

ENDURANCE

BY HAMMER NUTRITION

#135 July/August/September 2023

\$4.99 US / \$5.99 CAN

NEWS

IN THIS ISSUE

Less is Best

Always has been, Always will be

Processed Seed Oils

Even more reasons to steer clear

Perpetuem for the WIN

Perpetuem 2.0 renders big results

PLUS

Sucralose

Makes headlines, again!



BEING FRANK

A WORD FROM BRIAN FRANK



Welcome to the
135th issue of
Endurance News!

“We at Endurance News believe that there are no shortcuts and success can only come from hard work.”

As I say in every issue, this one is our best yet! Man, it’s hot out there. Good thing we’ve got articles on how to beat the heat (Liquid Endurance) and so much more unique and encouraging content. Besides a must-read dusey from Dr. French, the FOA (From Our Athletes, aka you and me!) pages are my favorite of every issue, and this one is no exception. Increasingly, people are discovering that **Life is an Endurance Sport**, and we make products for everyone, not just hardcore endurance athletes. Be sure to check out all the fantastic things Hammer athletes do worldwide!

If you have you not appeared on these pages before, and are a regular contributor, we’d LOVE to hear your Hammer

discovery story, helping a friend/stranger, or any other adventure you want to share. Include pics too!

Further along these pages, you’ll find a lot of updates on **Hammer Gel flask caps**, the return of **Perpetuem Solids** and **Nocciola Hammer Gel**, website updates, and more. So, check out the “housekeeping” article on these pages.

As I’ve said for decades -Absent proper usage protocols, the best products in the world will still fail. This is so true today with all of the crazy fueling myths that continue to permeate our world – like pre-event loading, high calorie, fluid, and sodium intake, and so many more. For years, we’ve also tried to explain this confusing, counterintuitive subject



through print, online, and in-person communication. Now best exemplified by our **5 Secrets to Success** guide.

However, I've realized that even the most long term, dedicated Hammer athletes still likely have some areas where they could improve their fueling habits - easily remedied if they let us help them. This is what Steve, my staff, and I do all day! Call, email, or live chat for your personalized plan.

In order to make this process scalable and more easily disseminated, we are gonna amplify our protocols with our **How To Fuel** guide series that you can easily download, share and enjoy. There will also eventually be videos of these guides for those who are probably not reading this. As always, you are driving this train and your feedback is needed, wanted and will be gladly accepted.

Before I go, I have to get on my soapbox for a minute and tell you about my favorite three nouns that have served me so well over these past 36 years and are the immutable principles on which Hammer has been built: **Quality, integrity, and transparency.**

Unfortunately, these days most consumers are somewhat jaded towards the businesses they patronize, and for good reason. They assume, and again rightly so in most instances, that the company cannot be trusted and they are just trying to make a quick buck by deceiving you so they can get rich quick, sell it to a VC group and sail off into the sunset. To me this is a tragedy and a scenario I cannot imagine being my reality.

Next, if you buy their product, try to contact the company with questions or more information? Or how about find their address or phone number on their web site. Nope, just a contact form and voicemail, with minimal response, if any. NOT HAMMER!

For 36 years, I've done business the old-fashioned way – showing up daily, doing the heavy lifting, walking the walk, not just talking the talk. After all, everything old is new again at some point, and I never tire of hearing clients say things like, “I didn't think there were any honest-to-goodness companies left out there; I'm so glad I discovered Hammer.” Can this be said about other companies that inhabit this space or the new ones

that seem to crop up daily? Not sure, but when you do business with Hammer, this is how it will go.

Regarding quality, I developed most of my products for myself and my family and use them daily. Sleeping easy at night is essential, knowing that every item we sell is the gold standard and nothing less. That's why **I'll never compromise quality to reduce costs or increase profits.** That's followed by integrity, which the dictionary defines as; The steadfast adherence to a strict moral or ethical code. Before my Dad passed away in 1991, he told me, **“In business, if you treat every customer the same way you want to be treated when you are on the other side of the counter, you'll never go wrong.”** I live this mindset every day and do my best to get my staff to do the same. We've never refused a refund and will always own our mistakes and correct them when we fall short of your/my expectations.

Continued on page 64



Brian Frank

Owner and Founder of
Hammer Nutrition

Hammer athlete, **Keller Norland**, tackles the unforgiving terrain of Tempe, AZ. Photo: Trevor Witt

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 hi-res photos to photos@hammernutrition.com.



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: Will Turner in pursuit of excellence. Read more about Will's published adventures and upcoming plans for "65" on page 66.

Photo: Chris DeStefano

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July/August/September 2023

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MOTO TRIALS WESTERN SERIES

CANON CITY, COLORADO

is
ionship



SPORTSMAN



MOTO TRIALS WIND UP

by BRIAN FRANK



2nd PLACE and 2nd PLACE

JACK RABBIT TRIAL 2D

1st PLACE and 3rd PLACE

AMA/NATC MOTO TRIALS WESTERN SERIES

2nd PLACE and 3rd PLACE

COTA / CEDAR CREEK TRIALS NATIONAL

1st PLACE and 1st PLACE

WHISKEY GULCH

This year, my competitive season constituted months of training and preparation for 8 competitions in 4 consecutive weekends in May and June. My results were three firsts, including my first ever National win, three seconds and two third place finishes. The last two nationals are coming up in Rhode Island before print deadline, and of course I'm hoping to do better. After decades of racing motocross and all forms of bicycles, I now compete in the little known sport of moto observed trials. There's no starting line and no checkered flags. It's the sport of perfection, literally. You ride 12 obstacle course "sections" three times each and the goal is to score zero points on each section. Sections are spaced out over a 3-6 mile loop and you ride from section to section. Competitions take 5-6 hours to complete and require peak physical strength, endurance, extreme mental focus and balance. It's absolutely the perfect sport for me and I'm just sorry I didn't discover it 30 years ago! I'm sponsored by **Hammer**, **Sherco**, **Trials Super Store**, **Alpinestars** and **Jitsie** clothing. EN

RACE RECIPE

BRIAN FRANK

Moto Trials Nationals
Canyon City, CO

WINNING PROTOCOL

PRE-RACE

Thursday

Travel day, try to eat light, stay hydrated (no loading!) get to hotel and focus on a good night sleep. Lights out by 10.

Friday

Eat and drink as normal, limit activity and time on my feet. Practice for about an hour to get comfortable on the bike and familiar with terrain. Light dinner with protein, starch and salad.

Saturday

Competition day. 6-7 hours of continuous exercise with 36 "sections" or hard efforts, spread out over three laps, start time is usually around 9 am, thankfully.

Breakfast at 6 am: Turkey, avocado, cheese sandwich on gluten free bread. Sip water lightly until start time.

DURING

Before each lap : 3 Race Caps Supreme, 3 Fully Charged capsules, 2 Anti-Fatigue Caps.

While riding : Water, Endurolytes®, Hammer Gel®

After start time, I start consuming small amounts of water and Gel at 15-20 minute intervals. I take 2-3 Endurolytes and 1 Anti-Fatigue per hour early on, then increase as the day goes on, as heat and depletion increase. Third lap I increase to 1-3 Endurolytes every 15 minutes as needed. 45 oz of water in my hydration pack is amortized and consumed slowly during each lap (every 2 hours or so).

POST-RACE

Ultimate post win cheat snack:

Convenience store **Jalapeno Corn Dog!** #earned





LEAVE US A REVIEW!

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.

hammernutrition.com



Here are a few examples of what over 20,000 of you have been saying just so far this year!

*"**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

"Shopping was a pleasure. Web site is well organized and check out is always easy. The products are great!" - Raymond C.

*"**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 the genuinely adheres to taking exceptional care of people. When you become a Hammer client, you join the Hammer family as well." - Mike B.

*"The 8-hour "**Fueling for Success**" Protocol is a great article helping someone that has no idea what is what and how to put it all together. Thank you!" - David B.*

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

REAL

Endurance Fuel



NOCCIOLA IS BACK!!!

- Rock-solid energy
- No sugar crash
- Easy to digest, no GI distress

Single Serving **\$1.60**
 26 Serving Jug **\$24.95**



"Hammer Gel works great. I love the quick fuel! They are easy on my stomach and the flavor options are excellent. These are a must in my distance running and riding, training and racing." - Joshua H.

- | | |
|------------------|---------------|
| ■ Nocciola | ■ Huckleberry |
| ■ Apple Cinnamon | ■ Orange |
| ■ Banana | ■ Raspberry |
| ■ Chocolate | ■ Tropical |
| ■ Espresso | ■ Vanilla |



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Hammer Philosophy

LESS IS BEST

Revisited

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.

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.

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.

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 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.

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 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.



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


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! 

Less pain, More gain!



- Targets Soreness and Irritation
- Optimizes mobility and flexibility
- Maximizes recovery

120 Capsules \$34.95



“Tissue Rejuvenator definitely helps with the aches and pains from a lifetime of competition. Wouldn’t want to be without it! - Frank W.”

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ENDUROLYTES® FIZZ

The Deliciously Refreshing Way to Replenish Electrolytes

by HAMMER STAFF

Smart athletes know that proper fueling during exercise requires more than replenishing calories and fluids. It involves consistent and adequate electrolyte support as well. And it's not just to help avoid cramping. Optimal functioning of the digestive, nervous, cardiovascular, and muscular systems depends on having adequate electrolyte levels in your body!

Remember, just as you shouldn't wait until you're out of energy before you consume more calories or dehydrated before you drink fluids, you never want to wait until you start cramping before you replenish electrolytes. By that time, the proper functioning of those aforementioned bodily systems has already been in a downward spiral for a while.

At Hammer Nutrition, we offer a variety of options to fulfill this all-important component of your fueling. One of those options

is **Endurolytes Fizz**, and it's the ideal one if you prefer drinking your electrolytes rather than taking capsules.

Simply add these rapidly dissolving tablets to your water bottle to create a delicious, never overtly-sweet, effervescent electrolyte drink—the same full-spectrum electrolyte support that made Endurolytes capsules famous. Endurolytes Fizz is available in five refreshingly pleasant-tasting flavors: Lemon-Lime, Mango, Grape, Grapefruit, and Cola (20 mg caffeine per Cola tablet). It's virtually calorie-free (a mere seven calories per tablet) and contains no sugar, artificial sweeteners, or preservatives, of course.

When it comes to answering the question “How good is Endurolytes Fizz?” our clients are our best salespeople! Check out this small sample of online 5-star reviews!





“I pop one in a 16-ounce bottle of water and drink when I get thirsty during my 6.5-mile hikes which I take 3 or 4 days a week. It keeps me hydrated really well during the hottest days. I usually refill my water bottle and have another Fizz on the return trip.”

“I use Endurolytes Fizz before, during, and after any exercise. It’s a great way to help get your body properly hydrated and keep it that way.”

“Best tasting stuff on the market. I use this on my short runs as well as my long runs.”

“I did my first 45K two weeks ago and had these as part of my hydration plan. Wow, this made the difference between suffering the last two hours and completing with a smile on my face.”

One Endurolytes Fizz tablet equals approximately two Endurolytes capsules. The tablets break at the center to allow for personalized dosing, helping you to meet your specific—and often ever-changing—electrolytic mineral requirements with great precision, no matter what the weather throws at you!

