

ENDURANCE

NEWS

BY HAMMER NUTRITION

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of Guaranteed Top-Notch Service

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PLUS
Daily Multi-Vitamins
Improve Memory Loss



BEING FRANK

A WORD FROM BRIAN FRANK

Welcome to the 137th issue of *Endurance News*, our first issue of 2024, and the kickoff of our 37th year in business. As I said in last year's first issue, these numbers are getting big. Yet I look forward to the new year with incredible optimism and enthusiasm, thanks to you! Without your continued support and encouragement, I'd have cashed in my chips and sailed off into the sunset years ago.

Like the previous 136 issues, this one is full of great information you won't likely read elsewhere, as well as the awesome athlete/client/ambassador contributions. You could say that *Endurance News* is a quasi-crowdsourced publication because we rely on you, our contributors, to supply the photos, stories, and outstanding accomplishments you see in every issue! Even the content articles we present are based on your feedback and the topics of interest generated. It's all good, so please keep the good stuff coming; we'll put it to good use!

While you'll see continued changes (improvements) here at Hammer in 2024, you can be certain that the important things will not change,

like our commitment to quality, education, and 5-star customer service. Those will never go out of style.

Do you remember the EF Hutton advertisements from the 70s? – “When EF Hutton talks, people listen” was the tagline used in a variety of commercials. In this context, you are EF Hutton, and Hammer Nutrition is the “people” who listen! Hammer Nutrition is a consumer-facing brand, meaning that, in actuality, you are driving the train or at least have a hand on the wheel. I don't have a crystal ball and don't need one because I simply listen to you, and you tell me what to do (except when you ask for gummy candy and edible gel pouches).

This is why we quickly gather ALL the feedback we get from every channel daily and review it individually and in staff meetings. Whether you submit a product review, comment on a web order, make a suggestion during a call, or post on social media, we're reading it, listening to you, and acting on it whenever possible. It's how I've always done it and how we'll continue to operate with your help. So, please keep that feedback coming, especially when it comes to areas we can improve upon. We love the kudos and stories of you doing incredible things with our products, so keep those coming as well.

In doing business this way for 36 + years, I've seen the affinity and loyalty that clients return for being treated as a valued part of this brand – perhaps even a sense of being part of a big family. I also know that when a brand honors its clients as we do, they tend to want to tell others. This is why we've finally resurrected our Referral Program with modern technology that will allow you to easily share a unique link with anyone that will direct them to our site to place their first order with a discount. After the order is completed, your account is credited as well. We'll be talking more about this in the coming months, so stay tuned.

Ok, so... about my hair (because everyone's been wondering) – I'm not having a midlife crisis or anything like that. My Mom didn't cut my hair as a child and always wanted me to let it grow. When she got sick last year, she asked me not to cut it while I took care of her. When she died on 1/2/23, I decided to not cut my hair for one year as a memorial to her. It allowed me to remember her every time I looked in the mirror or saw a photo/video of myself, and I have been able to share her memory with so many who inquire about my hair. From an early age, she taught me so much about diet (I didn't always like it...), like the evils of junk food and the virtues of whole foods. These truths, along with her support and encouragement, have helped guide me in developing all Hammer products you use and enjoy. Thanks Mom!

WEBSITE ENHANCEMENTS – We continue to refine and update the website to make it even easier to use. This includes regular updates to functionality and content. With your steady post-purchase feedback, we'll continue to refine and improve it throughout the year.

HOW TO FUEL GUIDES – we continue to create sport/event-specific fueling guides for everything you do. We're adding more to the website practically daily, so be sure to check them out, share with friends, and absolutely let us know if there's one you don't see yet. We'll get to work on it straight away.

THE PHONES – Just because we have a screaming website doesn't mean you can't call us. Here at HQ in Whitefish, we are still fully staffed with knowledgeable, super-friendly people who will be happy to speak with you, answer questions, take your order, or do anything else to assist.

Enjoy the rest of the issue and pass it on to a friend or family member.

Brian Frank

Owner and Founder of
Hammer Nutrition

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Hammer athlete, Ryan Ingham powers across local desert trails. Photo: Ryan Ingham.



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Gabriel Ervins for FWUEL Media knows the New Year means it's time to

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ENDURANCE NEWS

The informed athlete's advantage since 1993

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MISSION

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

OUR GUIDING PRINCIPLES

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

Education: We educate and empower athletes with free, easily accessed 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 our complete mission statement online at hammernutrition.com/company/mission-statement



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ON THE COVER:

Photo: Hammer Athlete, **Mark Aldridge**, takes full advantage of the bright sunshine and mountain trail terrain, with snow still on the ground. Photo courtesy of Mark Aldridge.

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Endurance News depends on authentic photos from our readers and your photo submissions are always welcome! To be featured in the next issue of Endurance News, email your hires photos to photos@hammernutrition.com.

Hammer Philosophy

LESS IS BEST

by STEVE BORN



I recently had a conversation with an athlete who experienced some very unpleasant physical issues and severely diminished athletic performance issues during a 6+hour cycling event.

Hourly salt intake: 300mg - 600mg per hour, in a balanced blend of the other just-as-important electrolytic minerals: calcium, potassium, magnesium.

NOTE: I have used the original Endurolytes formula for 25+ years and cramping issues have been remarkably minimal, if not altogether nonexistent (i.e., I can't remember the last time I had cramping problems). During my Double Furnace Creek 508 record, for example, I took anywhere from 3 - 6 capsules hourly for the 75.5 hours I was on the bike. In temperatures well over 100F in the day and down in the 30's at night, I Never. Once. Had. A. Cramp.

The Specifics

- Weight: 150 lbs.
- Hourly calorie intake: 195
- Hourly fluid intake: 32 ounces
- Hourly salt intake: ~1500mg (minimal amounts of other electrolytic minerals)

When you look at those numbers, it's no wonder issues occurred... they're simply TOO MUCH, especially for an athlete weighing 150 lbs.

THE BOTTOM LINE

We must, must, must stop looking at depletion rates and using them as "what I need to replenish" amounts. When I began my ultra-cycling endeavors, I learned the hard way that trying to replace "X" (what I'm burning/depleting) with "X" or "near-X" back in never works... the only thing I got for my troubles was serious stomach distress issues at the least, or, on the other end of the spectrum, a lengthy stay at the hospital to "celebrate" my DNF.

OUR RECOMMENDATIONS

Hourly calorie intake: 120 - 180, with those in the 200lb. range (like me) able to process 200-or-so calories/hour.

NOTE: When I use Perpetuem, be it the 2.0 or the original formula, my hourly intake is 202.5 calories.

Hourly fluid intake: 16-26 ounces per hour.

NOTE: When you fill up a 26-ounce water bottle, you'll see just how much fluid that is! Very few of us really need that much on an hourly basis.

Based on my early career blunders (aka "the school of hard knocks"), as well as in my 23+ years working at Hammer Nutrition, I remain convinced

We must, must, must stop looking at depletion rates and using them as “what I need to replenish” amounts.

that far too many athletes try to replace everything they're losing hour after hour, without giving any consideration to the complex mechanisms that are already in the body... and they're needlessly suffering physical issues and poorer-than-hoped-for results in their events.


These “complex mechanisms” that I just mentioned are essentially survival mechanisms, which Dr. Bill Misner eloquently explains:

The human body has so many survival safeguards by which it regulates living one more minute, that when we try too hard to fulfill all its needs we interfere, doing more harm than good. To suggest that fluid, calorie, and electrolyte replenishment can happen at the same rate it is spent during exercise is simply not true. The goal of fueling during endurance exercise is to postpone fatigue, not to replace all the calories, fluids, and electrolytes lost during the event. It can't be done, though many of us have tried.

At an easy aerobic pace, the rate of metabolism increases from a sedentary state to a range of 1200-2000%. As a result, the body goes into ‘survival mode’ where blood volume is routed to working muscles, fluids are used for evaporative cooling mechanisms, and oxygen is routed to the brain, heart, and other internal organs. Interestingly, it is NOT focused on calorie, fluid, and electrolyte replacement, as some of the ‘experts’ advise.

Remember, you can quickly and easily fix a “not quite enough” problem. An “uh oh, I consumed too much and now my stomach is rebelling” problem? That's a much harder and far less pleasant hole to dig yourself out of. Don't go there!

CLOSING THOUGHTS

If you have not already downloaded a copy of *5 Secrets of Success* for Endurance Fueling, don't wait any longer! When it comes to how to fuel properly, this is the most important informational tool you can own! This easy-to-read guide distills the knowledge we've gained through over three decades of rigorous research and field testing. Put these principles to work, and you will succeed—we guarantee it! 

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- Frank W.



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AT YOUR SERVICE

For 37 years and counting, Hammer provides world-class, stellar client service each and every day!

by STEVE BORN

2024 will make the beginning of Hammer Nutrition's 37th year in business. And if you've ever been employed in any aspect of the health food/supplement business, you know that surviving anywhere near that long is a remarkable accomplishment. Having been involved in various aspects in the health food/supplement business for 35+ years myself, I can honestly say that more companies have never achieved that kind of longevity... not even close. In fact, I've seen far more companies (a LOT more) go by the wayside than companies that survive.

But here we are. Heading into our 37th year and we're not only surviving. Nope, We. Are. Thriving. Have we had to face some challenges? You bet, and a few of them have been fairly difficult. But we've eagerly faced and overcome those challenges, and will continue to do so, because we're not just survivors, we're thrivers. How do I know all this? Because I've known Hammer Nutrition's Founder & CEO, Brian Frank, for over 35 years. Long before I became an employee at Hammer Nutrition (24 years in April 2024), I was (and remain) a devoted user of his products and have spent more hours than I can remember discussing fueling and supplementation with him. I've never met anyone more devoted

than Brian when it comes to providing exemplary customer service, which, in my book, is just as important, if not more so, than producing superior products (which he obviously also does).

For as long as I've known Brian, it's become crystal clear that his devotion to not only producing outstanding products, but providing exemplary customer service, has never faded. If anything, that devotion gets stronger with each passing month and year. As I have unhesitatingly said before, Brian's zealotry for treating customers by The Golden Rule and like family is unequaled by any other CEO of any other company I know. He really is the one who puts the "us" in "customer service" and that service is absolutely on par with the superior-quality products he produces and sells. They are both the hallmark of his company, and, coming up on 24 years in his employ, I know without hesitation that he will never cut corners on either. Never.

Brian's mission statement is so spot on and remains 100% accurate:

"Superlative products and the expertise to put them to their best effect are certainly key, but how a company interacts with its customers is even more important. From day one, we've strived to



treat every client exactly how we want to be treated when we are on the other side of the counter—fairly, honestly, and individually. We do everything possible to ensure that is what you experience when you do business with us. Our reputation for 5-star customer service has been earned

by living this principle every day for the past 30+ years. I still read every feedback submission we receive and work directly with my staff to ensure that every issue is handled to my satisfaction. It takes a lot of work and resources to maintain my standards, but it's the only way I'm willing to run my company. We treat you like you are important to us because you are... Guaranteed!"


Now, anyone could make a statement like that, but Brian is the only person who backs it up with his actions. I can say that without a moment of hesitation because of my decades-long history as a customer, employee, and friend of his. I know from personal experience that Brian has never deviated from his business model. Never. His earlier-listed mission statement quote is the only way he'll run the business, and his oft-used saying, "people before profits," has always been the very heart of how Hammer Nutrition does business.



