've swapped out the whey protein isolate with what we believe is the best of the best when it comes to non-animal proteins: organic pea protein. Considered to be least allergenic of all protein sources, organic pea protein is also regarded as arguably the easiest plant protein to digest, and has an excellent amino acid profile.

Vegan Tissue Rejuvenator

We've been working on this for a while, and it wasn't until reliable, high-quality sources of specific vegan-friendly joint-health nutrients became available that we were able to go from "wish list" to actual product. Given how amazingly effective this formula is, it was definitely worth the wait. Vegan Tissue Rejuvenator is slightly modified from the original to make it suitable for vegan diets, while maintaining the potent, reliable relief that makes Tissue Rejuvenator a perennial best-seller. For anyone who has adopted a vegan/vegetarian lifestyle and diet, look no further to find the most effective, vegan-friendly, joint-health supplement available!

Cola Endurolytes Fizz

The same superb electrolyte replenishment formula you can expect with Fizz, with an effective-but-not-excessive shot of caffeine (20 mg per tablet), and a refreshing, spot-on cola flavor. 'Nuff said!

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

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Secrets of Success

Our fueling recommendations:

Within 30 minutes after your finish consume:

- 20-30 oz. of water
- 30-60 grams of high-glycemic carbohydrates
- 10-20 grams of protein, preferably whey isolate
- Complementary amino acids and micronutrients



Recovery Done Right

For better performance tomorrow, recover right today!

BY ENDURANCE NEWS STAFF

Rehydration

Begin rehydrating immediately following your exercise session and continue throughout the day. Consume at least 16 oz. of water immediately following and continue based on temperature, sweat rate and thirst. You should consume at least 16 oz. per pound of body weight lost during a strenuous session.

Macronutrient requirements

First and foremost, the recovery process relies on two essential macronutrients: carbohydrates and protein. Consuming carbohydrates after exercise will replenish glycogen (carbs stored in muscles) while also helping your body to assimilate protein.

Several studies have shown that pre-exercise muscle glycogen level is the most important energy determinant for exercise performance. Athletes who have more of this readily available fuel in their bodies have a significant advantage.

Fortunately, you can substantially increase your glycogen storage capacity through consistent recovery practices. To maximize this process, always consume carbohydrates within 30 minutes of your session's end.

Ryan Ingham recovers after a race along the north rim of the Grand Canyon in the Grand Canyon 50 Miler. Photo: Courtesy Ryan Ingham

For fastest absorption, choose highglycemic complex carbohydrates

A high-glycemic complex carbohydrate is ideal because it raises levels of insulin in the blood. This is desirable after exercise, as insulin drives the storage of glycogen. stimulates protein synthesis (needed to repair and rebuild muscles), and decreases protein breakdown.

Though simple sugars will also spike insulin levels, they rapidly drop, leading to decreased energy for the rest of the day. Given simple sugar's inflammatory nature and propensity to cause stomach distress, it is a poor choice for recovery. Instead, choose high-quality complex carbs such as those found in Recoverite.

To maximize muscle repair, choose high-quality protein sources

Protein provides the raw materials your body needs to rebuild stressed muscles, enhance glycogen storage, and support the immune system. Whey protein isolate is the best protein choice for speeding recovery, though high-quality plant-based proteins are reasonable stand-ins for those who avoid all animal products. Like whey protein isolate, plantbased sources offer anti-inflammatory benefits.

When selecting a whey protein, it is essential to use an "isolate" rather than a "concentrate" or blend. While isolate is virtually lactose-free and boasts the highest absorption rate of any protein, concentrates include casein and higher levels of lactose. Not only are those more likely to cause GI distress, they also slow protein biosynthesis and increase inflammation, thereby delaying recovery.

Take care of the basics

There are many advanced recovery techniques and potent supplement tools to maximize recovery after exercise, but you've got to take care of basics. Get hydrated, and refuel with quality carbohydrates and easily absorbed protein. Recoverite offers it all in one simple step and is now additionally offered in a vegan formula.

Recovery matters. Do it right!



Succeed to



The most downloaded and read book on endurance fueling and strategy available!

When it comes to endurance fueling, we wrote the book!

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FROM THE KITCHEN OF

LAURA LABELLE

Fall for Your Food



With fall fully upon us, the weather is cooling, the days are short, and nights are getting long. This time of year, I like to get cozy, do some slow cooking, and enjoy heartier meals like stews, soups, and roasted dishes. Even with the fresh veggies of the summer behind us, eating healthy isn't difficult if you have a plan to set yourself up for success. I suggest you do this by sitting down and making a general meal plan for a few days at a time, and then setting aside a few hours to cook for the week. If you make extra, you can even parcel some out and freeze it so you have good food on reserve for when life gets crazy.

This week I will make a stew, a meatloaf (page 133 of In the Kitchen With Hammer Nutrition), and some delicious balsamic chicken (page 138) in the "slow cooker." I'll also prep a batch of brown rice (page 108), some roasted veggies (pages 113-116, 124), and perhaps some soup. That way I can come home and mix and match and just make simple easy dishes to compliment what I am serving. Here are some examples:

- **Day 1:** Serve soup with rice and steamed veggies for dinner.
- **Day 2:** Reheat pulled chicken and add it to freshly baked spaghetti squash with a butter lettuce salad.
- Day 3: Serve stew with a quick cabbage salad and some steamed broccoli.
- Day 4: Serve meatloaf with roasted veggies and a cucumber salad.