By the way, Endurolytes Fizz is NOT just for athletes! This is an ideal product for construction workers, landscapers, truck drivers, and even retired grandparents working in the yard. If what you’re doing—work, play, exercise—involves sweating, give Endurolytes Fizz a try. We guarantee you’ll love how it tastes, and even more, how it works! EN

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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PERPETUEM SHINES

Old Dogs CAN learn new tricks!

as told by ERIC KENNEDY

RAY SANCHEZ

Badwater Ultra Marathon

7.4-6.2023

Stats : 135 Miles

Total time : 33:16:41

Photo Credit : Ray Sanchez and Eric Kennedy



This was my third year crewing and being in charge of Ray's nutrition and my first year as crew chief. This year was by far the best Ray has felt in a long time at Badwater 135. Ray knows the importance of nutrition and has always believed in Hammer. Previous years primary products used by Ray at Badwater 135 were **HEED** and **Endurolytes Extreme** supplemented with whole foods for calories. Typically Ray would start eating after about 15 miles (Hammer bars). Water bottles of HEED were given as needed or if they were too hot to drink ice was added. Two Endurolytes Extreme were taken every 30 minutes. Water consumption wasn't measured or tracked. When Ray's stomach turned (usually around mile 80ish) he became mad scientists with Hammer

products trying to find the right combination or solution. Ray knew he had the right products but could never put it together.

This year was completely different! When Ray and I reached out to Hammer Nutrition for pre-race advice, Brian got right on the phone with us.

Brian's advice was as follows:

- 200 calories per hour in the form of Perpetuem (first 10 hours or longer)
- 24-30 ounces of water per hour **MAXIMUM**
- 1 scoop of Endurolyte Extreme powder per hour (mixed in Perpetuem)
- 1-3 endurolyte capsules per hour (adjust as needed)
- .25 ounces of liquid endurance every 4th bottle

Ray utilized this plan exactly and found great success as he has never felt better for the duration of Badwater 135! The only whole food consumed was a slice of pizza at approximately mile 110 since he was never hungry. **Anti-Fatigue Caps** at hour 18 to keep his legs from feeling heavy and to extend his endurance. More impressive was the fact that Ray didn't experience any hunger, vomiting, turned stomach, diarrhea or any other signs of nutritional deficiencies.

Perpetuem is truly an amazing product for endurance sports and will continue to be a go to for Ray Sanchez! Keep Hammering!

Brian's big take aways

Ray reduced his total hourly caloric intake, and used only **Perpetuem** as his primary source of calories. Even bigger was controlled and limited water/fluid intake instead of freely drinking unmeasured amounts.

EN



SCOTT GEISER

Western States 100

6.24-25.2023

Stats : Finishing time 24:50:19

Photo Credit : Luis Escobar

A traditionally **Classic Perpetuem** user, Scott also added **Hammer Bars**, **Huckleberry Hammer Gel** in flasks diluted with water, **Endurolytes**, plus and occasional **Energy Surge** during the race.



SEND US YOUR LETTERS!

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

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SHARE YOUR REVIEWS ON FACEBOOK!

We welcome your reviews. We check our Facebook page regularly and enjoy hearing how Hammer Nutrition has helped you.

KEEP HAMMERING!

facebook.com/hammernutrition

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

hammernutrition.com

to download your **FREE** copy of our #1 comprehensive guides

5 Secrets of Success, and How to Hammer.

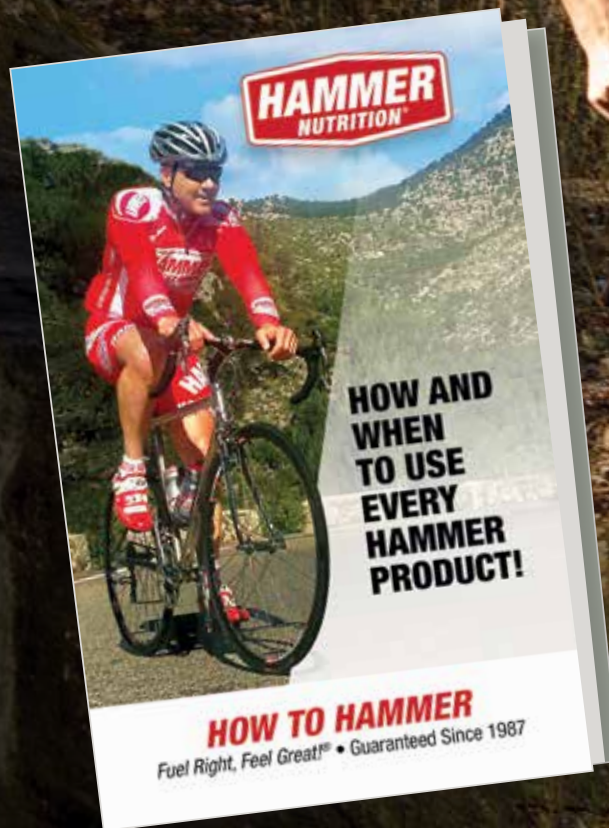
Still have questions? Join us on live chat and get a complimentary personal fueling plan from one of our friendly experts. We're here to help.

KEEP HAMMERING!



HOW TO HAMMER

Comprehensive Product Usage Manual



Lou Donofrio rounds the corner on a run through Ridley Creek State park in Pennsylvania.

Photo: Kevin Peragine Photography.



GET YOUR FREE COPY TODAY!

hammernutrition.com/how-to-hammer

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.

Liquid Endurance

The Right Way, The ONLY Way to Pre-Load Water! by STEVE BORN

The dog days of summer are upon us folks! And of the factors that can negatively impact our workouts and races, hot weather—or, more specifically, the inability to deal with hot weather—tops the list, partly due to the increased potential for dehydration and the issues associated with it. As one study states, “Dehydration in athletes alters cardiovascular and thermoregulatory function and may inhibit endurance exercise capacity if fluid loss exceeds 2% of bodyweight (BW).”

When exercising in hot weather, your body’s core temperature



increases dramatically. Your internal cooling system responds by sweating. However, unlike your car’s radiator, which recycles its coolant, your sweat evaporates or drips away, and it’s gone. Obviously, rehydration is your basic strategy, but there are two incorrect tactics that athletes employ:

1. Dramatically increasing fluid intake in the days leading up to an event. The problem with this tactic is that suddenly increasing daily intake overly dilutes 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.

2. Greatly increasing fluid intake during a hot-weather workout or race. While there are some allowances, primarily for heavier athletes, to increase normal hourly fluid intake (16-26 ounces) by two, maybe three ounces during hot-weather exercise, any more than that will put you at the serious health consequences caused from overhydration. How serious, you ask? Serious enough to kill you. That’s right; there have been incidences of “death by water intoxication,” formally known as dilutional hyponatremia. During exercise, we MUST remember the sage advice of hydration expert, Dr. Ian Rogers: “We can no longer assume that excess fluid taken during prolonged exercise will just be passed out in the urine,”

understanding that serious consequences can result from the consumption of too much fluid.

Glycerol and its Beneficial Effects on Hot-Weather Exercise

Back in the late 80’s, University of New Mexico scientists researched glycerol, a well-tolerated, naturally produced metabolite of fatty acid oxidation, and its hyperhydration potential for improved exercise performance in hot weather. They hypothesized that after ingestion, “glycerol will move out of the bloodstream and become evenly distributed throughout the body’s fluid compartments,” and found that “glycerol added to water has been shown to deter the effects of hypohydration for up to 4 hours.”

Their findings showed that glycerol added to water created a state of hyperhydration and would benefit athletic activity in hot weather by lessening the possibility of hypohydration (dehydration) and its subsequent negative effects. Their initial research results have been validated by numerous studies since then, including:

Glycerol-containing beverages create an osmotic gradient in the circulation favouring fluid retention, thereby facilitating hyperhydration and protecting against dehydration. Many studies have shown that increases in body water by 1 L or more are achievable through glycerol hyperhydration.”

“Glycerol-induced hyperhydration (GIH) has been shown to increase endurance performance (EP).”

“The effects of glycerol hyperhydration on thermoregulatory and cardiovascular physiology include higher sweat rates, reduced heart rates and core temperatures, increased forearm blood flow, and favorable subjective responses including reduced thermal sensation, thirst sensation, environmental symptoms questionnaire scores, and RPE (Rate of Perceived Exertion). These effects have been associated with performance improvements including increased endurance time to exhaustion (up to 24%), increased work and power (up to 5%).”

Liquid Endurance—Your Ticket to Beat the Heat!

It's clear that glycerol is the safe and highly effective way to create a state of hyperhydration that improves exercise performance in hot-weather conditions. When hot weather comes, you'll want to be ready, and with Liquid Endurance, you will be! It is the correct way, the only way to maximize fluid storage capacity safely and effectively prior to a hot-weather event.

Liquid Endurance contains the much-researched metabolite glycerol, which absorbs rapidly when taken with water, increasing the water content evenly in the body fluid compartments:

The intracellular fluid (ICF) compartment is the system that includes all fluid enclosed in cells by their plasma membranes.

The extracellular fluid (ECF) compartment, which has two primary parts: the fluid component of the blood (plasma) and the interstitial fluid (IF) that surrounds all cells not in the blood.

Increased fluid in these compartments contributes to sweat volume, resulting in a significant increase in cooling efficiency during prolonged exercise in the heat.

You can use Liquid Endurance before any hot-weather workout. Prior to events and competitions contested in hot-weather conditions, a 3-day load with Liquid Endurance will increase total body water (i.e., glycerol hyperhydration) and provide noticeable benefits of improved thermoregulation and endurance during hot-weather exercise.

Summary

Excess body fluid loss causes premature fatigue and decreased performance. If the loss goes unchecked, the potential for dehydration and the serious issues associated with it increases. Once dehydrated, you're cooked—literally and figuratively. But not to worry! Liquid Endurance, along with proper hydration, will address the fluid-loss concerns that endurance athletes face when training or competing in hot conditions.

Beat the heat with Liquid Endurance! EN

References available upon request

Hammer Hyper Hydration



- 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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SOS 3

5 Secrets of Success for Endurance Fueling

PROPER HYDRATION



Hydration in Hot Weather: How to Adapt

In hot conditions, especially beyond a 1.5-hour effort, your body's core temperature can increase dramatically. Your internal cooling system responds appropriately, producing copious sweat; however, unlike your car's radiator, which recycles its coolant, your sweat evaporates, drips away, and is gone.

Unreplenished fluid loss causes endurance athletes several problems:

- **Your heart must work harder in order to pump a decreased, but thickened, blood volume.**
- **Fluid depletion inside and outside muscle cells may slow down the metabolic reactions necessary for**

efficient muscle fuel transport.

- **Inadequate fluids result in higher cell temperatures, altering metabolic rates for less-than-optimal endurance performance.**

At the very least, excess body fluid loss means premature fatigue and decreased performance. If the loss goes unchecked during extended exercise, the potential for dehydration and its serious consequences increases. Once you get into the dehydration range, you're cooked—literally and figuratively—collecting a DNF and possibly an IV, too. Your basic strategy for staying cool in the summer months

should begin with appropriate hydration during exercise.