It takes a lot of work and resources to maintain my standards, but it's the only way I'm willing to run my company. We treat you like you are important to us because you are... Guaranteed!" - Brian Frank

As I have also said many times before, with some other companies, you get the typical (as an example), "Press 1 for supplements; press 2 for fuels; press 3 to leave a message," and so on. This has never been the Hammer way, and it never will be. You can expect that everyone who works for Hammer Nutrition will treat you like you are important to us, and that's because you are. It's really just that simple.

Whether you've got questions, concerns, suggestions, or a success story, give us a call or Live Chat with us. You'll be connected with a live person—a trained advisor—you'll be treated like a real person, not a number, and you'll experience the best customer support and service in the industry!

We've been here and thriving for over 3.5 decades, we're at **800-336-1977**, and we'll continue to enthusiastically be at your service! 



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We love hearing from you and reading your praise, but more importantly we value learning how we can better serve you. You can leave us a review on the product detail page for every product on our website.

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"FANTASTIC effective products without excess sugar and salt. Love **Hammer Gels**, **HEED** and **Fizz** for all my outdoor activities." - Joseph F.

"Thank you Hammer for the top-notch advice. All my questions were answered quickly and efficiently." - Online Reviewer

"Hammer rocks! Thank you so much for supporting the military and veterans. It means so much." - Steven L.

"What separates Hammer Nutrition from other companies is their support for the clients. Their customer service is a rare find in today's automated world. Brian Frank has assembled a team that genuinely adheres to taking exceptional care of people. When you become a Hammer client, you join the Hammer family as well." - Mike B.

"I've used Hammer products since 1995. I've tried other brands and nothing else compares when it comes to fueling". - Philip D.



FINDING YOUR MCPH

- Minimum
- Calories
- Per
- Hour

by BRIAN FRANK

Watch Brian's video here



HEY HAMMER FANS!

Brian Frank here talking about a really important subject. “Got to get this off my chest before I explode,” as the old headline used to read. For 37 years, I’ve been dealing with the question of how many calories per hour one should consume when exercising, be it an hour, 3 hours, 6 hours, or 12-hour multi-day events. Hint – **Less is BEST!**

This question vexes many athletes, and unfortunately, there is so much myth and misinformation surrounding it. The high-calorie crowd, as we call them, the experts of the day, were saying the same thing about how many calories per hour, with some going as high as 400, even 600! Silliness!

Maybe that’s what you’re burning. Doesn’t really matter. You can’t consume anywhere near that much. So, now we have a whole new generation of research, sort of. The outcome of a couple of questionable studies touting



60 to 90 grams an hour of carbohydrate is the basis for the “new” 60-90 grams per hour or recommended intake. Take a closer look at that research - Test subjects operate at 50% of max watts! What?

That’s right. Participants are walking along at a 95 beats per minute heart rate, not so much. We’re constantly exercising at a much higher heart rate than that.

You’ve probably tried higher calorie intake and had GI distress, plus all kinds of fun problems that go with it. So we invented this concept that less is best for optimal fueling in response to constantly dealing with athletes suffering from overconsumption of calories. So I have a little system I call the minimum calories per hour - **MCPH**.

CPH is the number you want to know. You want to determine your minimum calories per hour that allows you to exercise at the limits of your ability and fitness, not slow down, and not suffer GI distress or any other cramping problems. It comes down to about one calorie per pound of body weight for most athletes.

That usually ends up being the sweet spot, plus or minus a few. So, for most athletes, we’re talking 100 to 180 calories an hour. Nowhere near this 240 to 360 calorie craziness we’re hearing. This high-calorie take also contradicts human physiology. We know that the human liver can return about 1 gram of carbohydrate per minute into glycogen.

So there you go. Four calories per gram, times 60 minutes in an hour, equals a 240-calorie per hour theoretical ceiling. So why try to exceed that? And more to the point, why try to stuff so many calories down your throat when you just want to go pedal, swim, bike, run, whatever?

So do that and consume a lot less calories. You’ll be happier, your stomach will be happier, and you can forget about all the high-calorie fuss and muss. So less is best. 100-180 calories an hour. One calorie per pound of body weight, and you’ll be in the ballpark. **EN**

Hammer on!



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Ryan Mortensen powers over mountain terrain with energy on reserve. Photo: Ryan Mortensen.

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“Perpetuem Solids let you keep going while taking in the good stuff. It’s a great product with good taste and excellently effective.” - Mark I.



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The Perils of Loading

by BRIAN FRANK



When you have a big event, competition, or adventure, DO NOT attempt to load carbohydrates, water, or sodium.

IT DOES NOT WORK!

You have almost certainly heard experts and veteran athletes say you should “race like you train” and “never try something new on race day,” right? Evidently, most athletes don’t think this applies to the days leading up to the event too. I constantly see athletes massively changing their calorie, fluid, and sodium intake just before a big endurance event. These practices contradict the old adages and human physiology!

Maintaining constant calorie, fluid, and sodium intake while simultaneously reducing expenditures in the taper phase leading up to your event allows you to “load” all of these things as much as possible.

Hopefully, you have read our fueling booklet, *SOS: 5 Secrets of Success*, and incorporated those practices immediately prior, during, and after your training and racing routine. But what do you do in the 72 hours prior to racing? Keep reading for the answers.

In the old days, athletes were erroneously told that consuming copious amounts of calories, fluid, and sodium during endurance events would allow them to

achieve optimum performance. In the 80s, 400–600 calories, 40–60 ounces of fluids, and 1–3 grams of sodium per hour were recommended. Whenever exercise or competition went beyond three hours, stomach and GI problems were almost universal. Today it’s rare to find anyone still advocating these crazy numbers, at least in the U.S., Europe and Asia are another story.

As you know if you have read our literature, we recommend hourly intakes of 120–180 calories, 20–25 oz of fluids, and 400–600 mg of salt (as part of a full-spectrum electrolyte replenishment product) as more reasonable and effective. We’ve been advocating this for three decades, and these numbers are now more or less the accepted wisdom.

Unfortunately, the myths regarding “loading” in the days leading up to a big, hot event are still surprisingly pervasive. So, let me dispel this one more time to help you avoid making these mistakes this year and beyond.



“The idea of loading anything in the days prior to a big event is not only outdated but completely counterproductive.”



CARBS

We typically eat too much already. Increasing calorie intake during days of lower physical activity before an event only makes more work, fills your stomach and intestines, and likely leads to increased fat storage.



WATER

We are not camels and cannot store water. Suddenly increasing daily intake by more than 10% will overly dilute the electrolytes in your blood, which increases the potential for serious issues associated with hyponatremia. Additionally, all that unnecessary water will excessively fill your bladder, causing you to prematurely lose electrolytes courtesy of frequent elimination.



SODIUM

Again, we typically consume too much. Increasing it even more will not improve heat tolerance. In fact, it puts the body into survival mode where it seeks to jettison the excess to avoid toxicity. Whatever your normal daily sodium intake in the weeks prior to an event, keep it the same all the way up to race start. Then, from the start of the event, consume reasonable amounts throughout.



Dean Karnazes stays fully hydrated atop the arid peaks of Patagonia.

WHAT ABOUT LIQUID ENDURANCE?

YES!



When it comes to fluids, drinking excess amounts only increases the risk of overly diluting blood levels of sodium and other electrolytic minerals.

That said, there is a way to maximize cellular fluid storage, and that's via the glycerol component in Liquid Endurance. Glycerol is a naturally produced metabolite of fatty-acid oxidation, and it absorbs rapidly when taken with water or sports drinks, increasing the water content in blood, cells, and extracellular spaces. All three of these compartments contribute to sweat volume, resulting in a significant increase in cooling efficiency during prolonged exercise.

The key to maximizing—not over-supplying, but naturally maximizing—how much fluid the cells can hold is to use a specific amount of Liquid Endurance in a specific amount of water (ranging from 16–28 ounces) for a three-day period prior to a hot-weather workout or event. Follow product dosing instructions for best results. **EN**

Letters from Hammer Clients



DAVE NICHOLS



Dear Hammer,

I'm sending you this information on my trip to Mt. Everest base camp in Nepal. I would like to thank Hammer Nutrition once again for helping me to do another epic journey at my age of 75. This trail is rugged and follows the highest mountain range in the world. About 45 miles one way over 8 days and climbing over 20 000 vertical feet to 17,602 at Mt. Everest base camp. There were a lot of people having a rough time due to the hike and the altitude. A lot of young people asked me how I could do this trip and stay strong. That's when I showed them my Hammer products. I believe you will now have some new customers. I am sending a few photos what I took on my journey.

Thank you,

Dave



SUZANNE THOMPSON

Dear Hammer,

Oh my gosh, I ran my first marathon this weekend, and it was sponsored by Hammer! The Greenbrier River Trail, in West Virginia, was so beautiful at the height of fall colors! I used Perpetuem strawberry 2.0 to get me through. And also Endurolytes. I used the fizzy ones during training.

Here's a photo of me in my Hammer shirt and buff just as the finish line comes into view. I am so happy! Thank you,

Suzanne





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For more information about Hammer-recommended fueling protocols that can help you not only meet, but exceed your goals, go to hammernutrition.com

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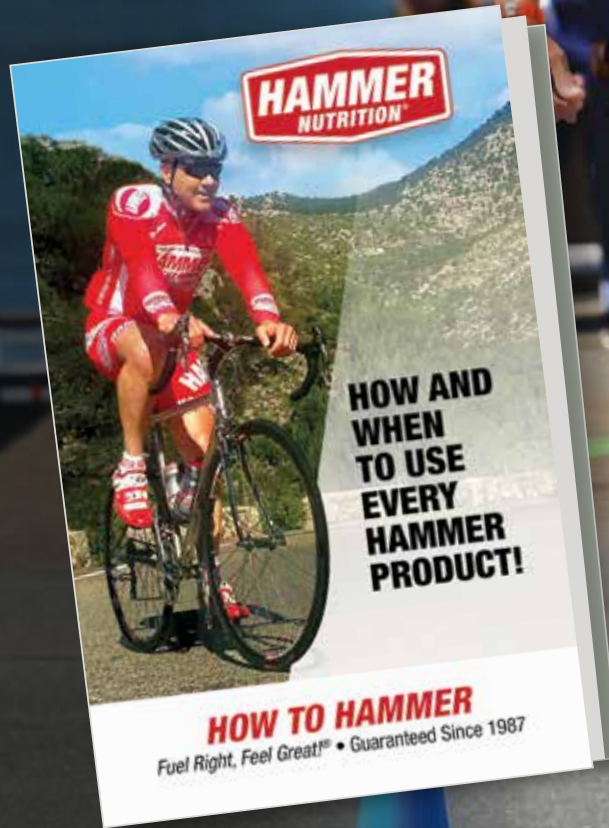
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HOW TO HAMMER

Comprehensive Product Usage Manual



Ricardo Cuervas comes down the IronMan home stretch with energy to spare. Photo courtesy of Ricardo Cuervas.



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How To Hammer provides all the vital information you need to Hammer to the next level. The final word on usage, with advanced details and specific applications.

HAMMER

▲ Over 3 hours and
Under 3 hours ▼

by BRIAN FRANK

The variety of fuels that Hammer offers and how we explain their best use has inadvertently caused much confusion. Hopefully, this article and accompanying video will clarify this for you and everyone else.