The beauty of this kind of conscious meal planning is that your dinners are covered, and there are plenty of leftovers to make lunches and other meals. That keeps you well-supplied with healthful food. Examples of how leftovers from the above menu could be repurposed are as follows:

- Take leftover stew and make a shepherd's pie by covering it with mashed potatoes or baked spaghetti squash.
- Meatloaf is delicious cold in a sandwich or chopped \angle up on a salad.
- Spaghetti squash is delicious in so many ways—hot or cold, with pesto, tomato sauce, or just butter/ghee and soy sauce or tamari.
- Roasted veggies are delicious hot or cold with some $\,$ 4 balsamic vinaigrette.
- Brown rice can be served with chopped up steamed 5 veggies or roasted veggies in a salad or stir fried with an egg.

The possibilities are really endless, but the point is to make meal prep as easy as possible and have fun while doing it. I always love the peace of mind I get from knowing that I have ready-made components to throw together for an easy, healthy, and delicious meal in no time at all. Yet I still have flexibility to create new dishes based on my mood or cravings. I encourage you to try to do this for a month and see how it works for you, your family, and your life rhythm. Tweak it to fit your needs and tastes, and most of all, have fun! Eating healthy food is a fun and delicious way to keep your body ready to Hammer on!



Acclaimed California-based chef Laura Labelle studied at Ecole De Cordon Bleu in Paris and received a "Grand Diplome" in cuisine and pastry. She has established two successful ventures, Cafe Luna and Quality Food and Beverage, and also worked as a personal chef to various celebrities and for Mix This music studio. Laura is an accomplished open water swimmer, enjoys practicing yoga and sharing her cooking with family and friends. She and her husband will soon be opening Le Petite Marche in Los Angeles.



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NEW! Men's Enduro Mountain Bike Jersey

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Mouth-Watering Recipes

Dig in to these savory, protein-packed dishes



Dijon Chicken Thighs

6 boneless organic chicken thighs 1Tbsp. olive oil

2 Tbsp. Dijon mustard

1 Tbsp. white wine vinegar

1 Tbsp. fresh chopped oregano 1 Tbsp. fresh chopped parsley Salt and fresh cracked pepper

Put chicken in a dish and mix all other ingredients in a bowl. Roll chicken in the marinade and let sit for 20 minutes. Bake at 400° for 30-40 minutes and serve with your favorite side dishes, or cool and chop for salads.

Teriyaki Baked Salmon

3 lbs. salmon fillets or steaks ¼ cup sliced green onion 1 Tbsp. sesame seeds

Marinade:

²/₃ cup coconut aminos ¹/₄ cup rice vinegar

2 Tbsp. honey

1 Tbsp. sesame oil

1 clove garlic, minced

1 Tbsp. grated fresh ginger

Mix all marinade ingredients in a bowl. Place salmon in a glass baking dish, pour sauce over it, and let marinate at least 20 minutes. Preheat oven to 400° and bake for 12-16 minutes. Garnish with sesame seeds and green onion.





...but what is *coconut aminos*?

Coconut aminos is quickly becoming a staple in the kitchens of health junkies all over. Containing around 70% less sodium than soy sauce, it has become to

many, a healthy alternative. It's made from harvesting sap from coconut flower blossoms, then fermented and blended with sea salt. Packing a rich, bold flavor similar to soy sauce, with a hint of sweetness, this little sauce is something that you'll want to add to your own meals.



These recipes are just a few examples of how you can create a quick, delicious fall meal. Have fun experimenting with proteins and herbs to pep up your meals. For more inspiration, go to hammernutrition.com/cookbook. Photos: Endurance News Staff

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Sleep Soundly for Superior Recovery

BY ENDURANCE NEWS STAFF

Sleep deprivation can put you in one of the worst holes you'll ever experience. It goes hand in hand with **overtraining**, **erratic training**, and **poor performances**.

Those are words from highly-respected coach Nate Llerandi, who labeled the lack of quality sleep "the ultimate performance killer."

Dr. Bill Misner elaborates:

Deep sleep patterns may mean the difference between big anabolic gains and none at all! Both bodily repair and anabolic growth occur only during quality rest, and when deep sleep patterns become routine.

While lack of sleep can have dire consequences, adequate sleep provides only positive, healthful benefits. In a typical day, a person's waking hours are consumed trying to meet the many mental and physical demands encountered at every turn, as well as replenishing vital nutrients as they are being used up during these daily activities. In the hours remaining—during sleep—the body takes time out to rebuild and recharge, preparing for the day ahead.

It's pretty obvious: if you're not obtaining the right amount of high quality sleep each and every night, not only is your athletic performance being sabotaged, so too is your overall health! *If you're not sleeping, you're not recovering. Period.*

Common problem, disastrous results

Getting sufficient high-quality sleep is an issue that plagues athletes and non-athletes alike. In fact, an estimated 30%-50% of the general population experiences bouts of sleeplessness and

10% have chronic insomnia. A survey done by the National Sleep Foundation in 2005 reported the following percentages* of these symptoms that were experienced frequently by the adult population:

- 38% woke up feeling unrefreshed
- 32% woke often during the night
- 21% reported waking too early, not being able to get back to sleep and difficulty falling asleep

(*Given that this survey was done over a decade ago, it wouldn't be surprising if those percentages have increased even more.)