Be aware of water weight loss during exercise

A good scale (preferably one that measures in less than one-pound increments, such as a balance scale) may well prove to be your most valuable fitness investment. Weigh yourself before and after each outing, carefully noting the time, exertion level, miles, and weather, as well as fluid, fuel, and electrolyte consumption. If you finish weighing the same or more than when you started, you have overhydrated. If you've dropped 3% or more, dehydration



has occurred. Up to 2% weight loss is safe and reasonable.

For very long events, such as a century bike ride, the average rider will also lose a pound or more in energy stores (glycogen, fat, and muscle tissue) in addition to water, so calculate that into your weight difference.

Once you begin to log your fluid consumption and weight fluctuations, you'll have the data to accurately calculate your personal needs. Another low-tech hint that will make it easier to track your training data: make sure you know the capacity of your water bottles and hydration packs.

Rehydrate in the correct amounts

Just like calories and electrolytes, you can't replenish fluids at the same rate that you deplete them; your body simply won't absorb as fast as it loses. And since fluids and electrolytes (especially the latter) perform many roles to maintain exercise performance, that will also cause depletion.

Your body will accept and utilize a certain amount from outside sources, so maintaining fluid intake within a specific range will postpone fatigue and promote peak performance.

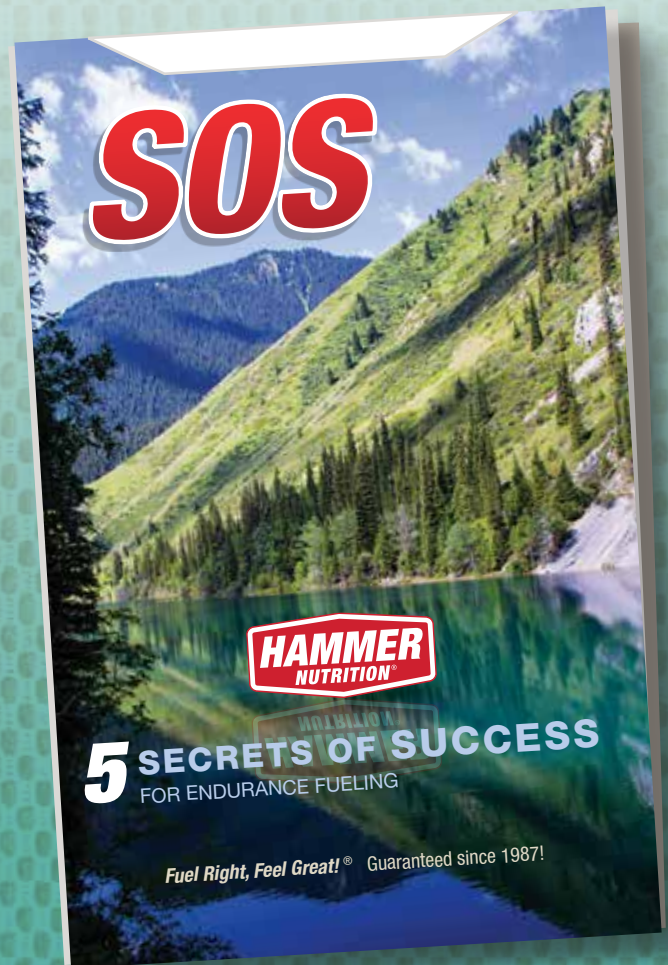
Research suggests that while electrolyte needs for individual athletes may vary dramatically, fluid loss remains fairly constant. Based on this research, along with the thousands of athletes we have monitored, we recommend the following:

- **For most athletes under most conditions: 20–25 oz/hr (approx 590–740 ml/hr)**
- **For lighter weight athletes, or those exercising in cooler temperatures: 16–18 oz/hr (approx 473–532 ml/hr)**
- **For heavier athletes or athletes competing in hotter conditions: up to 28 oz/hr (approx 830 ml/hr.)**
- **To avoid dilutional hyponatremia (over-hydrating), fluid intake should not routinely exceed 28 oz/hr (830 ml/hr). The exceptions are: heavier athletes exercising at extreme levels (prolonged periods at a high percentage of V02 max); and athletes competing in severe environmental conditions. (Note that increased fluid intake necessitates an increase in electrolyte replacement as well.)**

Continue reading this and all 5 Hammer *Secrets of Success* fueling protocols online today! →

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ASK HAMMER



YOU ASK

WE ANSWER

QUESTION

Race Season is here and I want to be sure I am doing everything right to get the best leg up on the competition and to perform my best in pursuit of a new PR. What would you recommend?

ANSWER

It's now peak season when your key races will be happening. And for those "A" races, you'll find no better ally (aka "secret weapon") than **Race Day Boost!**

In retrospect, maybe we should have called this product "**Personal Best in a Bottle.**" For the 20+ years that we've been selling Race Day Boost (RDB), countless users have done just that. Still, RDB is a pretty good descriptor, as it provides a tangible boost in race performance, which augments the hard work you've put into your training. Unlike most of the other Hammer Nutrition supplements, Race Day Boost is not a daily use product; for best benefits, it should be used very sparingly throughout the year, in fact. You'll first want to test the four-day Race Day Boost loading dose protocol in your training to gauge your body's response to the product. After that, save Race Day Boost for your handful of "A" races or events of the season.

The key to RDB's effectiveness is sodium tribasic phosphate (aka trisodium phosphate), a heavily researched compound proven to positively impact

Hammer athlete **Ryan Ingham** makes light work of the trails during the Endurance Trail Race back in May.

athletic performance. Unlike creatine or any other similar nutrient, sodium tribasic phosphate enhances optimal functioning of not just one, but all three of the body's ATP-producing energy systems/pathways-the ATP-CP system (short-term), the lactic acid system (medium-term), and the oxygen/aerobic system (long-term).

1. The ATP-CP (adenosine triphosphate and creatine phosphate) system:

The sodium tribasic phosphate in Race Day Boost supplies phosphate groups used in the resynthesis of ATP and CP, thus improving the performance of this short-term, explosive-type energy system.

2. The lactic acid system:

The sodium tribasic phosphate in Race Day Boost buffers blood acidity and helps maintain a more ideal acid-alkaline balance by neutralizing excess hydrogen ions within the muscle cell. Effectively buffering excess lactic acid allows the lactic acid system to provide energy for a longer time.

3. The oxygen/aerobic energy system:

Phosphates form part of a compound found in red blood cells known as 2,3- diphosphoglycerate (2,3-DPG). This molecule helps release oxygen from hemoglobin into the muscle cells. An increase in 2,3-DPG will improve the availability of oxygen to working muscles for the process of creating ATP (energy).

THE BENEFITS OF RDB

- **More efficiently produced energy = greater amounts of energy**
- **Less lactic acid build-up**
- **Greater endurance**
- **Up to an 8% improvement in exercise output**

For more than two decades, athletes have used Race Day Boost to unleash their potential and propel their peak performances. The stuff works. It's that simple. Whatever the duration of your key events), **Race Day Boost will prime you for the breakthrough you're after.** This is a special product for those special days when you'll need 100% efforts to achieve your goals. When that day comes, load up and hold on-you're about to blow some minds. **EN**

Your new PR in a Bottle!



- **Optimizes aerobic capacity**
- **Increases endurance**
- **Calms 'burning' muscles**

64 Capsules \$27.95



"I followed the steps at Hammer's recommendation and achieved my goal. I did not lose my stamina and ran my best marathon ever!" -Scott S.



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PERPETUEM®

Discovering Perpetuem, Discovering Renewal

by DEAN KARNAZES



Sometimes we discover new nutrition products through research and Google; other times, it occurs serendipitously. This is a case of the latter. And one I'll never forget.

It happened in the most unlikely of places, the Sahara Desert. Actually, given the circumstances, perhaps it wasn't all too unusual. The year was 2008, and it was day five of the Sahara Race, a grueling six-day, 250 km self-supported footrace across the Sahara. The fifth day of most stage races is the notorious "long day," meaning that it is the furthest one-day distance of the overall event. This particular stage was 100 km, and it involved climbing and descending lots of sand dunes, hot, shoe-swallowing sand dunes.

This was following four days of tough competition, four showerless days of sleeping in a tent on the ground (or not sleeping), and eating reconstituted camping food for dinner. I was battling it out with an Italian Special Forces member, a Romanian ultrarunning record holder, and an emerging South African superstar, Ryan Sandes.

The stakes were even higher for me. You see, the Sahara Race is part of the 4 Deserts Challenge, a race series in the hottest, windiest, driest, and coldest deserts on Earth (the Sahara, the Gobi, Atacama, and Antarctica). Quick digression, most people don't realize that Antarctica is a desert because it's cold and

covered in ice. But a desert is classified by the amount of annual rainfall it receives, of which Antarctica sees very little. I was attempting to be the first person to complete all four of the races in a single year; most people become part of the 4 Deserts Challenge Club over the succession of many years.

Adding to the pressure, the individual that has the lowest cumulative finishing times from all of the races—regardless of how many years it takes them to complete all four—is crowned the 4 Deserts Challenge champion. I was in the running.

And things were going reasonably well at the Sahara Race. That is, until the long stage. Ryan Sandes had set a blistering pace throughout the first four days and had a comfortable margin going into day five. I knew I'd have to perform well to contend. And I was, at least until about the midway point. That's when the proverbial wheels came off. Suddenly I found myself depleted and flagging, seemingly running on fumes, and still with about 50 km's to go! I didn't exactly hear footsteps coming up behind me—we were running on sand after all—but Ryan caught up to me. We spent the next couple hours feeling each other out, but the kid was too strong.

A kid he may have been at the time, but a gentleman nonetheless. He could sense my exhaustion and offered a slug

from his holster. I desperately obliged and took a pull from a little flask he offered, having no idea of the contents. Wow! It was smooth and delicious, thick and slightly warmed from the sun.

"What is this?" I asked.

"Perpetuem," he replied.

I'd never heard of Perpetuem, but that single gulp added an amazing pep to my stride and helped get me to the finish line that day. I ended up with the Silver Medal at the Sahara Race, runner up to Ryan. But that didn't matter, he'd turned me on to a new product that's become an integral part of my training and racing ever since. I used Perpetuem at the remaining 4 Deserts events and successfully completed all four races in a single year, somehow winning the 4 Deserts Challenge in the process.

Since that time, Perpetuem has been reimagined and improved, with the corn maltodextrin replaced with a lower dextrose equivalent, tapioca maltodextrin. And Perpetuem comes in four delicious flavors, so there's no lack of variety. For a special kick on those cold days, try Caffe Latte warmed, which includes 30 mg of caffeine to help rev the engine.

Thank you to Hammer Nutrition for making such a great product, and thank you to Ryan Sandes for making the unexpected introduction! **EN**

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Dean Karnazes makes the most of a lakeside run while visiting Hammer HQ.