Back in 1992, when I introduced **Sustained Energy**, it was intended

for our clients engaging in long-distance, mega-endurance efforts. In the late 80s and early 90s, ultra, distance events were increasing, and there were no products designed or intended for long periods. The only available fuels were the usual sugar, citric acid, and salt combo, and they did not work for ultra distances.

However, shortly after introducing Sustained Energy, giving athletes a real ultra fuel, I realized there was a lack of carb fuels for higher intensity, shorter duration exercise. It turns out the products of the day were not working for many athletes even in these shorter durations. This led me to develop **Hammer Gel** and then **HEED**.

The introduction of Hammer Gel in 1995 and HEED in 2004 created the need to differentiate the products and their best uses. To help facilitate this, we started talking about exercise periods lasting less than or more than three hours so you would know which fuel is best based on the duration of your exercise. The introduction of **Perpetuem** in 2002 increased this need.

Since then, we've been suggesting that athletes think about fueling for their exercise bouts with a hard dividing line of under three hours or over three hours. If you exercise for 1-3 hours, use Hammer Gel if you are a water drinker, and HEED if you are a drink drinker. Both are complex carb-only fuels that provide a quick boost for these durations.

However, if you plan to exercise for longer than 3 hours, Perpetuem or possibly Sustained Energy should be your primary source of calories. They contain protein, and Perpetuem even has some fat in it.

The above instructions confused many clients and even some of our staff. No one is confused about exercise lasting less than 3 hours – use Hammer Gel or HEED, and you'll be golden. It's the 3 + hours fueling where things get confusing. Even today, I regularly hear clients asking:



WATCH BRIAN'S VIDEO HERE



Mitch DeYoung has his fueling dailed in for a long training ride.

“Does that mean for my long events, I start with HEED or Gel for the first three hours, THEN switch to Perpetuem or Sustained Energy?”

NOPE. This is absolutely not what I am trying to convey.

The big idea here is that when you exercise for 3 + hours, you forego the Gel/Heed and start immediately with your protein-fortified fuel. This is super key and the big takeaway here.

After many hours, to avoid flavor fatigue, to change things up, or for more energy towards the end, Sustained Energy and Perpetuem. Either or both, this magical combo is for the long days. We're talking about 3, 6, 12, 24, 36 hours, and beyond.

- The difference is both Sustained Energy and Perpetuem contain protein.
- HEED and Gel do not.

This is especially important because, after about 1.5 hours, your body will begin burning some protein in the gluconeogenesis process. In fact, roughly 10% of calories converted to glycogen will come from protein.

That said, if you're not consuming a steady protein source during these long activities, it has to come from somewhere. By using a carb-only fuel source, after a while, your body will have to start robbing protein from... you guessed it - your hard-earned muscle mass. This will cannibalize your precious muscle and accelerate fatigue – both of which we want to avoid. **Sustained Energy and Perpetuem are here to fill the void and help offset what you are burning.**

Furthermore, Perpetuem has the Bonus advantage of having some fat to help with fat metabolism.

CHEAT SHEET

Under 3 hours

- HEED and or Hammer Gel alone is fine.

3 Hours or more

- Use Sustained Energy and/or Perpetuem from the start.

Start sipping away 10-15 in and continuously throughout your activity.

TIP: After 6-12 hours or more, to break up the flavor fatigue, go ahead and have a little HEED or Gel for a palette perk and to get up that next hill. **EN**

The Original Ultra Fuel



- Stable energy mile after mile
- Lactic acid buffering
- Spares muscle mass

32 Servings \$49.95 each



“Sustained Energy 2.0 worked great on my last trail run. Very clean taste, quick energy and easy to work with at aid stations. I will be using this for my upcoming ultra. Plus, Hammer has great customer service. Thank you!” -Christopher C.



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SECRETS OF SUCCESS

SOS

1

Pre-Exercise Fueling

When and How much to eat before exercise



Our Recommendations

Three hours before exercise, complete your meal of 300–500 calories of low-fiber, easy-to-digest complex carbs and a small amount of protein, and some fat.

30 minutes before, consume one serving of Fully Charged in 4–8 oz of water.

Want to “top up” right before you start? Consume a serving of Hammer Gel® 10 minutes prior to beginning your activity.

SOS

2

Calories Count

What and How Much to eat During exercise



Our Recommendations

Consume 120 to 180 calories per hour of activity.

Fuel with complex carbohydrates like maltodextrin instead of simple sugars or blends. (HEED®, Hammer Gel®, Perpetuem®)

For exercise longer than 3 hours, your primary fuel should include protein in a ratio of about 8:1 carbs to protein. (Perpetuem®)

SOS

3

Proper Hydration

What you need to know to Stay in the Flow



Our Recommendations

To avoid performance and health problems associated with low blood sodium, your fluid intake during exercise should not routinely exceed 26 oz per hour, depending on weight and conditions.

Average athletes or average temps: 16–26 oz of fluids per hour (approx. 473–769 ml)

Lighter athletes or cooler temps: 16–18 oz of fluids per hour (approx. 473–532 ml)

Heavier athletes or hotter temps: up to 28 oz of fluids per hour (approx. 828 ml)

SOS WATCH NOW FOR SUCCESS TODAY!



Video Series



Brian Frank takes in an evening ride on the back roads at Hammer HQ.

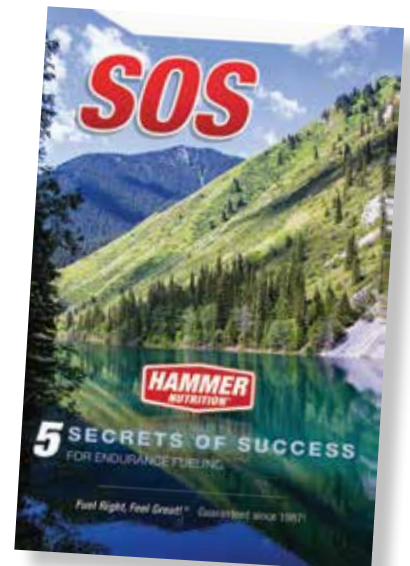
For over 37 years, we have been THE fueling experts! Our “Less is Best” fueling protocols have helped countless athletes successfully fuel for every endurance endeavor imaginable - without cramps or GI distress! You name it, we’ve done it, or helped other athletes do it. By following the fueling practices revealed in this book, you’ll be able to Fuel Right and Feel Great for anything you do.

Informed by rigorous science and proven in use, our methods and products are the surest path to optimal performance and health.

If you have fueling questions feel free to call to speak with one of our friendly, knowledgeable client advisors. We’re here to help!

Brian Frank

Brian Frank, Owner



WATCH NOW →



ASK HAMMER



YOU ASK

WE ANSWER

QUESTION

Why does Hammer use Maltodextrin instead of sugar in your fuels?

ANSWER

Here are the benefits of maltodextrin, along with information about its effects on insulin during exercise and shortly after it's been completed

The Benefits of Maltodextrin

1. You can digest greater amounts of calories from maltodextrin than from any short-chain sugar, aka “simple sugar,” such as glucose, sucrose, and fructose (As one nutritional scientist states, “maltodextrin allows one to swallow more energy in less volume.”) With maltodextrin you get the full amount of calories that you need for energy production, and with no delay in exiting the GI tract. Fuels containing simple sugars must be mixed at very calorically weak solutions in order to be digested with any efficiency, so your body won't be getting the right amount of calories it needs. However, when athletes



try to make a “double-strength” mix of a simple sugar fuel, that too-high sugar mixture does not match body fluid chemistry, which means it just sits in the stomach undigested for a lengthy period of time... and that means severe stomach distress. You won't have that issue with maltodextrin.

2. Maltodextrin goes to work extremely quickly in producing energy because it's a high Glycemic Index carbohydrate; in fact, it's the same as pure glucose (both are 100). That's a good thing because you want that energy as quickly as possible, and that's what maltodextrin will do. Another benefit with maltodextrin is that, because it's comprised of hundreds of saccharide molecules all weakly bonded together, it will provide a much more consistent and longer-lasting energy than glucose or any other simple sugar, and without that undesirable “peak and valley”, “flash and crash” energy that is typical with simple sugars.

Because of maltodextrin's high Glycemic Index (GI), many people ask about the insulin release that occurs. The answer

to that is that, yes, maltodextrin does elevate blood sugar levels very rapidly and will cause an insulin release. This is not an issue immediately prior to exercise, during exercise, however, as Dr. Misner explains:

“During exercise, insulin release is inhibited because sympathetic nervous system hormones are also released and, concurrently, exercise augments muscle uptake of glucose from exogenous intake accompanied by lower insulin levels and effects.” Basically, what Dr. Misner is saying is that because energy turnover is very high, and with the release of specific central nervous system hormones, the body is able to deliver glucose to the muscles with very minimal insulin... insulin release is not a significant factor during exercise.

After exercise, when the body needs to have its cells restocked with fuel, maltodextrin’s high Glycemic Index is also desirable... Recoverite and Organic Vegan Recoverite are PERFECT fuels for maximizing recovery.

Those are the only three times-immediately prior to exercise, during exercise, and shortly after exercise-when a high-GI carbohydrate such as maltodextrin should be consumed. **EN**



Get more answers to your **FREQUENTLY ANSWERED QUESTIONS** online **HERE**.



Hyper Hydration on demand

- Increases heat tolerance
- Maximizes cellular water levels
- Aids dehydration prevention

32 Servings \$27.95



“DEFINITE LIFE SAVER for me! I’ve used Liquid Endurance for two summers working State DOT maintenance outdoors in the heat and humidity. Not once have I experienced any heat-related illness.” -Mark W.



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6 Reasons TAPIOCA is Tops



The original **Perpetuem** and **Sustained Energy** formulas used corn-derived maltodextrin (complex carbohydrate), which was actually a very good maltodextrin. Regarding the GMO issue, which we've received a number of emails about, here's the deal: By the time it goes from source material (corn) to "finished product," it has been extensively processed, so much so that the DNA of the corn is degraded and all that is left is the carbohydrate component, which of course is the maltodextrin. The protein component in the corn is completely gone, and with it all the lectins and allergens.

Batches of the finished maltodextrin product from the manufacturer we use go through a test called PCR (polymerase chain reaction), and in every case no GMO residues, pesticides, or herbicides—even in parts per billion (ppb)—are ever detected. It is a VERY clean finished product with no undesirables in there.

Now, even though corn-derived maltodextrin was definitely a good one, when we find an even better one (in this case, a tapioca (cassava root)-derived maltodextrin) we're absolutely going to go with it. **EN**

Here are the advantages of a tapioca-derived maltodextrin

- 1** Tapioca requires far less processing than corn.
- 2** Unlike corn, there is no GMO content in tapioca to begin with, so even though all the corn-derived maltodextrin we used in our products tested at 0ppb for GMOs, going with tapioca just saves us that hassle.
- 3** Tapioca maltodextrin has naturally lower amounts of sodium and higher amounts of naturally occurring potassium. Given that most everyone consumes far too much sodium as it is, having more potassium and less sodium is a definite plus.
- 4** Tapioca maltodextrin has a more-alkaline pH than corn-derived maltodextrin. Considering that we athletes are "acid-producing machines" during exercise, a more-alkaline pH is a highly desirable during-exercise feature/benefit.
- 5** Tapioca maltodextrin has a lower Dextrose Equivalent (DE), which means lower mono and disaccharide (short-chain sugar) content, and a much higher percentage of polysaccharide (complex carb) content--in essence, a more "complex" complex carbohydrate--for even longer-lasting energy and endurance.
- 6** Tapioca maltodextrin has same Glycemic Index (GI) as other forms of maltodextrin, so you get the fast-acting energy that you're looking for.