The supplement solution to ensure sufficient sleep

The connections between health, athletic performance, and sleep are hard to overstate. Mood, motivation, muscular repair, hormone regulation, quality of digestion, and mental focus are just a few of the things that will deteriorate if you aren't sleeping well. If you hope to make gains in your training, maintain a strong immune system, get the most from your day, and simply enjoy your life, you must get adequate sleep.

Fortunately, Hammer Nutrition produces three supplements which help alleviate the effects of stress—the most common cause for sleep issues—while also safely and effectively supporting sound, restful sleep.



REM Caps

Headed up by melatonin, REM Caps contains a proprietary blend of specific nutrients in therapeutic doses, all of which work synergistically to safely and effectively help you quickly fall—and stay—asleep.



Hammer Hemp

Contains Phytocannabinoid-Rich Hemp Oil, which interacts with the body's endocannabinoid system. Of its important roles in the body, the endocannabinoid system helps regulate sleeping patterns. The phytocannabinoids in Hammer

Hemp augments the body's natural production of cannabinoids, helping to ensure sufficient amounts are available to positively influence sleep.



Essential Mg

Of the hundreds of roles magnesium plays in the body, one of the primary benefits for aiding sleep is that it helps the muscles and nerves to relax. Additionally, along with the valerian root extract in REM Caps,

magnesium may provide noticeable relief for anyone suffering from night cramping.

This unique and highly effective combination allows you to reap the health and performance benefits of a more sound, restful, and productive sleep, all year long.





A Cut Above the Rest

THE MOST absorbable, dietary-friendly, potent protein available

- Helps reduce muscle soreness
- Supports immune system
- Grass fed, 100% isolate

24 Servings **\$39.95** Single-serving packets \$3.50 ea

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Jennifer Reschke relies on Endurolytes Extreme Powder and Hammer Gel to win 1st place amateur female at Ironman 70.3 Chattanooga. Knowing that the work isn't done until she recovers right, she has Recoverite waiting at the finish, every time. Photo: Neil Gallivan





AID STATION

A roundup of nutritional news, tips and tidbits

The Omega-3/Mortality **Connection**

A recent study reveals that a higher level of omega-3 fatty acids is associated with a lower risk of mortality. Headed up by Dr. William S. Harrisan internationally recognized expert on omega-3 fatty acids—researchers examined data from 2,500 men and women enrolled in the Framingham Heart Study Offspring cohort.

Compared to the subjects whose Omega-3 Index values were in the lowest 20%, those subjects who were among the top 20% had a:

- 39% decreased risk of cardiovascular disease
- 42% lower incidence of coronary heart disease
- 55% less risk of stroke

Interestingly, the findings showed that the participants with the highest blood levels of omega-3 fatty acids had a 47% lower risk of death from causes other than cancer and cardiovascular disease. This suggests that EPA and DHA have benefits that go beyond preventing arterial plaque buildup.

Fish is the ideal source of these essential fatty acids, but consuming sufficient amounts of high quality fish on a regular basis is difficult and expensive. That's why adding EndurOmega to your daily supplement regimen is more than just a good idea, it's essential!





More than 10 million Americans suffer with macular degeneration, the leading cause of vision loss. This condition is considered to be incurable, and it's caused by the deterioration of the central portion of the retina, known as the macula.

There are a number of steps that we can take to protect our eyes, most of which are obviously beneficial for every other area of health:

- ✓ Don't smoke
- Exercise regularly, and maintain a healthy weight
- ✓ Limit your intake of refined carbohydrates (high-glycemic index foods)
- Keep your blood pressure and cholesterol under control

A diet rich in dark, leafy green vegetables, nuts, and omega-3 fatty acids (see above) is also vital for protecting our eyes. Fruit consumption is important as well—oranges especially.

Research from the Westmead Institute for Medical Research in Australia revealed a lower risk of macular degeneration among men and women who consumed higher amounts of the flavonoids that occur in oranges.

Flavonoids are powerful antioxidants/antiinflammatories found in almost all fruits and

> vegetables. Though we recommend getting your citrus-specific

> > flavonoids from whole oranges (because of all the other phytonutrients that occur in oranges as well), you can also obtain citrus bioflavonoids in Premium Insurance Caps (500 mg per 7-capsule dose).



How Hammer Can Help

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Enhance endurance, accelerate recovery, and supercharge your immunity with the "A" Team.



Race Caps Supreme

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- Enhances energy & endurance
- Increases workload capacity

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

Super Antioxidant

- Helps reduce soreness
- Aids in reducing free radicals
- Helps improve circulation

60 Capsules: **\$34.95** 3 or more: **\$30.95 ea**

Premium Insurance Caps

- Supports optimum health
- Boosts energy all day
- Supports immune function

120 Capsules: **\$21.95** 210 Capsules: **\$37.95**

A0 Booster

- Fat-soluble antioxidant support
- Helps reduce muscle soreness
- Benefits skin & eyes

60 Capsules: **\$34.95** 3 or more: **\$29.95 ea**

Mito Caps

- Improves energy production
- Promotes well-being
- Improves fat metabolism

90 Capsules: \$24.95

Daily Essentials Kit includes:

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Reduced Risk of

Dying Prematurely for Coffee Drinkers

BY ENDURANCE NEWS STAFF

If reading this headline in Endurance News feels a bit like déjà vu, we understand. In fact, we've reported on research supporting coffee's health benefits with such frequency that we'd forgive you for accusing us of rehashing the same findings repeatedly. But of course, that's not the case; these studies just keep coming, and only rarely do mainstream news sources pick them up.