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- **Steady energy hour after hour**
- **Spares muscle, burns fat**

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Single Serving **\$2.95**

- Strawberry
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- Chocolate
- Caffè Latte



*"I've been using **Perpetuem** on my longer runs for the past 15 years. Your 2.0 is an excellent improvement. It's nice to have an improvement in a product I trust. Making things better is Hammer's trademark." - Dean V.*



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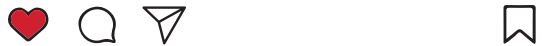
@gonowmego



Naomi Haverlick Only 1 day of vacation: mostly a travel day to visit fam, but stopped along the way for a beautiful gravel ride. #howihammer



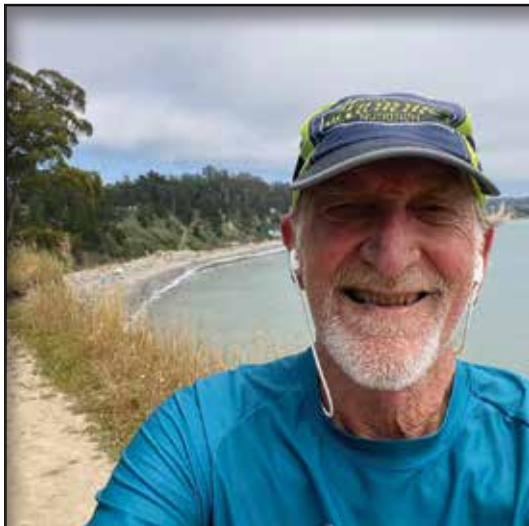
@ryan_ingham_endurance



Ryan Ingham Whether having a good day or a bad one, if you smile no one else will know the difference! Even on a rough day you can still grind it out and finish in time!! #howihammer



@lilfaith.bw



Breese White Great weekend running. Looks like he's back. Longest run in 2 months on Sunday 13 miles with no issues. Wahoo! Hammer fueled and recovered. #howihammer



@essentialtrainingjng.nick

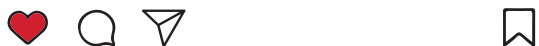


Nick Castellano Getting some miles in along the rails to trails path here fueled with bars, HEED, and Endurolytes! #howihammer

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@runner_blogger_az



Jeremy Heath It's officially getting hot AF in the desert again Stay hydrated folks! #howihammer



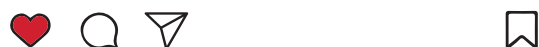
@lilkap144



Austin Kapoukranidis Great weekend @redbudmx (battery emoji) Ended up getting tickets in all my classes! #howihammer



@wilderness_alex



Alexander Terry From May hiking and running in the Adirondacks (tree emoji) Thank you for the support @hammernutrition #howihammer



@bikerdadmq



Jeremy Hinkson An amazing gravel ride today of 54 miles. Hammer Nutrition provided plenty of energy. HEED 2.0 in all 3 bottles. #howihammer

STRESSED OUT?

It's time for the Vitamin B6 and Magnesium Combination!

We athletes can get stressed out over many things, such as,

- ◆ Did I do enough training for my big race?
- ◆ Do I have my fueling plan locked in?
- ◆ Is my equipment in top shape?

And so much more. Plus, times being what they are, it's not unusual to find ourselves stressing more than usual, going from moderate stress levels, which are pretty normal, to extremely stressed levels, resulting in several negative health consequences.

We can employ many techniques to help alleviate stress, and research has shown that a combination of vitamin B6 and magnesium is superb at reducing stress, more so severe or extreme stress. It does this even better than magnesium alone, which already has an excellent reputation for helping lower stress levels.

While animal studies have shown the effectiveness of the vitamin B6/magnesium combination in stress reduction, a 2018 study used human subjects to determine whether similar results could be achieved.

The Depression Anxiety Stress Scales (DASS) was utilized as “a 42-item self-report instrument designed to measure the three related negative emotional states of depression, anxiety, and tension/stress”. All study participants had a minimum score in the upper-moderate to severe to extreme severe stress and anxiety categories.

For eight weeks, study participants were randomly chosen to receive either:

- ◆ 300 mg of magnesium
- ◆ 300 mg of magnesium plus 30 mg of vitamin B6

At the end of the study, both groups experienced reductions in their stress scores; the magnesium/vitamin B6 group had a 44.9% reduction, and the magnesium-only group had a 42.4% reduction. However, for those study participants with high DASS scores—ones that put them in the severe or extremely stressed category—the impact was even more remarkable, with those taking the vitamin B6/magnesium combination having a sizeable 24% improvement compared to the magnesium-only group.

Magnesium alone appears to be very effective if you're moderately stressed, though a



“Research has shown that Magnesium is very effective for reducing stress, but even more so when combined with Vitamin B6.”

vitamin B6/magnesium combination is even more effective. However, for those who are severely/extremely stressed, the vitamin B6/magnesium combination is the ticket for helping reduce dangerously high stress levels.

2-3 capsules of Premium Insurance Caps will get you near to above the 30 mg of vitamin B6 used in the study, and 3 capsules of Essential Mg will replicate the 300 mg of magnesium used in the study.

It's important to note that higher levels of vitamin B6 and magnesium may provide even better benefits for reducing stress and promoting positive outcomes in many other areas of human health. Keep in mind that the Daily Value (DV) and similar standards represent the minimum needed to prevent a deficiency disease. A more-appropriate standard for athletes and all people living in today's stressful world is the Optimum Daily Intake (ODI). For vitamin B6 the ODI ranges from 25 mg – to 300 mg daily, and for magnesium, the range is from 500 mg to 750 mg daily.

EN



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- Optimizes magnesium levels
- Supports ideal sleep

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Your're All Zebras

Unique Individuals require unique health solutions

by DR. BAYNE FRENCH, MD DC



I have some unfortunate news for you. You're part of a population. In college I wanted to major in Populus Avoidance. My guidance counselor didn't give me any guidance. In fact, she didn't even want to meet with me. I was used to that. She claimed that academic major didn't even exist. I eventually gave up and decided on pre-med.

There's a lot of problems with the populus. Pestilence, crime, chit chat, and others. Also, as a member, you are subject to medical advice from population-based studies. You know, looking at the masses. But you're not a population, you're an individual. One with your own unique collection of risk factors, and genetic baggage.

Population-based recommendations are efficient. They're simple, quick, and have the advantage of being "evidence-based". Individualized medical recommendations are far more nebulous, time consuming and

require more dialogue...things most medical providers intend to avoid. The system is not set up to allow for this on a large scale. There are powerful forces at work, under the guise of value-based care, that require us (me) to fill out forms. Heaps of them. Useless forms, that cannot be delegated to others. My view of "value" is me in the room with a patient. Every year it gets harder to do that. Behind these abysmal decisions and mandates are people. Idiots. I would love to get in the octagon with a few of them. Not that I know what I'm doing in there but they'd be missing an ear when I was through.

Plugging you, a gnarly, aggressive, and gorgeous zebra into guidelines designed for a horse is not a style of medical practice that I overly enjoy. I want to have individualized discussions with individual patients. I want them to read and research and ask questions. I am unfazed, completely unaffected when

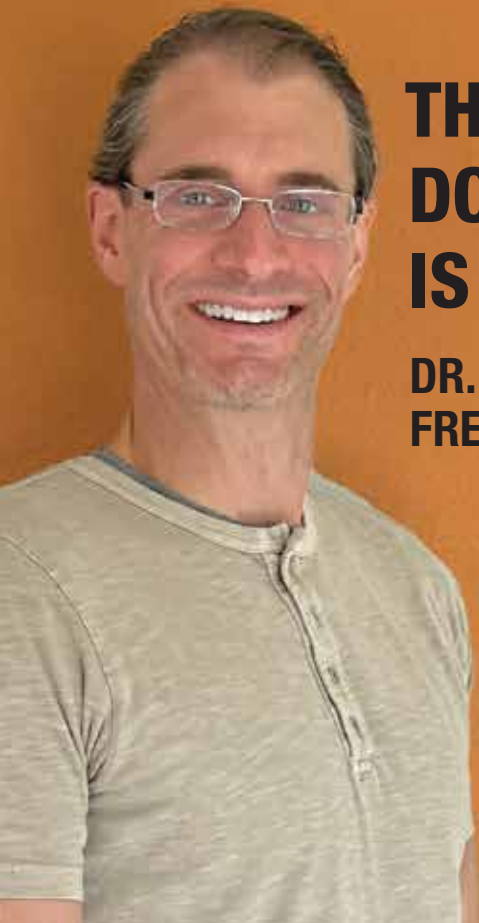
patients choose to not take my advice. It does not offend me. I don't have time to be offended because in order to practice the way I want, there is a heightened level of efficiency that needs to take place. This usually starts at 5 AM when I go through every patient on my schedule. It also involves an intolerance of patients being late. No-shows result in a search for a new doctor. I can operate this way because I work at an independent clinic, a zebra in its own right not subject to decisions and mandates of a conglomerate. For most providers in the United States this scenario is an impossibility. As it is for most dedicated providers in my region.

Maybe you can now understand why your Stiff in a White Coat wants to put you on Lipitor when your cholesterol is high. Not because they're bad people. It's a bad, broken, sick-focused system. If you don't want to be a part of it then listen the hell up!

Action Items:

If you have a clogged toilet, you don't call a mechanic, right? First turn on the ceiling fan. If you have a broken bone, you probably shouldn't see a chakra reader for it. If you want a Western Medicine method of treating disease, then most medical providers will suffice. Not if you want to understand health, wellness and true prevention (I don't mean "early detection"). You're largely on your own for that.

Continued on page 30



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.



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*“Love the **Premium Insurance Caps**. My wife and I both take them and when I don’t, there is a noticeable difference in my energy level and ability to recover.” - Aaron R.*



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Your're All Zebras

Continued from page 28

You must be willing to look hard at your own dogma, upbringing, relationship with food, habits, and your incessant excuse making. As one of my idols Dr. Bernie Roth said “reasons are prettied up excuses”. You must be willing to READ. This quest may also benefit from consultations with Naturopathic physicians, or Functional Medicine trained providers.

If the first question out of your mouth is “does insurance cover that?”, then just take the damn Lipitor.

With every article I write, there results some comments and questions. A common theme is a desire for “ammunition” to convince their respective provider why they don’t need to take cholesterol medicine. My first advice is to stop trying to convince anyone of anything. Our human demise would be delayed if we all just stopped trying to do that. Especially when dealing with indoctrinated “experts” like physicians. Stop it. Instead educate yourselves. What you might find is that taking cholesterol medicine is the right move. Especially if you’ve developed a belly, your father died relatively young, you’ve developed Fatty Liver Disease, and you’re not willing to stop eating carb as a staple. And especially if you smoke.

What are statins anyway?

Because I’m lazy, I’m just going to include narrative I wrote from a previous article:

The statins are a group of medications that interfere with cholesterol production. They have been widely purported to lower the risk of cardiovascular disease and heart attacks. There are few things within medicine that are so vehemently clung to as this concept. The status quo is powerful here and although massive amounts of data over decades have brought into question the rationale for widespread use of these drugs, most medical providers do not deviate from their fervent dogma.

Nilsson et al. (J Negat Results Biomed. 2011) performed a very large study looking at individuals between 1998 and 2002 in regards to statin use and heart attacks and death. “Though a widespread and increasing utilization of statins, no correlation to the incidence or mortality of AMI (heart attack) could be detected”.