Conquer every climb!



Brigette Takeuchi and her crew tackle the Washington Cascades.
Photo: Brigette Takeuchi

- **New 2.0 Tapioca formula**
- **Steady energy, hour after hour**
- **Spares muscle, burns fat**

32 Servings \$39.95 each
Single Serving \$2.95 each

- Caffé Latte ■ Chocolate ■ Vanilla
- Orange ■ Strawberry

Now made with Tapioca Maltodextrin for superior taste and performance!



"I recently competed in a 24 Hour Championship and was able to log 303.3 miles, finishing 3rd in class, 10th overall while fueling with **Perpetuem**. And after a tough race I didn't get muscle cramps or the dreaded dead legs." - Joe G.



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SUGAR

The Antithetic Performance Enhancer

by DR. BAYNE FRENCH, MD DC

SUGAR REFRESHER:

Lots of things are called “sugar”. In my fighting days, they called me Sugar French. Later, I learned it was because people loved to fight me, but that’s not important.

Although my fighting record was not what I had hoped, it’s important to know that true sugar is sucrose. Sucrose is composed

of a molecule of glucose bound to a molecule of fructose. After sugar ingestion (which hopefully occurs rarely), the enzyme protein sucrose cuts it in half. Glucose and fructose are then absorbed into the bloodstream.

Fructose occurs naturally in fruit, agave, honey, and some vegetables. Unprocessed fructose-containing

foods have relatively low amounts; The fiber and phytonutrients within them cause the fructose to be absorbed into the blood slowly, which is favorable metabolically.

High fructose corn syrup (HFCS) is NOT naturally occurring. It is highly unfavorable. It is over 50% fructose and as high as 65%. It was developed in 1957 at Oklahoma State University. HFCS made it into our food in the 1970’s. In 1984, both health-food companies Coca-Cola and Pepsi changed from sucrose to HFCS. I have endurance athletes in my practice who regularly drink these beverages. They have a gut, acne, bloat, fatty livers, and pre-diabetes.

HFCS is so biologically active and metabolism perturbing that finding evidence of Fatty Liver Disease in regular soda drinkers is almost

NO
SIMPLE
SUGARS



predictable, including in endurance athletes.

The glucose piece of sugar elevates blood sugar, spiking insulin and driving the formation of fat. Over time, insulin elevation leads to insulin resistance and eventual Type 2 diabetes.

So, sugar (sucrose) has two weapons: glucose and fructose. Like me in my fighting days...run away and play dead.

LET ME IMPRESS YOU WITH OTHER BIG WORDS:

1) If I were a high-level endurance athlete, who I am, I would want to have heaps of nitric oxide (NO) in my body. NO does many favorable things and is generated in numerous tissues, including the heart, liver, and the inside lining of blood vessels.

Like most things human, the biochemistry of NO is vastly complicated. What is well understood is that it increases blood flow to tissues (vasodilates). It also facilitates the entry of glucose into muscle cells.

If I were going to run really far and fast or pack a 700-pound elk out of the mountains in pieces, I would like to have more blood getting to my muscles and more glucose entering those muscle cells. Wouldn't you?

You know where I'm going with this: sugar interferes with the formation of NO. As I said in my recent article on Uric Acid: "Why in the hell would you want to consume sugar with any regularity or EVER fuel with it?"

2) Many ultra-high level, Olympic caliber, freaky-good, scary strong, savage monsters like me know that your performance depends on your kidneys. Yep, those beans in each flank determine fluid and electrolyte balance. They are trained, just like your muscles and mind. Sugar, primarily through its fructose half, drives the formation of Antidiuretic hormone (ADH). ADH is a fascinating hormone (like all things human) made in the brain, then stored and released by the pituitary gland.

Continued on page 25



THE DOCTOR IS IN DR. BAYNE FRENCH, MD DC

- Double Board Certified in Family Practice and Obesity Medicine
- Nutrition and Medical Weight Loss Specialist
- Hammer Nutrition Chief Medical Advisor
- Accomplished Spartan Athlete
- Proficient Outdoorsman and Mountain Survivalist
- Developer and founder of DeEvolution Lifestyle
- Developer and founder of LW Med

Dr. French is clearly not your average lab coat physician. Read more from Bayne on Endurance News Weekly.



Sugar

Continued from page 25

ADH is important for athletes. As its name implies, it interferes with diuresis (taking a leak). We thus hang onto the water, which is important in the setting of dehydration. ADH levels are usually elevated with heavy exertion, and hey, let's face it, nobody wants to stop and pee during a race, which is why I loved Obstacle Course Racing. You're already wet and muddy, which makes something else convenient.

Excessive ADH is a performance inhibitor causing excess fluid accumulation, which distorts one's "power-to-weight ratio." The more weight you pack around, the worse your power. ADH, unfortunately for athletic performance, also causes vasoconstriction. Recall that nitrous oxide is a vasodilator, enhancing blood flow to muscle. ADH reduces blood flow to muscle.

You know where I'm going with this: sugar drives the formation of ADH. Sugar directly causes more fluid accumulation and

less blood flow to your muscles. Companies that promote sugar as an outstanding endurance fuel are either duplicitous or ignorant. And ignorance in a field in which you profess expertise is idiocy.

3) People always say, "I want to lose weight." Nope. What you want to do is burn fat. That's more specific, right? "I want to run (bike, swim, etc.) faster ." Nope. What you want is to have your muscle cycle faster and longer without fatiguing. This is not semantics.

Meet Adenosine triphosphate, ATP. The chemical energy in this compound is converted to mechanical energy during muscle cell cycling. ATP is the absolute basic energy currency of our body. Its generation and subsequent utilization are paramount to optimal athletic performance. The mitochondria inside our cells make this compound.

You know where I'm going with this: below is an excerpt from my recent Uric Acid article,

"When we consume sugar, the enzyme fructokinase metabolizes the fructose piece. This process uses ATP. Douard et al (J of Phys. Jan 2013) showed

that a cellular fructose load, as provided by sugar-sweetened beverages, causes ATP to reduce by 40-50%. Sugar impairs performance by depleting our primary energy currency. The notion that sugar is a good fuel source for endurance pursuits is deeply physiologically and biochemically flawed, and in essence, science shows the opposite is true."

SUMMARY

Outlined above are fundamental, biochemical reasons why sugar is antithetical to optimal athletic performance. It's antithetical to daily, non-athletic performance.

Sugar as a foundational business model compound needs to die off, and the sugar-producing/promoting companies and their philosophies should go away... it's as simple as that.

To enact a durable and real change, it must occur on an individual level. Meaning YOU do things differently. Educate yourselves, align with what makes sense to you, associate with whom you feel is operating in an authentic way, then go kick ass. EN



Recover Right with Recoverite®!



- Restores muscle glycogen
- Rebuilds muscle strength
- Reduces soreness & fatigue

32 Servings \$69.95 each
Single Serving \$3.95 each

- Caffé Latte ■ Chocolate ■ Vanilla
- Orange ■ Strawberry



Now made with Tapioca Maltodextrin for support taste and performance!



"As an older athlete, I have relied more on rest and proper post-workout nutrition to stay competitive. **Recoverite** has been and continues to be an integral part of my training program. I use it as a delicious rehydration supplement post efforts and know I am rebuilding muscle mass everyday." - M. Burkhardi.

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#howihammer



@camiblake.pb



2023 USA Pickleball Nationals in the books! What an amazing experience Brook and I got playing on center court. Thanks so much. #howihammer



@hosava



Dreams are made, dreams are crushed. I wasn't able to qualify for the 2024 Olympic Trials. The beginning of this journey, I told myself, I would rather try and fail than not try at all out of fear ... Photo: JT Productions #howihammer



@runny.mommy



Zugegeben: da oben in der eisigen Kälte wäre mir ein heißer Espresso schon lieber gewesen. Achtung Werbung und so. #howihammer



@getkartfit



Your down time at the track is valuable. How you spend it can be the difference between winning a race or being in the back of the pack. #howihammer

Where "Social" is SOCIAL, NOT Sales!



@keith_fairfield



A cool and breezy 32 mile social ride this morning from Trek Claremont. Be safe. Be seen. #howihammer



@shercousa_official



The sport of Hard Enduro can really take a toll on a rider. @codywebb and the Sherco team rely on Hammer to keep them fueled throughout the race weekend. #howihammer



@pinkcyclingshoes



Hammering into my taper week! Super excited for Steamboat next weekend! #howihammer



@thomasmerrill81



P7 at Petit! Wild ride from start to finish, but thoroughly enjoyed that one. #howihammer

Losing Weight with WHEY



Gabrielle Suver keeps strong and lean for the season ahead. Photo: Gabrielle Suver

This is the time of year when keeping those unwanted pounds off can be tough. Many of us are in off-season mode, meaning our time spent exercising has decreased. Plus, in colder weather, our bodies want to insulate in an effort to stay warm. Unfortunately, this makes putting on unwanted pounds nearly effortless.

A weight loss and weight management weapon that you may not have thought of is **Hammer Nutrition Whey Protein**. The same Hammer Whey Protein that you depend on to help rebuild lean muscle tissue, reduce muscular soreness, and support a strong immune system also aids in protecting against weight gain.

Here's why:

1) Hormonal Effect of Whey Protein

The hormone cholecystokinin (CCK) acts as a regulator of appetite. Studies show that CCK is largely responsible for the feeling of fullness or satiety experienced after a meal, and that it helps with controlling appetite.

Comparing whey protein and

casein protein beverages, researchers in these studies noted that the whey protein group participants:

- Consumed significantly fewer calories than the casein group participants
- Reported a greater sense of fullness and satisfaction than those consuming the casein protein beverage

2) Whey Protein's Influence on Insulin Sensitivity

Research shows that whey protein helps increase insulin sensitivity (how responsive your cells are to insulin):

One study compared whey protein and beef protein, with results showing that the whey protein caused a significant increase in insulin sensitivity versus the beef protein, with a 40% decrease in plasma insulin concentration. The researchers concluded, whey protein is more effective than red meat in reducing body-weight gain and increasing insulin sensitivity. Whey thus appears to be an ideal protein source for promoting

healthy blood sugar regulation and supporting weight loss.

Another study compared the results from participants consuming either a whey protein/water mix or water only. The whey protein-drinking group showed improvements in glucose tolerance and insulin sensitivity over the water-drinking group.

3) Whey Protein's Superior BCAA Content

There is no richer source of BCAAs than whey protein isolate, and in a large study of nondiabetic men and women from various countries, researchers found that increased intake of BCAAs was associated with a lower adjusted risk of being overweight. The article "Reduce the Risk of Weight Gain: Branched-Chain Amino Acids May Help" discusses this in greater detail. It can be found on page 20 in Endurance News #74.

SUMMARY

For muscle tissue repair, anti-inflammatory properties, immune system support, and more, whey protein isolate - Hammer Nutrition's Whey Protein - is unsurpassed in the world of protein powders. Powerful weight loss aid is an important feature in whey protein isolate's resume, so make sure you're using Hammer Whey Protein to help you achieve your weight management goals. Each scoop contains 15 grams of whey protein isolate with no fat and a mere 1 gram of carbohydrates. At only 70 calories per serving, you don't need to be worried about overdoing it calorie-wise.