Luckily, the latest study published earlier this summer in the prestigious JAMA Internal Medicine peer-reviewed journal made the big time, and major news sources finally picked up on the story we've been sharing for years: Coffee has tremendous health benefits and may in fact increase your lifespan.

This particular study involved nearly a half million participants (men and women) in the United Kingdom's massive BioBank population-based study. The results showed a strong association between coffee intake and

Over a five-year period, the study participants completed questionnaires providing data on their diet and coffee consumption. Biological samples were analyzed to determine genetic variations that indicated how fast or slow caffeine was metabolized. Subjects were followed for an average of ten years.

The research concluded that, compared to non-coffee drinkers, regular coffee consumption decreased premature mortality by 6%-14%. Furthermore, it showed that more coffee was associated with lower mortality, all the way up to 8 cups of coffee per day.

Coffee has tremendous health benefits and may in fact increase your lifespan.



Lead study author, Dr. Erikka Loftfield of the U.S. National Cancer Institute, suggested that the mechanisms for coffee's positive influence on health and longevity include improvements in inflammation, liver enzyme levels, insulin sensitivity, and cellular function.

Dr. Loftfield concludes, "These results provide further evidence that coffee drinking can be part of a healthy diet and may provide reassurance to those who drink coffee and enjoy it."

Though we've accurately reported on these findings for years, this most recent study offers yet more evidence to support our position. If you're a coffee drinker (and you're choosing coffee from good sources), you can rest assured that your morning ritual is indeed supporting your health and wellness.







- 100% organic
- Micro-batch roasted

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.

All blends available in ground and whole bean!

SUMATRA	12 oz. \$13.95
THE EARLY BREAK MEDIUM ROAST	12 oz. \$13.95
THE CHAIN BREAKER ESPRESSO	12 oz. \$13.95
THE DOWN SHIFT	



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Adrienne Bounces Back

BY LOREN MASON-GERE

As 15-year-old Adrienne Harnum recently learned, even young bodies can break down under the strain of heavy training and competition. As an up-and-coming high school basketball star, her enthusiasm, youthful energy and rate of recovery are the stuff our adult readers dream of. With her incredible motivation matched by her natural abilities, she'd started on the highly competitive Columbine High School's varsity basketball team while only a freshman. Her athletic future appeared to be a bright one indeed.

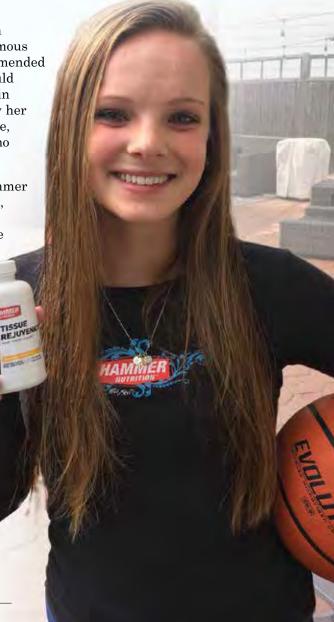
During summer training last July, however, disaster struck. Adrienne tore the labrum in her right shoulder, jeopardizing the season ahead.

The injury would require surgical repair, followed by thorough physical therapy and rehab. A complex joint, shoulders are famous for complicated and lengthy rehabilitation. Her doctors recommended a recovery period of four months. If all went as hoped, she would be well by the first game of the season—but unable to engage in practice or training beforehand. With the pressure on to follow her breakthrough freshman season with star performances to come, losing so much training time would be a tragic setback. With no time to waste, she underwent surgery immediately.

Luckily, her father, an athlete himself, was familiar with Hammer Nutrition and reached out for advice. Resident Fueling Expert. Steve Born, immediately responded with a specific Tissue Rejuvenator protocol based on her age, weight, and injury. She put it to use, followed it religiously, and the results spoke for themselves.

Just three weeks post-operation, her physical therapist documented mobility rates that surpassed what would normally be expected with four-to-five weeks of rehab. Her progression representing more than a 25% acceleration in recovery—was nothing short of remarkable!

During summer training last July, disaster struck. Adrienne tore the labrum in her right shoulder. The injury would require surgical repair, followed by thorough physical therapy and rehab.



Her progress didn't stop—or even slow. The acceleration of mobility allowed her therapist to advance her quickly into weight-bearing and strengthening activities, then light basketball training. Seven weeks after surgery, she was back in the gym, practicing dribbling and left-hand skills, strengthening her weaknesses, and priming for another great season.

Adrienne is on track to play full-contact basketball a month ahead of the initial prognosis. Having now added firsthand knowledge of the power of proper supplementation to her considerable bag of tricks, her goal of playing college ball seems all but inevitable.

We're excited to follow along as this Hammer star continues to rise!

Just three weeks post-operation,
Adrienne's physical therapist
documented mobility rates that
surpassed what would normally be
expected with four-to-five weeks of
rehab utilizing Tissue Rejuvenator.
Her progression—representing more
than a 25% acceleration in recovery—
was nothing short of remarkable!