There is certainly something powerful biologically going on with statin medications. In addition to lowering cholesterol, they lower inflammation, and act as antioxidants. To say that they are universally beneficial and indicated for everyone with elevated cholesterol is grossly inaccurate. Like Kenny Rogers said, “You’ve got to know when to hold ‘em, know when to fold ‘em”. Statins likely help reduced cardiovascular disease in certain situations. Like men under 70 who have already had a heart attack, and men with numerous risk factors (elevated

blood pressure, abdominal obesity, diabetes, smoking, etc). As Abramson et al (BMJ. 2013) reported, for the majority of people for which statins are prescribed (specifically for “primary prevention”, people who DO NOT have heart disease) the benefit is lacking, while side effects and risks are significant.

Very often the “36% reduction” in heart attacks attributable to statin treatment is mentioned with little understanding of what that actually means. It is a statistical figure referring to relative risk reduction. The actual reduction in heart attacks was 1% (3% down to 2%). This is absolute risk reduction. The benefit of statin medication for relatively healthy people, without known heart disease, is just not there. A group of independent researchers reviewed vast data (Cochrane Database Systematic Reviews) found the evidence limited that statins help prevent a first heart attack, and “caution” should be taken in prescribing them for this reason (75% of statin prescriptions are written for low-risk patients).

An independent (no industry funding) group of doctors and scientists formed a group whose foundation is a concept called NNT (number needed to treat). It is a way of looking at the real benefit and risk of a treatment. Their work on statins (and other interventions) can be found at www.thennt.com. It is not favorable in regards to statin use.

Continue reading this article in its entirety on Endurance News Weekly. hammernutrition.com



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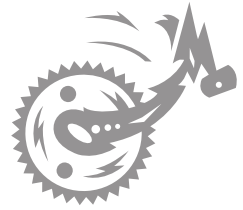




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HOUSEKEEPING

Important updates
from BRIAN FRANK

from HAMMER HQ



FLASK CAPS

The pain and suffering is finally over. We managed to source a new cap that allows undiluted Hammer Gel to flow through the valve! We'll send out free RED caps to anyone who needs them; call, email, or send a smoke signal. Of course, every flask we ship from now on will include the new RED cap.



**GO
WITH
THE
FLOW!**

The white cap on the left is the original. If you have one or more of these, **SAVE THEM!** They are unicorns – replace the flask underneath if you have to, but keep the cap.

The white cap in the middle is the lame one we've been using because we could find anything else. If you have one or more of them, throw them away as soon as you get the red ones.

The New Red cap is *way* better than the white one, but not quite **as** good as the original. However, we are confident we have found the best compromise possible. The Gel is free-flowing with not too much extra air, and opens easily (particularly with your teeth on the fly).



PERPETUEM SOLIDS

This has been out of stock for years due to the supply chain and manufacturer failure. The solids are in stock now in new Chocolate flavors and taste fantastic! Orange, Strawberry, and Caffe Latte are in the pipeline as well.

We cannot use tapioca maltodextrin, so these are the “original” corn formula that you all know and love so well. They will also be available in 6 - count tubes and 24-serving, 72 - count tubs.



NOCCIOLA HAMMER GEL

The wait is finally over! After being out of stock on our most popular flavor of Hammer Gel for almost two years, it’s finally back in stock and flying off the shelves in single-serving pouches and 24-count boxes. We’ve partnered with a new manufacturer and cleaned up the ingredient deck while at it. You’ll also notice a slightly different taste that is a significant improvement, with more noticeable hazelnut and chocolate flavors. No eta yet on jugs, but I’m working on it.

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CHOCOLATE
Now in Stock!

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- Buffers lactic acid
- Satisfying on the go!

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“Easy to use and gets the job done. Very soothing on the stomach when I need some extra calories.” - Harold P.



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HOUSEKEEPING

Important updates
from BRIAN FRANK

from HAMMER HQ



PERPETUEM 2.0

Perpetuem 2.0 – Nothing like change to stir the pot and ruffle feathers. While there have been very few vocal critics of the Tapioca 2.0, as you can see from the articles here, when appropriately compared – meaning not in the kitchen based only on taste and texture, but out in the field during multi-hour efforts where it's superiority in delivering clean, consistent energy for almost indefinite periods is evident and undeniable.

PERPETUEM CLASSIC

However, for those who do not want to change, we also have your old favorite in Orange and Caffe Latte flavors in 32 serving tubs only. It's now called Perpetuem Classic, which you can find on the Perpetuem product detail. However, it's not selling well compared to 2.0 (4:1), and we likely will only be stocking it for the next 4-6 months. If you only want the Classic, stocking up now or during the annual family and friends sale later this year is a good idea.

WEB UPDATES KNOWLEDGE and HOW-TO GUIDES

Besides working daily to improve the user experience of our new one-year-old newish website, we've rebuilt our "knowledge" section to help you find the information you need more quickly. In addition, we've brought our "How to Fuel for" guides out of the basement, gave them their own landing page, plus a form to request a guide if you don't see the one you want already listed. These are detailed, step-by-step guides on how to fuel right and feel great the Hammer way for all distances of running, triathlons, mtb, moto, golf, and more. Please take a minute to check this out and give us your feedback! I aim to have easily accessible, downloadable guides for every activity we see our clients doing. **EN**



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- Improves power output
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Support Healthy Blood Pressure by Drinking Coffee?

Quite possibly!

by STEVE BORN



I've written several articles that discuss the health benefits of drinking coffee, but a recent study that caught me by surprise showed that men and women who drank 2-3 cups of coffee daily had lower blood pressure than those who didn't consume coffee. Nearly 3,000 participants, all free from cardiovascular disease, were enrolled initially in the Brisighella Heart Study (BHS) in 1972. This particular study included over 1,500 of those participants. A year before the 1972 study, participants answered questionnaires regarding the number of cups of coffee they consumed daily. Clinical evaluations of these participants were conducted every four years and included measurement of peripheral blood pressure, central aortic blood pressure, and more.

NOTE: Central aortic systolic blood pressure (CBP) is the pressure seen by the heart, the brain, and the kidneys. If properly measured, cSBP is more closely associated with hypertension-mediated organ damage and prognosis than cuff-

to-intraarterial brachial SBP (bSBP).

Lead study author Arrigo Cicero, M.D., Ph.D., states, "The results are very clear: peripheral blood pressure was significantly lower in individuals consuming one to three cups of coffee a day than in non-coffee drinkers. And for the first time, we were also able to confirm these effects with regard to the central aortic pressure, the one close to the heart, where we observed an almost identical phenomenon with entirely similar values for habitual coffee drinkers compared to non-coffee drinkers."

The researchers also noted, "In this study, we did not observe any clinically relevant association between arterial stiffness and self-reported daily coffee consumption..."

So what about caffeine? Dr. Cicero responds,

"Effectively, caffeine is just one of the several bioactive compounds in coffee, which contains amounts of phenolic compounds (i.e., chlorogenic acids, cafestol, kahweol), alkaloids (trigonelline and, of course, caffeine),

diterpenes (i.e., cafestol, kahweol) and other secondary metabolites all potentially involved in a large number of metabolic pathways in humans. Even though caffeine could increase BP levels (especially in individuals who usually do not drink coffee), the amount of coffee's bioactive compounds seems to counterbalance this effect with a final neutral-to-positive impact on BP."

Regarding decaf coffee, Dr. Cicero states that "we were not even able to estimate the consumption of decaffeinated coffee in our sample. However, considering the rural nature of the BHS population, it is possible to state with good approximation that most involved volunteers regularly drink caffeinated coffee."

Studies such as these and the previously listed studies confirm the multiple benefits of drinking coffee. I think I'll have another cup of The Big Ring, one of the deliciously healthy 53x11 coffees!

EN

References available upon request

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PROCESSED SEED OILS

Even MORE compelling reasons to eliminate them from your diet

by STEVE BORN

Prefatory Comments:

We first ran a version of this article in Endurance News Weekly, with a rerun in Endurance News #133. So why are we bringing up a subject we've already discussed twice? Because it's crucially important for your health and well-being, simple as that. If you did not read the original article before now, please take a few moments to read this slightly updated version. And once you have, we're convinced that you'll want to take action in avoiding processed seed oils. It's no stretch at all to say that doing so is one of the most important steps you can take to protect your health.

In Brian Frank's article, "Four Pillars for Health and Wellness" (Endurance News #134), he most appropriately includes avoiding sugar and limiting sodium as two of the four pillars. We've added a fifth pillar, one which earns a rightful place amongst the other four: Eliminate processed seed oils from your diet as much as you possibly can.

While sugar remains the #1 enemy of your health, salt—with processed seed oils now included—are in a virtual tie (or very close to being tied) as the 2nd enemy of your health. Dr. Chris Knobbe's eye-opening video lecture, "Diseases of Civilization: Are Seed Oil Excesses the Unifying Mechanism?" provides more-than-ample evidence that processed seed oils are indeed a

primary key to a vast number of chronic diseases that can affect every one of us. Dr. Knobbe boldly states:

"While processed foods are driving virtually all of this chronic disease, of the processed food components... it is the seed oils that are the primary drivers because they are the biological poisons. They are poisons, plain and simple."



These seed oils “now make up 63% of the American diet, form the basis of USDA food recommendations, and are found in 600,000 processed foods sold in the U.S. today,” according to Dr. Knobbe. “In 1909, Americans ate 2 grams a day of vegetable oil, says Knobbe, and by 2010 they were eating an astounding 80 grams of vegetable oil a day.”

While you ponder the profound immensity of those statements, let’s backtrack just a bit...

We need two essential fatty acids (EFA) for life—the omega-6 fatty acids and omega-3 fatty acids. Our bodies cannot make either, so we must obtain these fatty acids from dietary sources. Omega-6s are vital because they produce specific molecules (prostaglandins and leukotrienes) that are, in appropriate amounts, necessary for proper immune system function. Omega-3’s also produce prostaglandins and leukotrienes; however, these are different types than omega-6s make. They’re less inflammatory and are associated with many health benefits.

While both are necessary for the human diet, the problem is that most people consume an excess of omega-6’s, while their omega-3 intake is woefully lacking. While research points to a 1:3 or 1:4 omega-3 to omega-6 ratio as ideal, most people’s diets show a 1:20 ratio or even higher. Dr. Artemis P Simopoulos explains:

“In the past three decades, total fat and saturated fat intake as a percentage of total calories has continuously decreased in Western diets, while the intake of

omega-6 fatty acid increased and the omega-3 fatty acid decreased, resulting in a significant increase in the omega-6/omega-3 ratio from 1:1 during evolution to 20:1 today or even higher. A balanced omega-6/omega-3 ratio is vital for health.”

Clearly, a 20:1 omega-6 to omega-3 ratio is very much out of balance. This imbalance causes excess inflammation and oxidation throughout the body, significantly disrupting optimal health and increasing the likelihood of chronic diseases, including obesity, diabetes, heart disease, cancer, and more.

The primary culprit for the excess? Health-destroying amounts of omega-6 fatty acids. The increased use and consumption of industrially processed seed oils referred to as vegetable oils. Dr. Chris Knobbe states that these industrially processed seed oils “drive the oxidation. They’re pro-oxidative, proinflammatory, and toxic, but of all of these, it is oxidation. That is by far the worst.”