Hammer Whey Protein is 100% grass-fed whey protein isolate.

It is completely free of antibiotics and hormones, and other unnecessary and unhealthy ingredients. With six grams per serving of the multi-beneficial amino acid, glutamine, and loaded with immune-enhancing factors, including beta-lactoglobulin and alpha-lactalbumin, Hammer Whey Protein is the best whey protein powder on the market! Another component in Hammer Whey is the inclusion of a most-generous 6 grams of l-glutamine (amino acid; aka “glutamine”) per scoop. Taken near bedtime, glutamine allows for maximal release of Human Growth Hormone (HGH) during sleep, HGH being involved in a wide range of beneficial functions during the time while we’re sleeping, including weight loss.


Though most of the studies on glutamine supplementation focused more on obese people, when we’re overweight—even just a little—our body’s ability to produce HGH is severely impaired. As one site I reviewed stated “Since glutamine is a natural way to increase the levels of HGH in your blood, it can help offset the impairment. In turn, you can start to lose healthy amounts of body fat while increasing your lean body tissue.”

To obtain the full value of Whey Protein and the glutamine in it, you’ll want to consume it on an empty stomach, 2-3 hours or more after your last meal. It’s also important to mix Whey Protein in water only, as carbohydrates will blunt the weight-loss and HGH-producing effects.

Don’t Forget Phytolean and ChitoLean!

The days are still shorter, and for most of us it remains dark when we leave for work in the morning and dark again when we get back home in the evening! Plus, it continues to be much colder in many areas of the country. These two factors may impact how often we’re able to exercise and for how long, which can negatively affect our metabolism.

Though most of us do our best to eat the healthiest diet possible throughout the year, when it comes to the winter months, many athletes resign themselves to weight gain, courtesy of training less and eating more (especially those tempting starch- and fat-laden foods and snacks).

Fortunately, Hammer Nutrition offers two outstanding products that provide a powerful assist in our weight loss/management efforts: **Phytolean and ChitoLean.** 



Now “weight” just a minute

Hammer has everything you need to tip the scales back in your favor!

- Balance blood sugar levels
- Keep metabolism steady
- Prevent afternoon drag
- Reduce cravings
- Satisfy hunger



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Discover a wealth of free information and education, specially authored and curated with your peak endurance performance in mind.

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breaking nutritional research from around the world, further professional insight regarding the many uses of our various products, and success stories from our athletes.

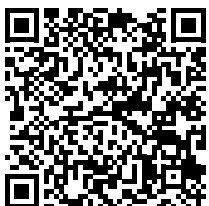
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Immunity Booster Kits



Jill Shumacher is ready for the trails year round.

Immunity Booster Kit

Endurance C + Enduro D

\$39.95

- Promotes superior bone health
- Extraordinary Immune Defense and Support



Super Immunity Booster Kit

Basic Immunity Kit + Clear Day and AO Booster

\$89.95



"A great combination of ingredients. All I know is that I have hardly been sick since I have been taking them and that says a lot. Thanks Hammer!" - Merville H.

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HOUSEKEEPING

from **HAMMER HQ**

Important updates
from **BRIAN FRANK**



**YOUR FAVORITES
ARE BACK!**
with more on
the way

Whey Protein Hammer Bars
we've resolved the hardening issues and should have nice new bars in stock by the first week of March. All other bars should remain in stock through 2024 now that our manufacturer has completed their upgrades and installed their new machinery. Fingers crossed!

Happy New Year!

I'm excited because I have mostly or entirely good news for you

Perpetuem Solids

All flavors and styles are now back in stock! That means you can now buy 6-count tubes and 72-count tubs in Orange, Strawberry, Chocolate, and Caffe Latte anytime. We've also got these going out to dealers and distributors, so you should start seeing them on your favorite Hammer retailer's shelves soon. If not, ask them to start stocking your favorite flavors.



Hammer Gel

The nut gels are back! All three flavors have been reworked with a new manufacturer, and they taste amazing and are not too thick. You will notice that these come in a different size/shape pouch that is a bit bigger. I know it's not ideal, but it was this or nothing.

I'm encouraging our manufacturer to move to a smaller pouch, but in the meantime, this is what we've got. We're also working to produce pre-filled 5-serving flasks and 26-serving bulk containers of these three flavors. I'll keep you posted on our progress here.

Whey Protein Singles

They won't be the old stick packs, but I'm bringing back the singles in Vanilla and Chocolate for sure, maybe Strawberry, too.



Vegan Protein/Vegan Recoverite Singles

I know many of you would like these, so you can try them before you buy a whole tub. We'll continue trying to find a solution that will allow us to offer singles for trial and convenience.

Hammer Gummies?

NOPE.

Not happening folks. They are sugary, acidic candy that cause gut rot. There will not be a Hammer Gummy on the market any time soon.



Add the bubbles before you're in trouble!



Refreshing, Delicious, Electrolytes

- Light and effervescent
- Excellent electrolyte source
- No artificial ingredients or sugar

13 tablet tube \$6.95
Five amazing flavors!



"FIZZ is my go-to especially on hot/humid days. I like the convenience which is easy to pack and toss in a water bottle. It also provides quick relief for night leg cramps." - Patrick T.



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Daily MultiVitamin use Improves Memory!

by STEVE BORN

As most everyone knows, the brain is responsible for many functions that fall under the term “cognition”—thinking, learning, memory, attention, perception, processing information, and much more.

A little over two years ago, we wrote about research whose results showed that participants who took a multivitamin/mineral supplement daily for three years were associated with a 60% slowing of cognitive aging. Using the Global Cognitive Function (GCF) composite score—the overall summary of 19 separate tests and the primary method in determining overall cognitive function—a noticeable improvement in GFC composite score was noted in the multivitamin/mineral supplement vs. placebo results.

Summarizing the results, lead study researcher, Dr.

Laura D. Baker, stated, “Daily multivitamin-mineral supplementation appears to slow cognitive aging by 60% or by 1.8 years,” and that the results “may have important public health implications, particularly for brain health, given the accessibility of multivitamins and minerals, and their low cost and safety.”

A second, more recent study using data from that same original study--the COcoa Supplement and Multivitamin Outcomes Study Web (COSMOS-Web)—was performed, and the results linked the intake of a daily multivitamin supplement to better brain function, notably improved memory.

Led by Dr. Adam M. Brickman of Columbia University, this latest study involved more than 3,500 participants, ages 60 and older. Half of the participants received a daily multivitamin

supplement, while the other half received a placebo. Neither the participants nor the researchers knew what type of pills—multivitamin or placebo—each group received.

At the beginning of the study, the participants took a series of web-based online tests to determine their cognitive abilities, which were repeated annually for three years. After the first year, the participants took a test that involved viewing a series of 20 words, one at a time, for three seconds each. Immediately afterward, the participants were asked to input as many words as they could remember. The results showed significantly higher scores (i.e., improved memory) for the participants who took the multivitamin supplement than those who took the placebo. This improvement was maintained over the second and third years.

Continued on page 38

Daily Essential Kit



- Supports overall health
- Encourages efficient energy production
- Supports mitochondrial health

Available in One and Three Month supplies, starting at \$109.95



"This combination of products truly changed my training and racing experience. Using these products helped me get past a training slump. I have more energy and feel great!" - Mary S.

 **SHOP NOW**



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expires 4.30.24

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Daily MultiVitamin use Improves Memory!

Continued from page 36



LarryWolf hammers the Sky Express Livermore Circuit. Photo: Katie Miu

Compared to those taking a placebo, the researchers estimate that participants who took a multivitamin supplement enjoyed improved performance by “the equivalent of 3.1 years of age-related memory change.” Additionally, the researchers believe that taking a multivitamin supplement daily may not only assist in maintaining cognitive function but possibly even enhance it later in life.

The researchers summarize: “Vitamin supplementation is relatively inexpensive, accessible, and has a few adverse effects, and thus might be a potentially useful population health intervention. Daily multivitamin supplementation, compared with placebo, improves memory in older adults. Multivitamin supplementation holds promise as a safe and accessible approach to maintaining cognitive health in older age.”

Discussing both COSMOS studies, Dr. JoAnn Manson states: “The findings that a daily multivitamin improved memory and slowed cognitive decline in two separate studies in the COSMOS randomized trial is remarkable, suggesting that multivitamin supplementation holds promise as a safe, accessible, and affordable approach to protecting cognitive health in older adults.”

Once again, we can add to the “arsenal” of research that shows that daily use of a high-quality multivitamin/mineral supplement provides extraordinary, wide-ranging benefits. At Hammer Nutrition, we always recommend that the first place to start your

supplement program is with **Premium Insurance Caps**, and this latest study solidifies that recommendation even more!

Next, consider our **Hammer Daily Essentials** to keep your supplementation bases covered all year round in one convenient kit. EN

References available upon request



Read more here about **Premium Insurance Caps** and the need for daily supplementation on

Endurance News Weekly.

DON'T LEAVE HOME WITHOUT THE ESSENTIALS!





Endurolytes®

Capsules, Powder, or Fizz - Hammer has your electrolytes on tap!

- Full-spectrum, balanced formula
- Rapidly assimilated
- Helps prevent muscle cramps and dehydration



Endurolytes 120 capsules	\$24.95
Endurolytes Extreme 120 capsules	\$29.95
Endurolytes Extreme Powder 90 servings	\$34.95
Endurolytes Fizz 13 tablet tube (5 flavors)	\$6.95



"I used **Hammer Endurolytes** while riding all 200+ miles of **Lotoja**. 8-time finisher and felt better this time than any previous time. No cramping at all, even at the end." - Online Reviewer



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COFFEE

is a No-Brainer for Brain Health!

by STEVE BORN

Prefatory Comments:

Over the years I've written a lot of articles about various aspects of fueling and supplementation, as well as nutrition and general health. But when I came across this latest study on coffee, I realized that I've probably written more articles about this beverage than anything else. I've lost track as to exactly how many, but I know it's close to a dozen, if not more. What's become clear to me is that, thanks to all these studies—which continue to appear with more frequency—coffee may very well be the healthiest beverage one can consume. This latest study is yet another that reveals coffee's benefits for the brain.

Have you ever heard of trigonelline? I hadn't either, but I have now, thanks to exciting new research revealing that this naturally occurring compound found in coffee and in some vegetables (e.g., corn, onions, peas, tomatoes), can help boost memory and spatial learning (acquiring, retaining, structuring, and applying information related to the surrounding physical environment), and significantly assist in the delay of cognitive decline.

Researchers at the University of Tsukuba (Japan) found that trigonelline (TG) provided its neuroprotective benefits via its antioxidant and anti-inflammatory

properties. By reducing the release of the proinflammatory cytokines (protein-based cell signaling molecules), tumor necrosis factor α (TNF α) and Interleukin 6 (IL6), the release of neurotransmitters serotonin (5HT) dopamine (DA) and noradrenaline (NA) were promoted, which in turn “facilitated memory and learning functions in aging model mice.”

While additional studies will undoubtedly be necessary to further reveal and understand trigonelline's impact on cognitive health, these results are very encouraging, with the researchers concluding that “TG (trigonelline) might be considered a potential supplementary medicinal compound for ameliorating cognitive aging and neuroinflammation-related CNS (Central Nervous System) dysfunctions.”