"I have tried a lot of different supplements that simply do not work. I researched **Race Caps Supreme** very thoroughly and decided to purchase. My energy is way up and I can feel the difference immensely in my performance. I will continue to purchase for years to come!!!"

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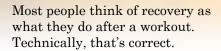
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Recovery-It's a Long-Term Game

BY JOHN KELLY



But it's not the previous workout that makes recovery important; it's the next one.

I actually like to think of what I do post-workout as preparation.

After tough training or a race, our bodies are in need of serious physical repair due to damaged muscle; glycogen depletion; loss of fluids, electrolytes, and other minerals; and so on. If we had simply decided on a whim to do something just that day, we'd probably be fine going about business as usual. Eventually we'd recover. But chances are, that workout was part of a larger plan to increase fitness. In that case, recovering as quickly as possible is critical to being able to effectively continue towards that goal.

When considering exactly what is needed for recovery, I don't just consider what condition my body is in at the moment. I consider how much repair is necessary to get it in the right condition for what comes next. If I have another high intensity training session within 24 hours, I focus on replenishing my carbs. If it's a long and/or hot workout, I'm sure to replenish my fluids

and electrolytes as quickly as possible (I enjoy adding some Grape Fizz to my water). And if I don't have a meal coming up, I get a little extra protein to keep the muscle rebuilding process going. My default refueling option is Chocolate Recoverite, a little chilled if possible. It reminds me of the post-workout chocolate milk I used to think was a good idea.

No matter what I do immediately after training, it's unlikely my body will be back to 100% before I'm at it again. A proper training block involves weeks of cumulative fatigue before we eventually need recovery time. Throughout that block, it's not just about post-workout recovery, it's additional steps to combat that cumulative fatigue as much as possible: proper sleep (my recovery Achilles' heel), proper nutrition (my weekday lunches are nutrient-dense salads or grain bowls from a local chain called Chopt, and I rely on Hammer to supplement nutrients I might miss), and steps to relieve muscular soreness and injury such as EMS (I have a Compex unit), foam rolling, or sports massage (I visit Georgetown Sports Massage near my work).

Every so often, though, maybe there isn't anything big to prepare for on the immediate horizon. If you follow me on social media,

you've probably seen some pretty crazy and unhealthy things that I consume. Honestly, I do thoroughly enjoy those. They're definitely not about physical recovery, though. Far from it. They're for celebration, typically after a big race, and for mental recovery. As demanding as endurance sports are, it's important to remember to let our minds recover as well and to stop and savor the moment every once in a while. So stay focused on what's next and recover well, but remember to enjoy the journey that leads there.



Photo: Gregg Gelmis, WeRacePhotos

John Kelly is an ultrarunning data scientist with a triathlon habit. He has won the Barkley Marathons and 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.



Jake Vedder hammers Mt. Brighton in his home state of Michigan preparing for the upcoming season. Photo: Mitchel Vedder



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.Continued from page 4

That being said, I am not a vegan, although I have eaten that way for several months at a time and enjoyed it. We are also fully aware of the philosophical debate surrounding this diet and will remain neutral on that front. I really believe in freedom of choice when it comes to one's diet. Hammer supports athletes who eat plant-based diets and those that include animal products in their diet as well.

Going forward, I will continue to develop products that meet the needs of all types of athletes and their dietary choices.

This leads me to the other question I get a lot: "Why do you guys spend so much time talking about diet when you sell fuels and supplements?" The answer is simple: you cannot expect to achieve lasting health or peak physical performance if your diet is filled with junk food! At least 90% of the calories you consume come from your daily diet, not nutritional supplements.

You cannot expect to achieve lasting health or peak physical performance if your diet is filled with junk food!

It's not an accident that all of my products are complimentary to a healthy diet. I don't think an athlete should have to go on

a sugar binge just because they want to go out and swim, bike, run, hike or whatever.

However, there may be a misperception of my dietary habits based on my advocacy of a whole food diet with minimal sugar/wheat/dairy. I am not a saint or militant about my diet or anyone else's. I practice moderation always, except when I do not, and that's not often. I do allow myself ½ teaspoon of raw sugar in my morning coffee. Other than that, if I am going to go off program, it's going to be for a delicious Tarte de Poires Belle Helene when I am on vacation in France!

CBD – Our gradual roll-out of this revolutionary product continues with more varieties including a non-water-soluble, full-spectrum tincture, that is also 0.0% THC guaranteed, a 500 mg, 2-ounce salve for topical applications, and a 500 mg water-soluble tincture. I know many of you were baffled by my article in the last issue of EN and the mailer I sent out to some of you due to the lack of benefits listed.



Buddy van Vugt (Hammer Europe Distributor), Juliette Blanchet (Hammer Europe Sponsored Athlete), Karin Sloove (back), Brian Frank, Kamil Lesniak (Hammer Europe Sponsored Athlete), Andrzej Olszanowski (Hammer Europe Sponsored Athlete) and his son at the Ultra-Trail du Mont-Blanc. Photo: Courtesy Buddy van Vugt

For reasons that may or may not be obvious to you, there's very little we can say other than that taking this product may help with issues surrounding soreness, sleep quality, and relaxation. Believe me, I wish I could share with you the feedback I have gotten from customers and friends alike!

As I said before, there are many sources of information if you wish to learn more. One thing you can be sure of, if you want to use CBD, I have found the best product and am offering it at the best prices you will find online or in stores. That is my solemn promise to you.