Cardiovascular research scientist, Dr. James DiNicolantonio, agrees and refers to these omega-6 seed oils as “drivers of coronary heart disease.” He summarizes:

“Omega-6 polyunsaturated fat linoleic acid consumption has dramatically increased in the Western world, primarily vegetable oils. Numerous lines of evidence show that the omega-6 polyunsaturated fat linoleic acid promotes oxidative stress, oxidized LDL [the “bad” cholesterol], chronic low-grade inflammation, and

atherosclerosis. Omega-6 is likely a primary dietary culprit for causing CHD (Coronary Heart Disease), especially when consumed as industrial seed oils, commonly referred to as vegetable oils.”

Continue reading this article in its entirety on Endurance News Weekly. hammernutrition.com



EAT HEALTHY AND SAVE BIG!



by BRIAN FRANK

Think that gas station burrito is the cheapest thing you can find for dinner? Think again!

The work day is done, maybe you get in a ride or a quick run, you're on your way home and pull in to top off on gas. Given the price of gas these days you dig between the seats for change or pray to the Debit Saints that your card works. You figure the best bet for a quick bite is to pop in and grab whatever is left on the shelf because after all, you're too tired now anyway to actually cook.

Wait! Don't blow it!

We get it - with prices going up on seemingly everything these days, our pockets are the first to feel the pinch. Add in longer work hours plus fitting in time to train, yep that cellophane-wrapped smashed cold mystery meat sandwich for a buck or two somehow starts looking like a logical choice.

Have you wandered into the produce section at your local market lately?

Veggies. Are. Cheap.

Stock up and put that spare change toward your next adventure instead!

Eating healthy costs way less than you might suspect.

As for time and effort, think of it this way: as an endurance athlete, if you can run or pedal for hours at a time - we're pretty sure you can manage five minutes chopping a carrot.

We've done some of our own independent comparison shopping, to give you an idea how simple substitutions in the fridge, can keep you on track, eating as well as you should, while saving you some serious coin! (*local market prices will vary of course)

Additionally, compare costs on a calorie-to-calorie basis and see if going off the rails was worth it, both nutritionally and economically. (Heres' a hint: YIKES!)

Then there's taste.

Ok, not going to lie, my one Culinary Kryptonite weakness in the whole world is a giant jalapeno cheese corndog!

However, there's just no flavor comparison between soggy, overly salted, fast food french fries, verses crisp roasted rutabaga 'fries' with garlic parm, pepper, and sea salt, with a little Siracha for dipping. Yummo! Minimal prep for Maximum taste payoff.

Next time you think you're doing your bank account a favor by pinching a penny at the neighborhood tomaine taco truck, pinch *yourself* and load up on fresh, deliciously satisfying, easy and inexpensive healthy food to stay on course.

Bon Appetito! - Brian Frank EN

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

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“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



Share your creations!
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Deliciously Healthy Recipes



PEACH BLUEBERRY PROSCIUTTO FETA SALAD

Fresh sliced peach (Flash grill over high heat if desired)
Crumbled Feta Cheese
Thinly sliced Prosciutto
Spinach Mixed greens salad
Pecans, walnuts, Pistachios - or nuts of your choice
Fresh Blueberries (or even better, Montana Huckleberries!)

Combine as you like and toss with your favorite
Olive Oil / Balsamic Vinaigrette Dressing.

CHICKEN VEGGIE KABOBS

Fresh chicken cubed. (or other protein of choice)
All your favorite veggies sliced and cubed
Onions, Peppers, Zucchini,
Tomatoes, etc.

Stack all ingredients onto metal or
bamboo pre-soaked skewers
Season to taste
Cook turning often over medium hot grill,
for 10-20 minutes or until protein is cooked
through.

Baste if you like with a combination of:
Olive Oil
Soy Sauce (or Liquid Aminos)
Honey
Red chili flakes



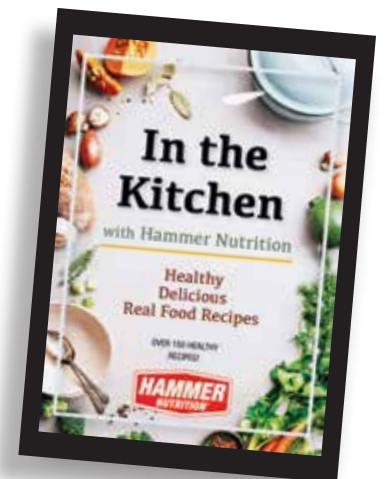
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KITCHEN OF

LAURA LABELLE



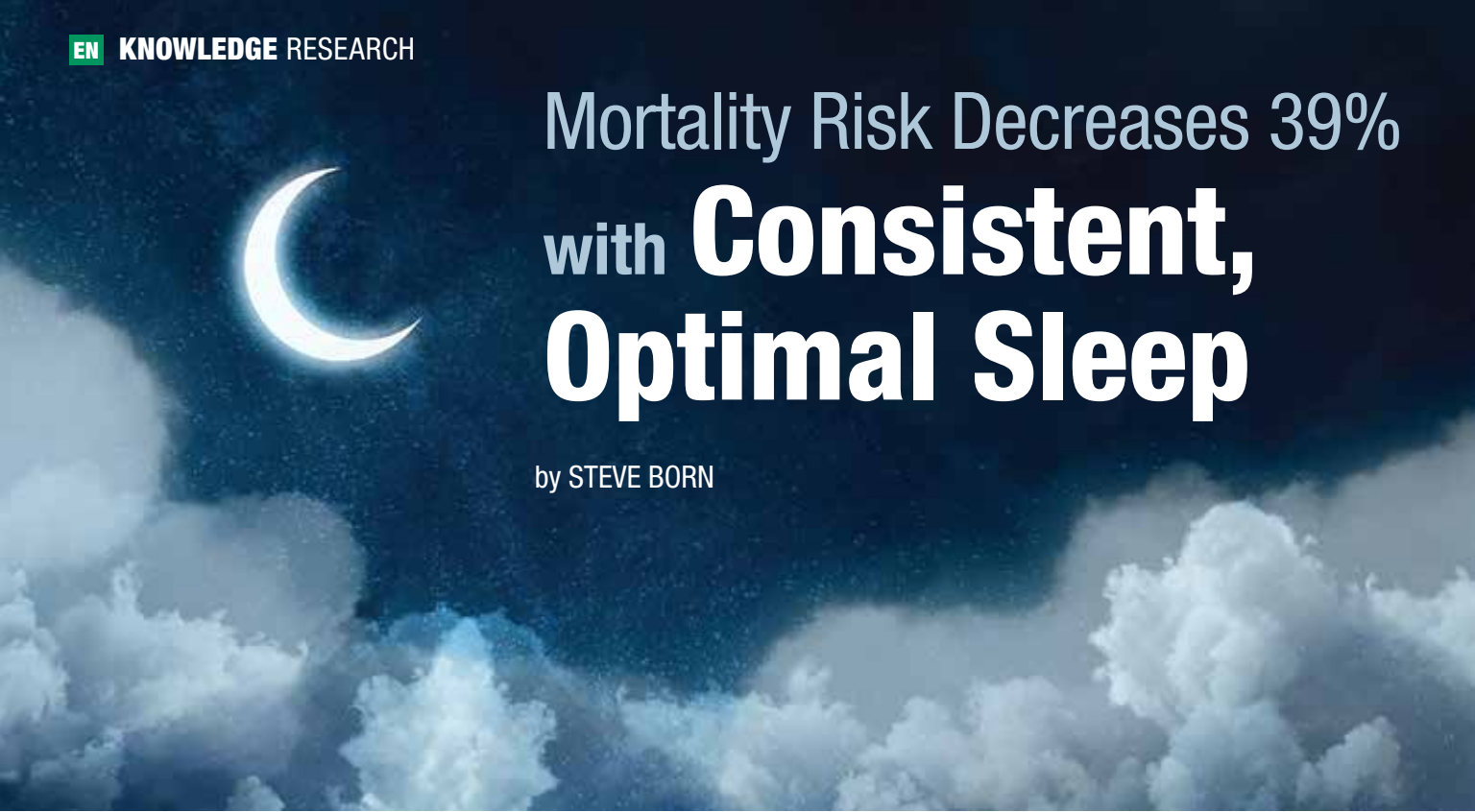
HAMMER Mo-HEED-o's

Simply combine your favorite HEED flavors with fresh fruit and ice. Add fresh muddled cilantro and garnish with fresh mint. Have fun with these Hammer Mocktails and Get Creative!



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*In the
Kitchen*
today!





Mortality Risk Decreases 39% with **Consistent, Optimal Sleep**

by STEVE BORN

I can't think of anyone, me included, who wants to die prematurely, and of the many things we can do to protect against that is to maintain a regular healthy sleep schedule.

The results of a study presented on June 7, 2023, at SLEEP 2023, the 37th annual meeting of the Associated Professional Sleep Societies, were crystal clear: In a diverse group of older adults, those with regular and optimal sleep had about a nearly 40% lower risk of dying of any cause during follow-up than peers who with irregular and insufficient sleep.

In this study, involving 1759 adult participants in the Multi-Ethnic Study of Atherosclerosis Sleep Study, the researchers evaluated the association of consistent of optimal sleep quality and duration with all-cause mortality.

Sleep regularity and duration were classified using for 7 days of data gathered by wrist actigraphy, “devices that are worn on the wrist and record movements that can be used to estimate sleep parameters with specialized algorithms in computer software programs.”

A sleep EEG is a recording of the electrical activity of the brain while you are awake and then asleep, and over 3,909 NPSG's (nocturnal polysomnography) with at least 6 hours of usable EEG were analyzed. After additional data was reviewed and factored in, the researchers found that:

- 1015 of the participants were categorized as “regular-optimal” sleepers.
- 744 were categorized as “irregular-insufficient” sleepers.

A 7-year follow up period

revealed that the “regular-optimal group” had a 39% lower mortality risk compared to the “irregular-insufficient” sleep group.

Lead researcher, Dr. Joon Chung states, “Evidence is mounting that irregular sleep is associated with pretty broad adverse health outcomes, most prominently cardiometabolic disease, obesity, and cardiovascular disease. If sleep were an eight-hour pill, it would be beneficial to take the full dose at regular times consistently.

Results suggest benefits of expanding the public conversation on getting ‘a good night’s sleep’ and broadening this goal to getting many good nights of sleep, in a row, on weekdays and weekends. Getting adequate, regular sleep seems to be something that is good for all. I don’t know of anyone who wouldn’t benefit.”

Sleep specialist, Dr. Fariha Abassi-Feinberg, concurs with Dr. Chung, “We know our bodies have an internal clock, known as the circadian rhythm, which regulates various biological processes, including sleep-wake cycles. Sticking to a consistent sleep schedule allows your body to align its natural rhythm with the external day-night cycle. This synchronization promotes better sleep quality and therefore better health. The American Academy of Sleep Medicine (AASM) recommends adults try to aim for at least 7 hours of sleep and I often tell my patients that keeping a regular routine is best for your sleep and health.”