If that's not enough good news, other research shows trigonelline's potential benefits for helping:

- Lower blood pressure
- Reduce cholesterol
- Enhance cardiac blood flow
- Improve insulin sensitivity and glucose metabolism

Coffee time? You bet!

Our **53x11 Coffee** is Fair Trade Certified, 100% organic, and flat-out delicious. If you've never had a cup, you owe it to yourself to give it a try! Available in three awesome blends (Early Break, Chain Breaker, and decaf Down Shift) and a 100% Sumatra (Big Ring), 53x11 Coffee delivers plentiful health benefits and awesome flavor. It's purely good coffee. EN

References available upon request



Hit the road ahead always "Ride Ready"!



Denny Rowell and a pal are *definitely* "perked" for a morning ride.
Photo: Shane Trotter.



- Fair trade
- 100% organic
- Shipped fresh within days of roasting

All 53x11 blends are available in 12 oz. Ground or Whole Bean bags \$14.95 / bag.



Visit hammernutrition.com/products/coffee for more information on all of our varieties, and sign up to have your coffee delivered automatically each month.

 **SHOP NOW**

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by DEAN KARNAZES



On a recent trip to the Greek island of Ikaria there was a memorial service taking place. The Pastor lamented on how tragic it was that the deceased passed away at such a young age. He was 97. On Ikaria, if you die before one hundred your life is cut short.

One of the fabled “Blue Zones”—five regions across the world where people are the healthiest—Ikaria has the highest concentration of centenarians anywhere on earth (a centenarian is someone who lives to be a hundred or older). It is also the place of my maternal bloodline. So naturally I was curious about the secrets of longevity on this mythical island. What I discovered was illuminating and some of the lessons learned translate to our everyday living in western culture, despite originating from an obscure Mediterranean island.

For brevity, I will distill the key insights into two broad topics: lifestyle and diet.

Lifestyle: Ikaria was once referred to as the “red rock.” The rocky, mountainous island was an enclave of artists, writers, poets and freethinkers who lived a largely nonconformist, some would say, communist lifestyle (hence the “red” rock label). There was much harmonious bartering between neighbors and an ethos of honesty and self-regulation pervaded which carries over to this very day. It’s not uncommon to walk into a market on Ikaria and instead of a cashier there is a basket to place the money. I once rented a car on Ikaria and when I asked the representative where I should pick up the vehicle, his reaction was rather stupefied, “It’s at the airport, of course.”

“But where?” I asked.

“In front,” he said over the staticky connection, “Just walk outside and the car will be there.”

“But where do I get the keys?” I pressed.


There was a slight pause in the conversation, “The keys are in the ignition,” he seemed perplexed by my question, “How else could you drive the car?”

The people of Ikaria also pay little attention to time. Rarely do you see a clock displayed anywhere. The island’s inhabitants do not stress over meetings and deadlines. Life just seems to flow naturally at its own pace. Get togethers are loose approximations. No pressure, just have a glass of wine or ouzo and take it easy. It’s naive to think this kind of living could fly in our busy democracy, but it’s certainly worth contemplating.

Ikaria, Greece, has the highest concentration of residence living to 100 or more years old.

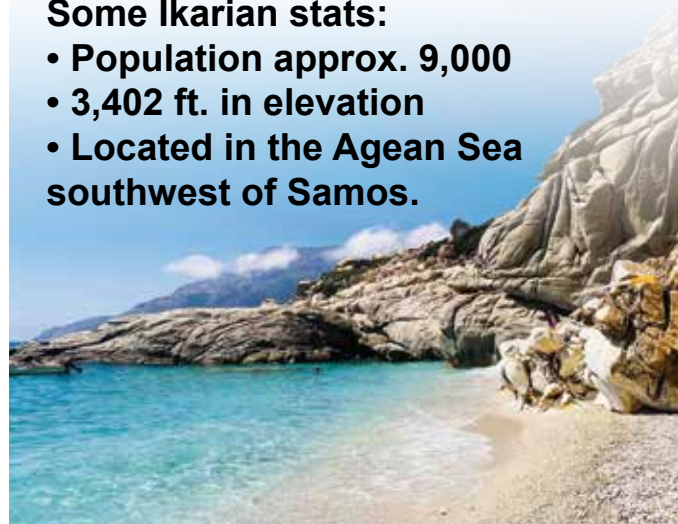
Diet: The Ikarians eat what they grow. If they can't pick it from a tree, dig it from the earth or catch it with their hands, it's not part of their everyday diet. There are many herbs and native flowers used in cooking, and being a Greek island olive oil is used liberally. The people on Ikaria also consume a lot of local honey. The old men call it "nature's Viagra." Food is minimally processed and slowly cooked at low temperatures. And meals are almost always enjoyed in the company of family and friends.

When I think about how to apply the learnings from Ikaria to my life, I've begun gravitating toward minimally processed foods as well. That's why I love **Hammer Raw Energy Bars**. They contain simple organic ingredients and provide reliable, long-lasting energy while being easily packable and ready to eat. And for fueling during training and races, my absolute favorite is **Hammer Gel Huckleberry**, which comes from locally harvested, in-season fruit. Not only do Huckleberry flavored Hammer Gels supply ready energy, the taste brings the palate to life!

So next time you're stressing out over a looming deadline or running late for an appointment on an empty stomach, try a **Hammer Nutrition Raw Energy Bar** and let your inner Ikarian shine. 

Some Ikarian stats:

- Population approx. 9,000
- 3,402 ft. in elevation
- Located in the Aegean Sea southwest of Samos.



Real Fuel Ready to GO!



- Reliable long-lasting energy
- Packable and easy to eat
- Suitable for all diet types

Single Bar \$2.95 ea
12 bar Box \$33.00

- Chocolate Chip
- Oatmeal Apple
- Cranberry
- Almond Raisin
- Coconut Chocolate Chip



"I enjoy **Hammer Bars** as a quick snack during my day, which gives me plenty of energy to keep going. They are also a great source of fuel for my distance running. The flavor options are GREAT!" - Josh R.



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FROM THE
KITCHEN OF

LAURA LABELLE



Spring Veggies with Yogurt Sauce

1 cup sugar snap peas
2 celery stalks
1 red bell pepper
1 large cucumber
6 radishes
1 cup cherry tomatoes
1 tsp fresh dill, chopped
1 tsp fresh chives, chopped
2 Tbsp fresh mint, ribboned

Yogurt Sauce

1/2 cup plain yogurt
2 Tbsp olive oil
1 Tbsp fresh lemon juice
1 garlic clove, finely grated
1/3 tsp Sriracha

Preparation

Start by washing all the veggies and herbs. While they dry, make the yogurt sauce by combining all ingredients in one bowl. Stir until smooth. Set aside and let rest. Next, chop all the veggies into 1/4- 1/2-inch cubes. Pour yogurt sauce over chopped veggies and mix well.



Grilled Marinated Shrimp

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

Preparation

Mix all ingredients in a bowl and marinate for an hour in the fridge, then bring to room temperature. Throw on a hot grill for about three minutes on each side. Serve hot or allow to cool slightly to top salads.

**With Hammer In the Kitchen,
healthy eating never has to
be boring!**

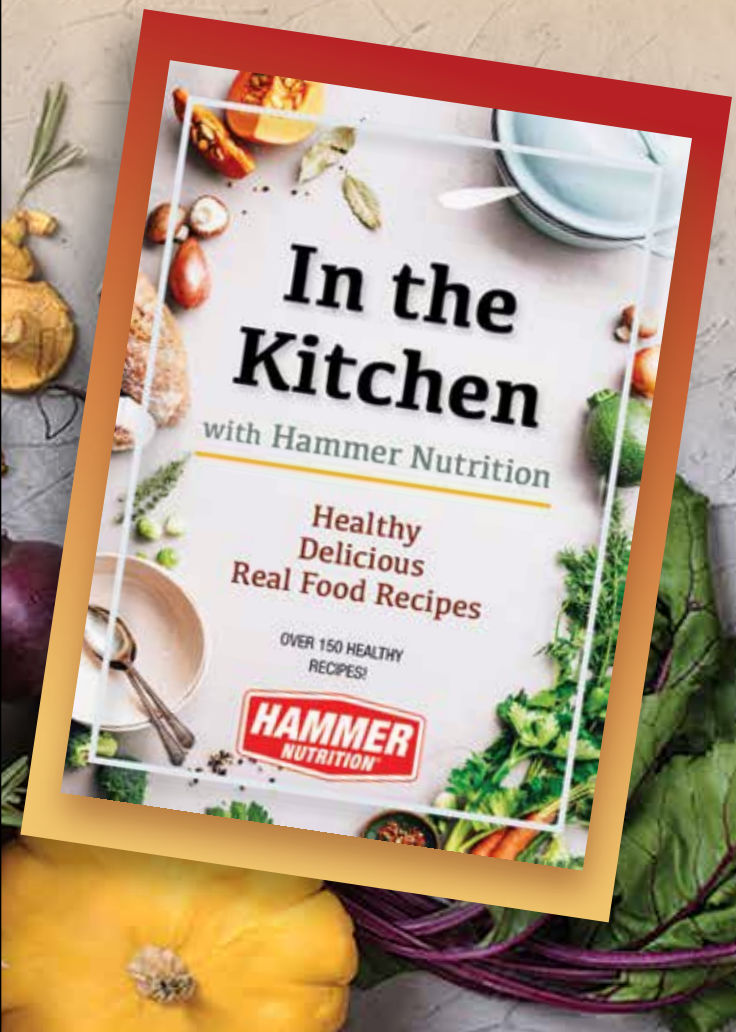
Download your **FREE**
copy Today!



Share your creations!
#chefhowihammer



“For someone like me with the culinary creativity of a potato, this cook book has helped me enjoy cooking in a way I never thought possible! It’s become a staple of helping me get prepared for race season!” - Online Reviewer



LIFE IS AN ENDURANCE SPORT[®]

Every Day Athletes and Hammer Heroes doing Amazing things, Every Day!



MIKE VIZER

To succeed means being able to perform at your best, whether you are an athlete or not I truly feel Hammer has you covered. I started using Hammer products because I would struggle to eat during a work/shoot day. **Hammer Gel** and **Hammer Bars** have been a go-to for me for quick sustainable energy. Without any intake I shake and that really messes with my shots. I also found using the different hydration supplements was a huge help during any summer day. Sweat is sweat it doesn't matter if it's in a competitive environment or not! I couldn't be happier to have Hammer as a part of my program and my life!



MELANIE MOCIUN



September here in Marin County has brought hot days, cool days and rainy, windy days. A real mix. I find myself taking extra **Endurolytes** often while digging holes and chopping wood in the heat. I ran out of **Digest Caps** earlier in the month - I found out that they really do make a difference! I'm glad to have a supply of them back on my shelf. These photos are from another Alcatraz Swim - the support paddlers ended up needing to wait and hang out in the shifting tides near Alcatraz while a Cargo ship came into the Bay. Luckily it was a calm and beautiful morning.

The weather definitely took a turn in November. I spent lots of time hiking on Mt Tamalpais and on the trails in our North Bay. I also spent significant time digging holes for new trees and shrubs on my property. Always fueled by Hammer supplements and fuels.

Thank you Hammer!