As is usually the case with the timing of this issue, let me be the first to wish you a Happy Thanksgiving, Merry Christmas, and a bigger and better 2019!!

Enjoy the read and pass along the good news about Hammer to all of your family and friends. We make a product for all of them!!

Brian Frank Owner/Founder

Brin Fink



"My ultra kryptonite! Easily digestible fuel for the long haul. Perpetuem Solids taste just right."

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Whatever your sport, you'll find plenty of challenging Hammer Nutrition-sponsored events to choose from this fall. 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:



50 Endurance Ne



DEAD HORSE ULTRA

All Dead Horse photos courtesy of Dead Horse Ultra.

11/17/2018 GEMINI BRIDGES, MOAB, UT

One of Moab, Utah's most sought after camping and recreation sites is also home to the Dead Horse Ultra—a 50-mile trail run on desert singletrack.



YOUR SPORT UPCOMING EVENTS:



DAWN TO DUSK 12-HOUR MTB RACE

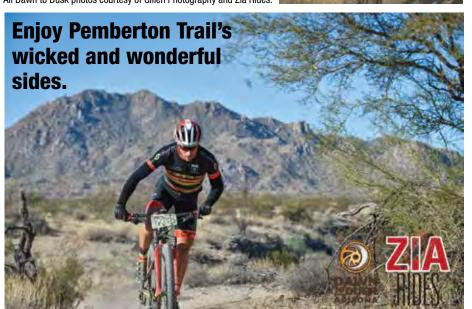
12/8/2018 SCOTTSDALE, AZ

Over the last four years of this race, the Pemberton Trail at McDowell Mountain Regional Park has shown its wicked and wonderful sides. The 16.5-mile loop highlights the best the area has to offer. With its fantastic variety and the amazingly scenic views of the Sonoran desert, it'll keep you engaged, lap after lap.

Team up with friends, or tackle the challenge alone. There are lengths and categories for suited for all riders, all abilities, and all ages, so come get involved in this amazing event!

For more details or to register, visit ziarides.com/event-register/dawn-duskarizona/#1473199916969-acd4dfa9-5e46

All Dawn to Dusk photos courtesy of Gillen Photography and Zia Rides.





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runchinohills.com/

ANTELOPE ISLAND FALL **CLASSIC 50K**

11/17/18 SYRACUSE, UT

buffalorunadventures.com/antelope-island-50k/

ROPE MILL DIRTY DUATHLON

11/10/18 WOODSTOCK, GA

mountaingoatadventures.com/ropemill

MACK CYCLE MIAMI MAN INTERNATIONAL AND HALF TRIATHLON, DUATHLON & AQUABIKE - USAT NATIONALS CHAMPIONSHIP

11/11/18 MIAMI, FL

miamimanhalfiron.com/

DRAGON SLAYER MOUNTAIN BIKE ULTRA MARATHON

11/18/18 GEORGETOWN, TX facebook.com/events/2031161917202765/

OLD PUEBLO TURKEY CHASE (EQUINE ENDURANCE)

11/23/18-11/24/18 SONOITA, AZ facebook.com/oldpuebloendurancerides/

HITS CHAMPIONSHIP TRIATHLON -PALM SPRINGS

12/1/18-12/2/18 PALM SPRINGS, CA hitstriathlonseries.com/palm-springs-caregistration

URBAN ULTRA - HOUSTON

12/1/18 HOUSTON, TX

ultraexpeditions.com/the-urban-ultra-houston

WILDWOOD TRAIL MARATHON

12/2/18 WILDWOOD, MO

wildwoodtrailmarathon.weebly.com/about.html

BELL RINGER 50K/25K TRAIL RUN

12/8/18 BURNS. TN

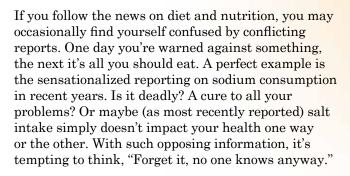
ultrasignup.com/register.aspx?did=55699

FOR MORE INFORMATION, **VISIT THE EVENT WEBSITES** LISTED ABOVE.

A Light in the Dark

How Hammer Deciphers Fact from Fiction – on Sodium and More

BY ENDURANCE NEWS STAFF



That's the worst-case scenario, and the type of nutritional apathy we're here to fight. In fact, we publish this magazine partially to counteract that exact feeling.

When it comes to potentially confusing topics such as the "salt dilemma," we take a consistent approach. We consult legitimate, non-biased (or paid for) studies, and follow long-term, repeated scientific findings—not the outliers the media so loves. When the latter start gaining momentum, we put them under the microscope, dissect them, and share what we find.

Here, we'll use sodium as an example to help you understand this process and the truth behind the news.

First, in the nature of full disclosure, we've been warning against overconsuming sodium for 31 years—as our regular readers know. That position is supported by libraries of research studies from the last century. Though we don't always agree with major health institutions, on this topic we do. Our suggestions echo that of the American Heart Association (AHA), who advise limiting sodium intake to reduce the risk of cardiovascular disease, along with the U.S. Food and Drug Administration (FDA) and the World Health Organization (WHO), who recommend consuming no more than 2,300 mg of sodium daily.