According to research, “adults should sleep 7 or more hours per night on a regular basis to promote optimal health.” Unfortunately, the data shows that more than one-third of adults in the United States are not hitting the mark.

What you can do

Use Hammer Nutrition’s Sleep Trio Kit daily. This comprehensive kit contains:

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

★★★★★ “I really love these REM caps. They help me fall asleep faster after getting that sleepy feeling. While tracking my sleep and HRV, I notice I am getting much longer deep and REM sleep. When I’m traveling across time zones, I use the REM caps to help me get to sleep when my body clock is on the PST time zone, where I live. Sleep is vital for recovery I know. I highly recommend these REM caps to anyone who might have trouble sleeping, especially when traveling.”

★★★★★ “10/10. I use a tracker for my sleep and have noticed my rem sleep has increased in the last 2 weeks using REM Caps.”

Continued on page 64

Sleep Tonight. WIN tomorrow!



The Total Trio for sublime deep sleep
Boost recovery and be well rested for the next challenge.

- **Essential Mg**
- **REM Caps**
- **CBD Tincture 750mg**

Sleep Trio Kit **\$84.95**



“The **Sleep Trio Kit** is one of my favorite Hammer products. Taking these before bed helps me transition to sleep and get solid sleep. Good quality sleep is the cornerstone of recovery”
- Online Reviewer.



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Supplementation Tips for Exercise at ALTITUDE

by STEVE BORN

We receive questions such as this fairly frequently: “I’ll be doing some racing at high altitude, for which I am not acclimated. What are some tips you can give me, along with any Hammer Nutrition supplements that may help?”

HERE ARE OUR ANSWERS:

1) Temper your expectations.

One reason that endurance performance decreases at altitude is because of lower oxygen content in the blood, which corresponds with a drop in VO₂ max. It takes several weeks to acclimate to high-altitude conditions—four to six weeks is the most common recommendation—so if you’re unable to spend that long in high-altitude conditions, you’ll most not likely not set a PR, perhaps not even coming close to it. As such, your goal is to pace yourself wisely—running by effort and not speed—so that you finish the race.

2) Make sure you’re adequately hydrated and minimize-to-avoid alcoholic beverages. Thinner air

causes breathing to be shallower and more frequent, which in turn creates greater fluid loss through the respiratory system. In addition, with the very dry and low humidity conditions at altitude, your sweat dries faster. That impairs fluid absorption through breathing and may also make you feel that sweat losses are diminished, even though they’re not. Make sure that you’re drinking what that equals 0.5 to 0.6 of your body weight daily.

Example:

180-pound athlete x 0.5 = 90 ounces of water

180-pound athlete x 0.6 = 108 ounces of water

3) Use supplements that will aid exercise performance at altitude.

The five I’ve included are listed/ranked in the order that I (Steve Born) believe will be most beneficial...

• **Race Caps Supreme** - Not only is this a great product for enhancing exercise performance—providing key

substrates (catalysts) to help produce energy more efficiently from the air you breathe in and the calories you consume—it’s outstanding for cardiovascular health. One of the ingredients in Race Caps Supreme, idebenone, will be especially beneficial for high altitude exercise. It is similar in nature to Coenzyme Q10 (CoQ10, another nutrient in Race Caps Supreme), in that it is vital for energy production. What makes idebenone unique is that, unlike CoQ10, it can still perform its energy-production functions/processes even in low-oxygen conditions.

• **Fully Charged** contains a number of nutrients/compounds that address and enhance several areas in exercise performance, accomplishing this without stimulants or excessive amount of caffeine, neither of which are beneficial, especially at high altitude. There are certain components in Fully Charged—beet root juice and a remarkable patented compound called Spectra™—that increase nitric oxide levels in the blood, which increases blood flow and oxygen

“I’ll be doing some racing at high altitude, for which I am not acclimated. What are some tips you can give me, along with any Hammer Nutrition supplements that may help?”

to the vital organs and working muscles.

- **Super Antioxidant**, while best known as a great antioxidant-rich supplement for recovery, contains ginkgo biloba and vinpocetine, both well-known as being beneficial for high-altitude exercise, primarily for their increased blood circulation and in helping improve brain function at low oxygen levels, the latter by purportedly boosting oxygen saturation.
- **Xobaline** contains vitamin B12 and folate, both of which play a number of roles play in the body, including being important catalysts for supporting increased aerobic capacity, energy production, and improved recovery, via their involvement in the production of red blood cells as well as RNA production and re-synthesis.
- **Essential Mg** – A decrease in cerebral blood flow, as measured by blood flow velocity in the middle cerebral artery (MCAv), is associated with hypoxia, a state in which oxygen is not available in sufficient amounts at the tissue level to maintain adequate homeostasis. Research has shown that supplementation with magnesium, while not able to prevent acute mountain sickness (AMS), significantly increased MCVa, suggesting that magnesium helps improve blood flow.

Continue reading this article in its entirety on Endurance News Issue #130. page 60.

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FROM OUR ATHLETES

5 Questions with **Nick DiNapoli**

1. How did you get into racing?

I first got into racing at around 10 years old. What started as a weekend hobby, turned into years of competitive racing. I discovered the NICA high school mountain bike league and quickly got hooked. This was my first taste of MTB and I've been at it ever since, enjoying progressing my skills across many disciplines.

2. How did you hear about Hammer Nutrition?

I tried a sample of HEED at one of those early NICA events, at a time when I didn't know much about proper fueling. Years later, I reached out to Hammer about the sponsorship program. That's been 7 years ago now, feeling much more hydrated and thoroughly recovered.

3. What are your go-to Hammer products?

HEED®, Hammer Gel®, Recoverite®.

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

I can't leave for a race weekend without my Wahoo computer unit and plenty of food! Besides the necessities of bikes and gear, I have to have the stats recorded...and can't make it too far without all my Hammer snacks!

5. What keeps you motivated and Hammering everyday?

Staying motivated to hammer through the week isn't too difficult as I love being outdoors and breaking a sweat no matter how quick it may be. I feel my best, physically but most important, mentally after activity...whether a ride, gym session, hike, etc. There's always stages where it's difficult to fit it all in during a day, but staying organized and planning out the week allows me to make the most of the time to get out and send it!

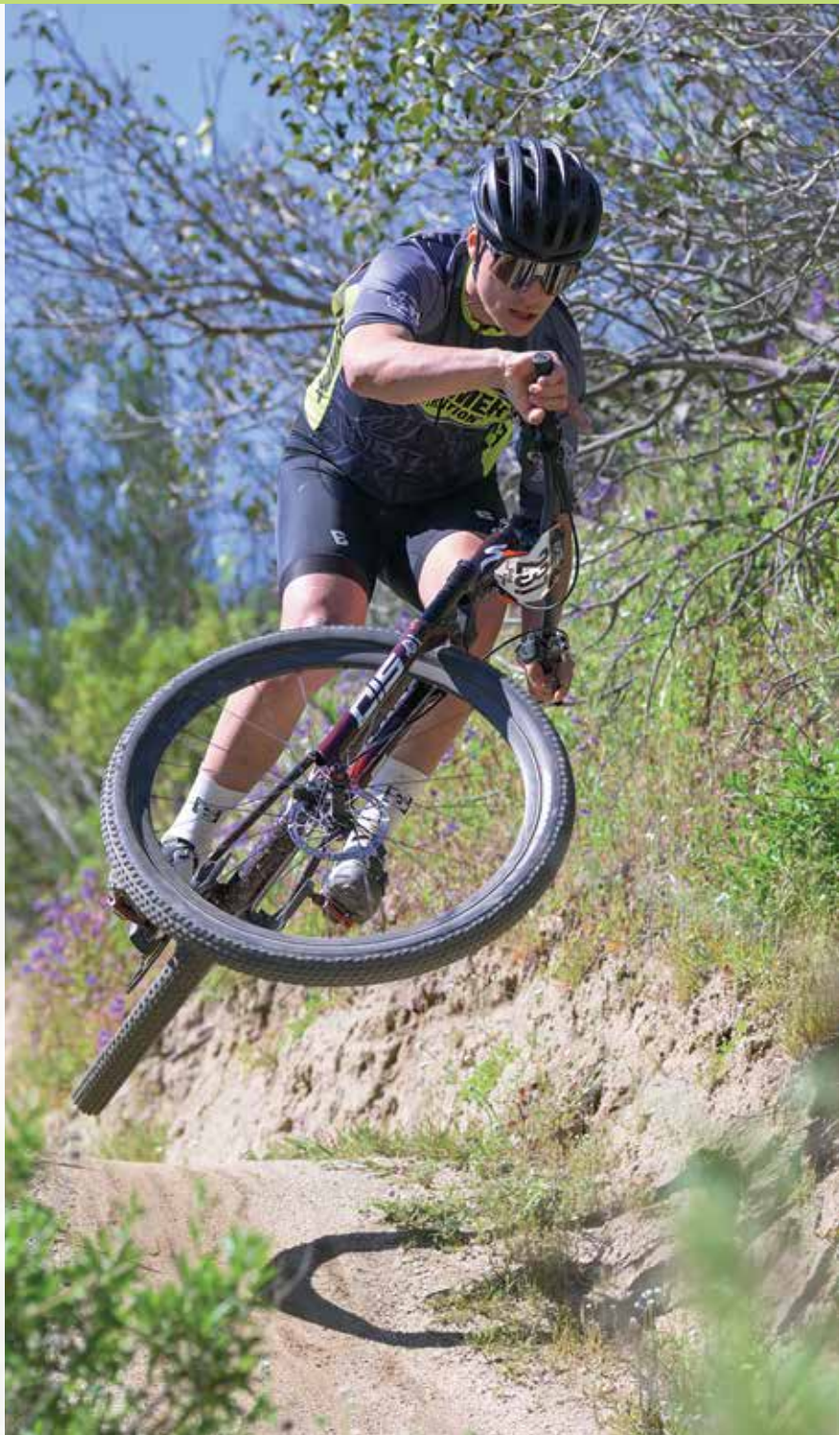


Photo courtesy of Nick DiNapoli.

2023 Sea Otter Classic / Pro Enduro and Downhill : Podium
2022 California Enduro Series : 3rd Place Overall

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

BOSTON MARATHON



April 17, 2023

Hammer athletes show up and show out in Bean Town!



Matt Sommer (right) 3:08:36 pace 7:12/mile

Vivian LaBarreda 4:13:26 pace 9:40/mile



Brock Walaska

(left) 3:10:29 pace 7:16/mile



HAMMER Must-haves

HEED[®], Hammer Gel[®],
Sustained Energy[®],
Perpetuem[®], Endurolytes[®]

Zandy Mangold

3:05:31 pace 7:05/mile



FROM OUR ATHLETES

Noah Stroud

Event: Ironman Texas Team Triathlon

Location: Galveston, Texas

Distance: 70.3 mile Tri

Date: 4.2.23

Stats/Results: Swim - 37mins (Noah),
Bike - 2:31 (Noah), and run 1:46 (wife).