Photos by SeaTrek Cares, courtesy of Melanie Mociun

VIC DEORNELAS



I was on a social ride with the Valley Spokesman bicycle club, and we were heading down Gibraltar Drive in Pleasanton when we saw a car pulled over with a man waving us down to tell us there was a young child walking in the middle of the street alone. I looked up and saw a little boy of about 3-4 years old barefoot walking in the middle of the road and I immediately sprinted on my bicycle to get to him as I saw he was heading towards a busier road, so I blocked him with my bicycle and then when my friends caught up with me I gave them my bike and grabbed the child and carried him to the sidewalk. I was worried he would scream or cry when I picked him up, but he stayed calm and seemed happy to sit in my lap and sing to me. The man in the car was calling the authorities, so we waited and tried to talk to the little boy, but he did not seem to speak English. After about 15 minutes still sitting in my lap, the child's mom showed up crying hysterically. She shared that the little boy was Korean and spoke no English, and was also autistic. His mom thanked us profusely, and I was just glad he was safe. As a dad and grandpa, the minute I saw him so small and barefoot in the road, I just did not hesitate in trying to get to him, so very worried he would get hurt.

Read full stories, race reports, and reviews from our athletes online at hammernutrition.com

HAMMER CBD

Now in Full-Spectrum



- Deepens quality of sleep
- Provides superior mood support
- Heightens overall tranquility

Oil Tinctures starting at \$44.95
Softgels starting at \$6.95



"I use Hammer CBD before bedtime to help me sleep. It works magically, for a peaceful, restful night!" - Thomas H.



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Hammer Lifetime Legends

CLYDE SHANK

Hammering
since 2001

At 76, Clyde Shank, hailing from a town north of Dallas, is no ordinary marathon runner. With a remarkable global resume of 606 marathons spread across all 7 continents, Clyde's journey is an awe-inspiring testament to his unwavering dedication, the unconditional support from his wife Kelly, and the assistance of his trusted companion, Hammer Nutrition.

Introduced to Hammer in 2001 during a training run with his wife, Clyde's lifelong partnership with the brand began with a boost of Hammer Espresso Gel. Now a beacon of Hammer wisdom, Clyde pays it forward by sharing his insights with fellow athletes. He swears by Hammer's Endurolytes and Anti-fatigue Caps. On race day, at mile 16, his concoction of Fully Charged, Perpeteum, Cherry Bomb HEED, and a splash of water provides the perfect boost to power through. Post-race, Orange Vanilla Recoverite brings him back to peak running form. Clyde is also an advocate for Hammer's CBD 1500 tincture.

Recently, Clyde completed his third lap around all 7 continents with a marathon in Singapore in December of 2023. He first succeeded in this incredible feat in China in 2006, followed by a second global round in 2011. Among his treasure trove of stories, Clyde faced two of his most unforgettable and challenging marathons within a month – the icy North Pole in April 2006 and the Great Wall in May 2006. Yet, beyond the miles, it's the lives touched and runners inspired that matter most to him.

In Rio de Janeiro, he uplifted a cramping fellow runner on the verge of quitting by providing Hammer Endurolytes. Within minutes, the runner found renewed energy, leaving Clyde behind. At the finish line, gratitude flowed from the once-defeated runner, illustrating why Clyde runs.

Looking ahead, Clyde envisions running until the wheels fall off, dedicating himself to spreading the Hammer legacy. Completing more marathons is just part of his plan; he envisions writing a book, promising tales that inspire fellow runners toward their triumphant finish lines. Clyde Shank's story is a celebration not just of his incredible journey but of the resilient human spirit and an unwavering zest for life. EN





Hammering since 2003

EILEEN COHEN

In sunny southern California, 78-year-old Eileen Cohen, a vibrant runner and fitness instructor, swears by Hammer Nutrition. For 23 years, she's honed weightlifting form for her devoted Monday class of women aged 50 and above. Her go-to Hammer Nutrition choices include Tropical Gels, HEED in all flavors, and Strawberry Recoverite.

Eileen and her husband served as proud ambassadors for Hammer, sharing its benefits with over 6,000 runners. Notable achievements guided by Hammer include conquering marathons in Dublin, Venice, and Los Angeles (15 times). A cherished memory of Eileen's involves running in the rain in Greece in 2001, mirroring ancient Greeks, and earning a symbolic wreath.

Looking ahead, Eileen envisions a 100-year birthday celebration surrounded by Hammer Nutrition products and fellow enthusiasts, with a celebratory 5k run as a testament to her dedication and belief that any athlete can finish the race. **EN**

Your CBD Gold Standard



- Improves sleep quality
- Reduces aches and soreness
- Helps lessen recovery time



Balm starting at \$4.95
 Oil Tinctures starting at \$44.95
 Softgels starting at \$6.95



"Thank you Hammer for making CBD that I can trust and that does the job! The tincture keeps me calm, collected, and mentally refreshed - even 80 miles in." - Travis M.



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FROM OUR ATHLETES

5 Questions with

LisaMarie and
Rene Griffin**1. How did you get into racing?**

Lisamarie: A friend ran a marathon at Disney and I thought if she could do it, so could I even with my asthma. *Rene:* My first race was a 4 mile night run in Singapore. The whole experience of running with a group of people got me hooked.

2. How did you hear about Hammer Nutrition?

Lisamarie: I discovered Hammer in a bike shop in 2008. *Rene:* My wife introduced me to Hammer when we were working to get me to my first marathon.

3. What are your go-to Hammer products?

Pre-race we both use **Fully Charged** and **Liquid Endurance** (depending on the time of year).

During the race we use **HEED**, **Perpetuem**, **Endurolytes Extreme** and **Anti-Fatigue Caps**. And of course **Hammer Bars** and **Gels**.

Post-race we always do **Recoverite** - it works like charm against sore and tired legs.

4. I can't leave for a race weekend without ...

Lisamarie: My husband, my lucky shoes, peanut butter Hammer gel, Squirrel's Nut Butter and David Clarke's book *Broken Open*.

Rene: My wife, my Hammer goodies, Squirrel's Nut Butter and the lucky "Yes/No" coin for those rare moments we need to make a decision.

5. What keeps you motivated and Hammering everyday?

Lisamarie: I get to wake up every morning and create new adventures with my husband and at the same time inspire others to do the same.

Rene: Each race is different and requires different training and that keeps me motivated. How do I hack the next race?



Eddie Kraft

Iceman Cometh 30 Mile MTB Race. Traverse City, MI.
30 miles, 1:52 , 4th AG, 190th/5100+ OA



HAMMER Must-haves

HEED[®], Fully Charged, Endurolytes[®]
Powder, Hammer Gel[®]

Keith Richardson

National: 6th AG Singles. National: 5th AG Doubles
Winner Longboat Key Senior Clay Court Championship.
Halls of Fame: South Carolina, North Carolina,
Appalachian State University Athletic Hall of Fame and
the York County (S.C.) Sports Hall of Fame.



HAMMER Must-haves

Endurolytes[®] Fizz, Fully Charged, Hammer
Secrets of Success.

WINNING RECIPE

CADEN DUDNEY

CLASH for CASH : GPF MX

NOV. 10-12, 2023

Overall
1ST PLACE

Schoolboy 2,
250B and 450B



FUELS FOR SUCCESS

HEED[®], Recoverite[®], Endurolytes[®] Fizz,
Hammer Gel[®], Hammer Whey Protein, Fully
Charged, Hammer Bars[®], and Endurolytes[®]
Extreme

“Mini O’s” had a bit of a struggle between starts and people running into him causing him to go down. He rode really well and fought for every position, sometime from the back of the pack. In SX he finished 4th 250 B, 10th 250 B Limited, 7th Schoolboy 2. MX 5th 250 B, 5th 250 B limited and 2nd Schoolboy 2 and got a 2nd place Olympiad award for Schoolboy 2.

FROM OUR ATHLETES



Ricky Taylor

Event: IronMan Augusta 70.3
Location: Augusta, GA
Distance: 70.3 miles
Date: 9.24.23 Stats/Results: 21st AG.
Time: 4:51 Photo: Ricky Taylor



Jordan Taylor

Event: IronMan Florida Location: Panama City Beach, FL
Distance: 140.6 miles City Beach, FL
Stats/Results: 19th AG. Date: 11.4.23
Time: 9:59:45 Photo: Jordan Taylor



HAMMER NUTRITION HAMMER Must-haves

Hammer Gel®, Perpetuem®, Endurolytes® Fizz, Endurolytes® Extreme, Hammer Raw Energy Bars, Endurance BCAA+, Anti-Fatigue Caps, Sustained Energy®.



Carol Cronin and Kim Couranz



Event: Snipe North American Championship
Location: Norfolk, VA
Date: 10.20.23
Stats/Results: 2nd OA. 1st Women's. 1st AG
Photo: Carol Cronin & Kim Couranz

HAMMER NUTRITION HAMMER Must-haves

Hammer Gel®, Hammer Bars®, Perpetuem®, Sustained Energy®, Recoverite®

Read full stories, race reports, and reviews FROM OUR ATHLETES online!



Josh Henrie

Event: Mount Baker FKT

Location: Mt. Baker, WA

Distance: 93.65 miles

Date: 8.5.23

Bike / Run

Time: 83h:11m over 9 days

Photo: Josh Henrie

WOW! Fastest
Known Time



HAMMER Must-haves

HEED®, Perpetuem®, Endurolytes®



Max Anstie

Some may recall our feature on Max back in EN 134 and were happy to report back 3 issues later that he has done one better and has been recently crowned 2023 FIM World Supercross SX2 Champion! After a stellar 2022 & 2023 season Max now has his sights set at the upcoming 2024 AMA Supercross season looking to run up front and be in title contention with the help of Hammer!

Photo: Max Anstie



Event: '23 FIM World Supercross SX2
Championship

Location: Melbourne, Australia

Date: 11.24.23

Stats/Results: 1st OA Winner!

Photo: Max Anstie



HAMMER Must-haves

Race Caps Supreme, Premium Insurance Caps,
HEED®, Endurolytes® Fizz, Recoverite®, HammerGel®

FROM OUR ATHLETES

UCI GRAVEL WORLD CHAMPIONSHIP



Victor Sheldon

Location: Treviso, Italy
Distance: 88 miles
Date: 10.7.23
Time: 4:53
Stats/Results: 3rd OA.
Photo: Victor Sheldon



HAMMER Must-haves

HEED®, Hammer Gel®, Anti-Fatigue Caps, Fully Charged, Perpetuem®, Endurolytes®

Eric Burkhart

Location: Treviso, Italy
Distance: 83 miles
Date: 10.7.23
Time: 5:47
Stats/Results: 68th AG.
Photo: Eric Burkhart



HAMMER Must-haves

HEED®, Hammer Gel®, Fully Charged, Endurolytes® Extreme.



Don Moden

Event: Téenek 100 USA 50K
Location: Aztec, NM
Distance: 50K
Date: 11.11.23
Time: 3:16:04
Stats/Results: 6th OA. 2nd AG.
Photo: Don Moden



HAMMER Must-haves

Endurance BCAA+, Anti-Fatigue Cps, Fully Charged, Tissue Rejuvenator, HEED®, Hammer Gel®, Recoverite®, Premium Insurance Caps, Race Caps Supreme, Essential Mg, Mito Caps, Super AntiOxidant



Seth Benson and Jerrod Paulson

Event: Vail Lake Endurance 8 Location: Temecula, CA
Distance: 53 miles Date: 11.18.23
Stats/Results: 2-Man Open Class WINNERS!