Most healthcare practitioners' advice follows these guidelines, and their anecdotal evidence supports it. Like us, they know that when sodium is limited, health improves. Nutritional expert Dr. Michael Greger explains it well, stating, "High blood pressure is not the only harmful effect of too much salt—it's also been tied to stomach cancer, kidney stones, bone loss, obesity, and direct damage to our kidneys, arteries, and heart."

This is all so well known that it hardly constitutes "news."

But sadly, people love a controversy, so media companies grab on to any nutritional research which conflicts with the accepted body of medical knowledge.

An example of this is the recent news suggesting that low-salt diets may actually increase the risk of cardiovascular disease and death compared to average salt consumption.

In this case, researchers combined the results from four separate studies, each of which used *limited data* to make *broad assumptions*. In all four, long-term health and diet habits were based on single urine tests at the start of the studies. If that sample was taken after the subject consumed little sodium, the results would be very different than had they eaten a burger and fries. They should have taken multiple urine samples over a period of time to accurately gauge intake, before drawing conclusions.

Dr. Elliot Antman of Harvard Medical School explains, "If we followed you for two years and made assumptions on whatever that first meal was, it just

A LIGHT IN THE DARK

Continued from previous page

wouldn't be accurate all along the way. There are a lot of assumptions being made in this study, and the results are not reliable."

Obviously, the study was not conducted in a reliable manner, thus failing our first test.

When we look at funding, the plot thickens. Evidence has emerged that co-authors of the study received thousands of dollars from the Salt Institute. One of the researchers has also been implicated in accepting funding from the Tobacco Institute and was a witness in defense of Philip Morris. This is enough to make us wonder whether the study was poorly designed, or intentionally erroneous.

All of this could be put aside if their findings were repeated or stood the test of time, but they do not. They do, however, fly contrary to decades of nutritional wisdom—upon which our position rests.

Having thoroughly reviewed these studies, we emerge more confident in our nutritional advice than ever. Sodium intake should be limited in order to support optimal health and performance.

Following the health news can be a nightmare. With so much sensationalism, it can be tempting to give up altogether—but your health is too important for that. That's why we're here, lending a hand in cutting through the clutter, shining a light on potentially hazardous health trends, and making our recommendations accordingly.

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Hammer Nutrition at the Biggest Trail Run in the World!

BY BUDDY VAN VUGT

The Ultra-Trail du Mont-Blanc (UTMB) is the ultimate trail running event. Each year, the elite of the trail running world gather in Chamonix, France, along with 8,000 other runners keen to participate in one of the event's five races. Hammer Nutrition Europe attended the event for the second year, with the goal of supporting the nutritional needs of runners at all levels and spreading Hammer's message: "Fuel Right, Feel Great®." This year, we were honored to be joined by Hammer Nutrition founder and owner, Brian Frank. He was at the booth helping runners and sharing his knowledge. Athletes, ambassadors, and international distributors came by to ask for his advice or share their Hammer success stories.

Among these ambassadors was Juliette Blanchet [see page 58], elite runner and top 10 favorite for the women's field. Juliette came by before her race and provided an interview, explaining how she eliminated her stomach issues by switching to Hammer. We then cheered her on in Saint-Gervais, where I was able to run along with her for 100 meters of her epic race. She'd later write in her blog of the mental boost that this gave her as she powered through 26 hours and 48 minutes of running, to finish as the 6th female. Big kudos to Juliette!

It was hard for us to imagine focusing on competition with such amazing scenery to distract us!

Beyond the competition, the event offered opportunity for comradery and fun. Our rented house, just 20 minutes outside of Chamonix, had plenty of room for my family, Brian Frank, ambassadors, and invited guests to stay, break bread,

exchange stories, and enjoy the amazing scenery. Outside the 4-day expo, there was some time to play around in this outdoor lover's Mecca. We enjoyed the trails and stunning views around Mont Blanc. It was hard for us to imagine focusing on competition with such amazing scenery to distract us! We were pleased to have the time to actually take it in and enjoy the balance of work and play that Hammer always strives for!

It was another successful and enjoyable UTMB, and we look forward to the next year. Until that time, we'll be "Hammering On!"

Buddy van Vugt on the trails of the Ultra-Trail du Mont-Blanc. Photo: Courtesy Buddy van Vugt



Rob Steger at the finish line of the Ultra-Trail du Mont-Blanc in Chamonix, France. Photo: Courtesy Rob Steger

Dream Race

BY ROB STEGER

Ultra-Trail du Mont-Blanc, also known as UTMB, is 171K (106 miles), and its 101K (63 miles) sister race Courmayeur-Champex-Chamonix (CCC), are dream races for many trail runners around the globe. Along with several other races during UTMB week, these two have both been personal goals of mine since I started running in September 2015. The world's best runners show up in Chamonix, France, to test their endurance in arguably the most competitive ultra field of the year. What makes this event unique is that with some persistence in accumulating points for the UTMB race lotteries, even middle-of-the-pack or back-of-the-pack crushers like myself can run the same dream race!