Photo: Jerrod Paulson



HEED®, Hammer Gel®, Perpetuem®, Endurolytes® Extreme, Fully Charged, Vegan Hammer Bars®.



Mitch DeYoung

Event: Lowell Rouge 100 Location: Asheville, NC
Distance: 100 miles Date: 10.23
Stats/Results: 6th OA.

Photo: Nicole Cottam



Perpetuem®, Endurolytes® Fizz, Fully Charged, Endurance BCAA+, Anti-Fatigue Caps.



Durward Higgins

Event: Huntsman World Senior Games. St. George, UT Event: National Masters Cycling Time Trial 35:32:02 GOLD
Date: 7.16.23 Road Race 1:30:29 GOLD
Stats/Results: 3 Gold. 1 Silver Criterium 45:27 GOLD
AG Omnium.

Overall World Champion

Photos: Durward Higgins



HEED®, Fully Charged, Race Day Boost, Race Caps Supreme, Every Surge, Anti-Fatigue Caps, Recoverite®



Matt Trethric

Event: 2023 Cyclecross Championship Location: Rocklin, CA Date: 11.4.23
Distance: 8 miles Time: 40 min
Stats/Results: 1st AG.

Photo: Matt Trethric



Hammer Gel®, Fully Charged, Endurolytes® Extreme



ERI TENORIO

BRAZIL

Brazilian National Championship
Pantanal, Corumbá (the Brazilian
second Amazon)

10/16/2023

Total Distance : 30KM down the
river

Total Time, with or without splits :
2h12min (Race Record)

AG Finish : Elite Pro (19-39)

Overall Finish : 1st Place



HAMMER Must-haves

Perpetuem® and Endurolytes®



RASAN AWAD



Traithlon and
Trail Running
IRONMAN 70.30

FOLLOW ME ON SOCIAL
[@food_health_runner](#)



HAMMER Must-haves

HEED®, Race Caps Supreme, Hammer Gel®, Endurolytes®,
Perpetuem®, Recoverite®, Hammer Bars®.



ABRAHAM VELASCO



THREE-TIME CHAMPION!

2023 Champion
Local Swim Series
Medellín, Colombia

2022 8th Place
Pan American Masters
Open Water Championship in
Medellín, Colombia



HAMMER Must-haves

HEED®, Anti-Fatigue Caps, Endurance
BCAA+, Whey Protein Bars.



LUCÍA COLL



Event 1: Cruce de los Altos
Mérida, Venezuela
11.18.23
Route Characteristics: 29,5 K
Total time: 5:48:49
1st Age Category (Submaster)
4th Female, 22nd OA

Event 2: Conoma Trail Race
Place: Anzoátegui, Venezuela
12.9.23
Route Characteristics: 24 K
Total time: 3:51:28
1st Age Category (Submaster)
5th Female, 20th OA



HAMMER EVENTS

CASCADE CREST 100



One of the most iconic 100 milers in the US and the world! Cascade Crest has a well-deserved reputation as one of the best 100-mile parties out there. Highlights include 23,000'+ of climbing, about 32 miles on the PCT, running through the 2.3 mile Snoqualmie Tunnel, lots of tall trees and tough trails!

Photo: <http://runners.photos>

GRAND FONDO NATIONAL SERIES



We are proud to be the official nutrition partner for America's original gran fondo series. The series offers challenging courses and timed segments which many of our sponsored athletes have taken on! There is a distance for everyone, with Hammer on course at all events!

VERMONT GRAND FONDO



We will be continuing our partnership with the Vermont Gran Fondo in 2024. "The Vermont Gran Fondo was born from a famous bucket list epic 4-gap ride known by the locals as the LAMB ride. LAMB comes from the names of 4 gaps (including the scenic Appalachian Gap). When combined into a single ride the course tops 100 miles and over 10,000ft of climbing.

LEON'S HEROES



We have a partnership dear to our heart with Leon's Heroes. We will be providing fuels for Leon's Triathlon know as America's race and the new K9 Triathlon honoring our Canine companions.

MUDSLINGER EVENTS



We are honored to continue our long term partnership with Mudslinger events. This family business born in Oregon offers scenic and challenging MTB and Gravel events. Registration is already open! Check out their events and sign up while you can!

QUICK'N'DIRTY SERIES



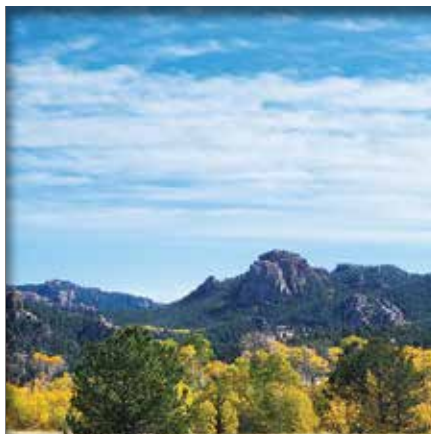
For all of our MTB enthusiasts, be sure to check out the Quick'N'Dirty series put out by our own sponsored athlete Victor Sheldon.

Held in SoCal, the series offers challenging courses in a fun welcoming environment.

NEW partnership!

COWBOY CRUSHER 7.13.24 Glenrock, NY

We are so excited to become the fueling partner for the Cowboy Crusher! This gritty gravel grinder starts in the quaint town of Glenrock Wyoming. It offers beautiful scenery of the Rocky Mountains and will take riders along Deer Creek and North Platte River. Check out this race if you are Cowboy Tough.



LOCAL EVENTS

We are proud to partner with many local events here in the beautiful Flathead Valley, Montana, USA! You will also find us onsite or well represented at the following events.

See you there!

EPIC RIDES : 24 HRS in the Old Pueblo
2/16/24

MTB

<https://epicrides.com/events/24-hours-in-the-old-pueblo/event-guide/>

CHUCKANUT 50

3/16/24

Ultra Running

<https://chuckanut50krace.com/>

EPIC RIDES : Whiskey Off Road

4/26/24

MTB

<https://epicrides.com/events/whiskey-off-road/event-guide/>

All-in-One Convenience Myth

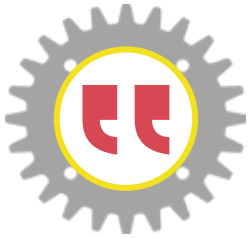
by BRIAN FRANK

When it comes to deciding on the best way to consume fluids, calories, and electrolytes during extended exercise (2+ hours), perhaps you are one of the athletes who thinks, “I just want everything in one bottle” because it sounds

convenient and means that you don’t have to think about fueling while you’re riding or running. Not surprisingly, this apparently logical approach has been heavily encouraged by companies selling “all-in-one” fueling products. They constantly tout the “convenience” of their all-in-one fuel product—“just drink this and you’ll be all set” they say.

My approach to fueling is 180 degrees opposite. I personally believe that the most effective way to fuel is by taking fluid (water), calories, and electrolytes separately and independent of each other. After you read my reasoning, I think you will agree that fueling using three separate “buckets,” as opposed to tossing everything in one “bucket,” is actually the most logical approach and guarantees the best possible outcome across the entire spectrum of conditions and applications you will encounter during 3, 6, 12, or more hours of continuous exercise.

The problem with combining your fluid, calories, and electrolytes into one container is that it will only meet your body’s needs in a very narrow set of temperature, duration, and intensity situations. I’ll illustrate my point by using an analogy of a single-speed bike vs. a 22-speed road bike. The single-speed bike represents the all-in-one fueling approach. This analogy excludes those of you who ride single-speed bikes for the added challenge—



“The problem with combining your fluid, calories, and electrolytes into one container is that it will only meet your body’s needs in a very narrow set of temperature, duration, and intensity situations.”

we’re only talking efficiency and maximum speed/minimum time from point A to point B here.

That single-speed bike will work great for you on relatively flat surfaces and at a speed that has you spinning between 70 and 100 rpm. But what happens when you encounter steep climbs or long descents? Now you are walking your bike up hill and coasting down due to your single gear option. The same is true with an all-in-one fuel. Single-speed bikes are cool, but for most of us, they have a pretty limited appeal and certainly would not be our choice if we were limited to owning only one bike. Same goes for the “all-in-one” fuel bottle—limited appeal and certainly not what I’d want my entire race to be dependent upon.

So, unless you always exercise in the exact same temperature and humidity (plus or minus five degrees and 5%, respectively) from start to finish, for no more than 2-3 hours, the all-in-one formula will leave you hanging every time.

Now consider the 22-speed bike. You can change gears to accommodate anything that comes your way—from short, steep climbs to long, grinding climbs, or long gradual descents—and still maintain maximum efficiency and pace. Thus, you have the same ability when you manage your fluid, calories, and electrolytes independently of each other and are able to make adjustments as conditions change. The flexibility afforded by

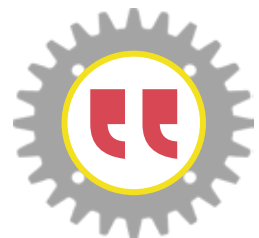


separating the fueling components during extended hours of exercise is crucial since the temperature, humidity, terrain, and pace will undoubtedly change significantly between the time you start and when you finish.

To bring the concept home, let’s consider a typical iron distance triathlon, double century, 100-mile MTB, 50-mile trail race, or the like—basically 6–24 hours of continuous exercise. These events start in the early morning hours when it’s nice and cool and continue on through the hottest part of the day, and sometimes back down to cooling temperatures. 20–30 degree variances are typical, and you may encounter as much as 50-degree temperature differences.

During the first few hours when it’s still cool, your caloric intake should be at your optimal level (for me, that’s 130–150 calories per hour), while fluid intake will be well below your max and the

need for electrolytes is minimal. However, as the heat intensifies and the body becomes increasingly depleted, you’ll need to reduce your hourly caloric intake (the body can process more calories in cool temps than in hot temps) while simultaneously increasing your fluid and electrolyte intake. These diverging needs can easily be met when you fuel separately. On the other hand, you cannot manage these changing requirements with an all-in-one fuel bottle. **EN**



“Unless you always exercise in the exact same temperature and humidity from start to finish, the all-in-one formula will leave you hanging every time.”

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My policy is simple: Any time I can improve a product, I will. - and so I did.

- Brian Frank

Read more about why Tapioca is Tops! on page 22, and get details about maltodextrin on page 20.

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25mg of caffeine

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Optimal 3:1 Formula **2.0**

32 Orange

CORN FREE GLUTEN FREE NO ADDED SUGARS

32 Servings / Net Wt. 3.52 lbs (1.6 KG) Powdered Drink Mix

SINCE 1987 100% GUARANTEED

MADE IN THE USA

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25 mg of caffeine

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1 Serving / Net Wt. 1.06 oz (30g) Powdered Drink Mix

Vanilla

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RECOVERITE® 2.0

Recovery Drink

Optimal 3:1 Formula

CORN FREE GLUTEN FREE NO ADDED SUGARS

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32 Chocolate

MADE WITH NATURAL INGREDIENTS

32 Servings / Net Wt. 3.25 lbs (1.47kg)

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2 Unflavored

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Ain't no valley low enough
Ain't no river wide enough
To keep me from getting to you babe!"

(Nickolas Ashford and Valerie Simpson
for Motown Records)

Photo: Brigette Takeuchi.



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Brigette Takeuchi enjoys her Hammer Gel chilled, in the snowy spring sunshine. Photo: Brigette Takeuchi.