Every year, I celebrate my running birthday, sort of my "second birthday" if you will, with an ultra race. Coming from such a humble and low level of fitness to having my third year of running in Chamonix was almost overwhelming and hard to comprehend. Since toeing the start line of 20 ultras, I've learned that fueling and hydration are half the battle to a solid ultra finish. My CCC started off slow with giant conga lines of runners and ended fast into the finish. Looking back, my nutrition and hydration were nailed down and have become almost automatic, letting me focus elsewhere during a race. Sipping on Perpetuem every 15 minutes and taking a Hammer Gel every 45 minutes let me hit the large climbs

of the latter half with relative ease. Fizz and Fully Charged in my water helped, too. I've never climbed 20,000 feet of gain compressed into a single 101K race before, but it was exhilarating having legs for the last two miles to push myself into a sub-20 hour finish during a difficult day that saw many people drop out.

The trail running community is a special one, and once a year it is a unique experience to have such commonality and passion for the trails in one place. I take away a special end to my third year, but more from the amazing conversations with people before, during, and after the race, than my actual race experience itself. Meeting Brian Frank and having lunch together before the race gave me a sense of calm before my dream race. The beauty of the Swiss Alps is hard to beat, especially surrounded by people who enjoy running as much as I do.

Looking forward, I want to continue to test myself and show people that you're capable of more than you could ever realize. My recovery from CCC was quick and surprisingly solid. (Thank you Recoverite!) Within just weeks, I will toe the start line of the Moab 240. For me, it's always been about testing my limits in distance. The question in my head has always been, "How far can I run?" I guess in a few weeks, we'll find out...

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 thousands of Hammer athletes around the world who are establishing Hammer's reputation of having safe. natural, and performance-proven results. Congratulations to everyone here on their accomplishments!





Aaron Plessinger

250 Outdoor National Championship With the 2018 250 West Supercross National Championship already in hand, Aaron Plessinger wrapped up the 2018 AMA 250 Outdoor National Championship in Budds Creek MD. Aaron Plessinger relies on his favorite Hammer fuels and supplements for daily training and every race day.

Photo: LT Photography



Carol Cronin

Snipe Women's World Championship Carol Cronin and Kim Couranz have been teammates for the past 8 years, and their hard work has paid off! This year, under coaching guidance from Carol's husband, Paul, Cronin and Couranz won the Snipe Women's World Championship in Newport, Rhode Island!

Photo: Paul Cronin



Gabrielle Suver

Masters of All Terrain Half Marathon Relying on Hammer Gel and Endurolytes to beat the hot summer weather, Gabrielle Suver sped through the Masters of All Terrain Half Marathon in Orange County, Florida, to take 1st overall female, and 5th overall!

Photo: Michael Suver



Brad Daniels

MR340 Canoe Race

Brad and the River Fitness Team claimed this year's MR340 Canoe Race as their own. The MR340 spans from Kansas City, Kansas, to St. Charles, Missouri, along the Missouri River. The team finished in 33:01 to beat the record by over an hour and a half!

Photo: Cindi Daniels



Mary Siegel

Eagle Up Ultra 24-Hour Race

"Until 2018, I used some supplements and most Hammer fuels. I cannot tell you what a difference it made to go all in. My training this winter was better than it has been in years. Thanks to Recoverite, my recovery between long runs was effortless. I followed proper usage of Hammer Gels, Fizz, HEED, and Perpetuem, which gave me all I needed on long (30-50 mile) training runs. Thanks to several supplements: Tissue Rejuvenator, Endurance BCAA+, Anti-Fatigue Caps, Fully Charged, Endurolytes, and others, training seemed more manageable, and at times effortless. It was like turning back to the clock a decade to my mid-thirties. All of this trust in Hammer culminated to a fantastic race in early June."

Photo: Dave Alverson



Suzy Degazon

Green Valley Lake Aguathon

When she isn't competing in her own events, Suzy Degazon enjoys inspiring the younger generation of athletes. This young man, Dylan Flores is an 11 year-old who won the short course at the Green Valley Lake Aquathon while sporting a blue Hammer Kit! Dylan was joined by his sister, Brooklyn, and Suzy for a mile run before he crossed the finish line!

Photo: rockyechrichsports.com



Evan Perperis

North American Obstacle Course Championship

Evan Perperis and the Conquer the Gauntlet Pro Team grabbed 2nd place Coed at the North American Obstacle Course Racing Championships! The rain during the event allowed the team's strengths to shine, and their hard work and dedication placed them on the podium with some of the best athletes in the sport.

Photo: Amy Perperis



Cynthia Salazar

Mountain Man Triathlon Sprint Relay

Cynthia Salazar and the Tribe-alicious team pushed their limits to take first place in the Mountain Man Triathlon Sprint Relay in July! Cynthia had an amazing time on the run leg of the race, running 5 seconds faster each mile compared to last year!

Photo: Heather Beutel



Feeling THIS Good After 170K? YES!

This is exactly what we mean when we say "Fuel Right, Feel Great!" with Hammer Nutrition! After 170 tough kilometers of racing, Hammer-fueled Juliette Blanchet still has plenty of energy, leaping for joy at the finish of the grueling Ultra-Trail du Mont-Blanc (UTMB). Juliette placed an outstanding 2nd in her age group, 6th woman overall.

Photo: Maindru Photo



Ditch the never-ending array of sugar-based products. Make the switch to Hammer and enjoy sustained energy — without the sugar crash.

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"ADDICTED TO THESE BARS"

"I don't usually eat protein bars but Hammer Protein Bars are amazing! After a long, open water swim, I have one of these with some Recoverite and am able to 'make it' until I can have a decent lunch. I don't feel like I ate a 'gut-bomb' which sometimes happens after I eat other protein bars. And...they are good!"



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