They came 7th out of 81 teams with a total time of 4:09

Photo: Noah Stroud



HEED®, Hammer Gel®, Hammer Bars®, Sustained Energy®, Perpetuem®, Endurolytes®



Jake Elkins



Event: Quick n' Dirty Summer Series

Location: Escondido, CA

Distance: 70.3 mile Tri

Date: 5.27.23

Stats/Results: 5.5 MILE COURSE

3rd place with a time of 1:08:36

5th place with a time of 01:08:27

Photo: Erick at Wildglass Photography



HEED®, Hammer Gel®, Recoverite®, BCAA+, Anti-Fatigue Caps, Endurolytes®

Jen Halladay



Event: Saw Tooth Relay, 100 solo

Location: Boise, ID

Distance: 100 mile

Date: 6.3.23

Stats/Results: 1st Female, 5th OA,
5:02, avg speed 20mph

Photo: courtesy Jen Halladay



Fully Charged, Race Caps Supreme, BCAA+, Hammer Bars®

Mary Siegel



Event: Mother Fricker Trail Run

Location: Frick Park, PA

Distance: 8 miles

Date: 4.8.23

Stats/Results: Satisfying finish after a year-long recovery and physical challenges

Photo: courtesy Mary Siegel



Endurolytes® Fizz, Hammer Gel®, Anti-Fatigue Caps, Tissue Rejuvenator

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



Summit Parcell

Event: Ironman 70.3 St. George
Location: St. George, UT
Date: 5.6.23
Stats/Results: Swim- 43:10, Bike- 3:34:07, Run- 2:31:19
Overall- 07:05:59
Photo: courtesy Summit Parcell



HAMMER Must-haves

Endurolytes® Fizz, Hammer Gel®, Vegan Hammer Bars®, Race Caps Supreme, Liquid Endurance, REM caps



Read more from all of our featured athletes here.

Colton Ahlberg

Event: Ironman 70.3 St. George
Location: St. George, UT
Date: 5.6.23
Stats/Results: Swim- 45:48, Bike- 3:14:06, Run- 2:28:45
Overall- 6:43:30
Photo: courtesy Colton Ahlberg



HAMMER Must-haves

Endurolytes® Fizz, Hammer Gel®, Vegan Hammer Bars®, Race Caps Supreme, Liquid Endurance, REM caps

RACE RECIPE

BRUCE BALCH

Chainsmoker MTB Race 2023

May 13, 2023 Las Vegas, NV



At 61 years young, lifetime client and Hammer Athlete Bruce Balch is still hammering out races, landing on podiums, and training all throughout the Nevada Desert! Bruce is the most active client dating back to the 80's with a customer #267, for perspective, we are now over and into the millions! KEEP HAMMERING Bruce!

FUELING RECIPE

PRE-RACE

Race Caps Supreme, Hammer Gel®

DURING

HEED®, Hammer Daily Essentials Kit

RECOVERY

Anti-Fatigue Caps

RESULTS

Finish Time: 1:30:54
Distance: 22 Miles

Overall: 2nd Place
Age Group: 1st Place

Hammer kids are

Mason Salazar



Quick n' Dirty / EXPERT MEN 16-48. Escondido, CA 5.27.23. 5 Mile Course. Race #1: 4th place, Race #2: 2nd place, Race #5: 5th place, Race #7: 2nd place
Photo: Erick at Windglass Photography

Willow Reece-Young



OCR, Softball, Basketball, Running.
1 Mile Spartan OCR, Charlotte, NC. 1st place in AG.
Photo: Mom, Hammer athlete, Amber Reece-Young

Lucy Johnson



Scholastic Swim Team Member
Swim Team Championships / Mile for Miles
Fundraiser.
1st place OA. Photo: Jeremy Johnson

MotoMort Enduro Team



16-Member Junior MTB Team founded by Hammer athlete, Ryan Mortensen. Working together through faith, determination, and resilience to become the best enduro rider they can be. Photo: Ryan Mortensen

NAILING IT!

Povolny Family



Round 2 -Minnesota Mountain Bike Series, RedHead, Chisholm, MN, 6.4.23.

Eli Povolny: 4th place OA, 2nd place AG

Isaac Povolny: 5th place OA, 2nd place AG

Jimmy Polvony: 10th place OA, 2nd place AG.

Photo: Isaac Polvony

John Benham V.



High School Variety Bowling

Ohio State Ranked 1 of 5 top High School Bowlers

Pursuing collegiate competition post-graduation

Photo: Dad, Hammer athlete, John Benham IV

Bryce Walaska



5K run, Age 11. Naval Air Station, Jacksonville, FL.

4.1.23. 1st place in AG 14 and under.

Photo: Dad, Hammer athlete, Brock Walaska.

Columbia Falls Softball



Columbia Falls Lady Wildcats Softball. Montana State Class A Champions. 5.27.23

8-2 State Championship Win.

24-3 overall season record. Photo: Kyrarah Trenkle



RECENT WINNING STATS

3rd place Ironman 70.3 Tasmania

4th place Challenge Wanaka

5th place Ironman 70.3 Geelong

1st place Challenge Taiwan

How do you fuel with Hammer during training?

My go to product I use for hard sessions is **HEED®** and I aim to get in 90g carb per hr for solid workouts. On hot days pre training I do like to get the **Endurolytes® Fizz** tablets which is great to push up sodium levels during some salty sessions. After training I make sure to replenish with **Hammer Whey Protein** powder in a smoothie.

How did you utilize Hammer at Challenge Taiwan?

The day before Challenge Taiwan I had 1 **Endurolytes® Fizz** tablet throughout the day in . On race morning I was making sure to sip on 500ml with 30g carb mix of **HEED**. On the bike I had 90g per hr of **HEED** with 2 **Hammer Gels®** (tropical) and on the run 90g Carb in a 700ml



CALEB NOBEL 2023 Tawain Challenge

bottle with 500mg of Sodium.

How did you get started with Hammer?

Dave Williams from Hammer Australia reached out to me in late 2020 to be part of the team. I have been around triathlon since I was 16years old and I have always heard of the brand. After testing there range of products I really got the full benefit out of particular products for certain sessions throughout my professional racing and have enjoyed being part of the team ever since.

How did you feel throughout your race using Hammer?

Mentally leading into this event I really wanted to come to Taiwan and have a good race hit out as I knew the field was not that stronger then usual so it was a good mental opportunity to race hard from the start and push the pace from start to finish.



THABANG MADIBA

Thabang Madiba represented South Africa for the first time at the Vertical World Mountain Championships in Austria on June 7th. Thabang is an up and coming athlete who has a promising future in mountain running and he is fueled by Hammer!

“I started using **Hammer Gels®** back in 2019 which I found to sooth my sensitive stomach.

My favorite Hammer fuels are **Sustained Energy** and **Perpetuem®**. I’ve been drinking **HEED®** to balance my electrolytes prior to the world championships. On race day I used **Endurolytes® Extreme** and **Perpetuem**.

I will be competing in two more races in preparation for the Otter Trail Race in October.”



ELENA FORONI

Ironman 70.3

St. George, UT

WINNING STATS

Total time was 5:27:13

Swimming 27:27

Bike 3:02:06

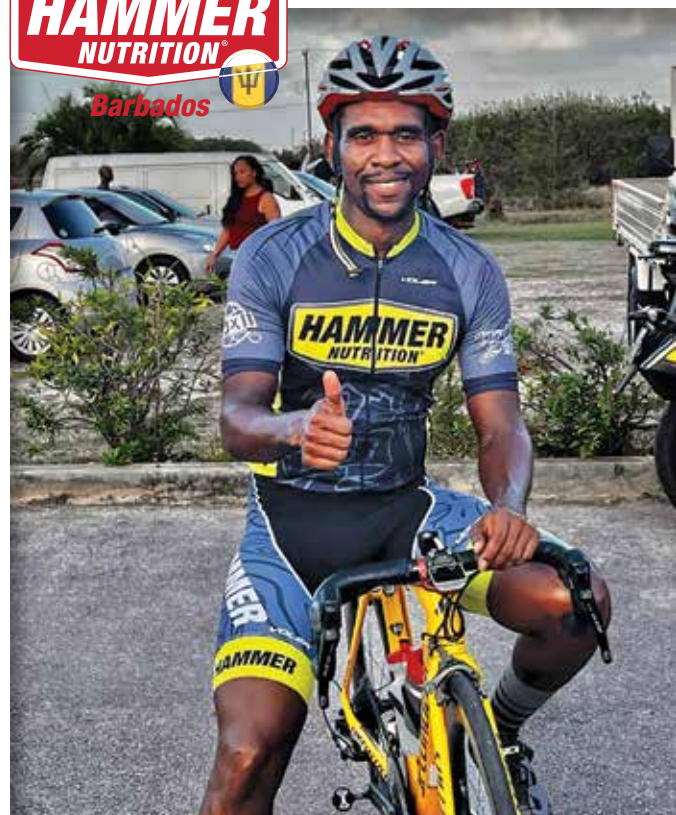
Run 1:51:09



“It was a hard race, very cold but it was awesome. That place is magical, and I enjoyed it!”

For fueling I used 2 bottles of **Perpetuem**® on the bike, and 1 in the run; Each bottle with 2 scoops of **Endurolytes**® Extreme Powder. I used 7 **Hammer Gels**®: one prior to the start, 3 on the bike, and 3 on the run. My

favorite flavors are chocolate and espresso. I also took 2 **Anti-Fatigue Caps**, and 2 **Endurance BCAA+** prior to the start. At the finish, I drank my **Recoverite**® strawberry, in a very cold bottle of water, so it was like a little desert.



RUSSELL ELCOCK

WINNING STATS

Sonics Road to Sky Race

31 Mile Road Race

St Philip Barbados

May 7th, 2023

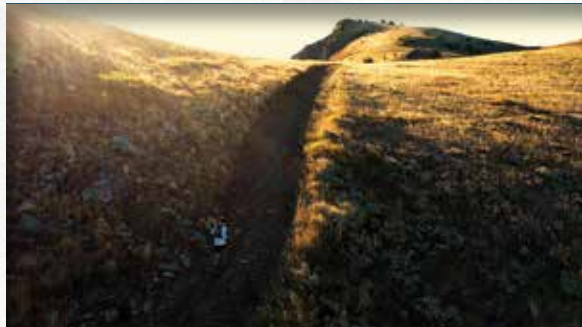
Elite Cat 1 - 3rd Place

Finishing time 01:35

National and Caribbean Championship titles in the years 2008–2016



HAMMER EVENTS



DC PEAKS 50, UT

We are excited about the addition of DC Peaks choosing Hammer to help fuel runners through this tough course in northern Utah! The course packs 11'000 ft of vertical gain on mostly single track with the best views in the area! Bonus points for live footage of the race on YouTube!



SADDLES 100, AZ

We are excited to partner with accomplished ultra runner and adventurer Michael Versteeg on the inaugural Saddles 100! The course offers an epic 100-mile loop of mostly single track on a full moon around the diverse Prescott trails.

TOUR OF THE CALIFORNIA ALPS - CALIFORNIA DEATH RIDE



We are kicking off our partnership for the 42 iteration of the iconic CA Death Ride! The event is known as one of the most challenging endurance cycling events on the West Coast. It boasts 14,000' of climbing, 103 miles and 6 Alpine Climbs!



UPCOMING EVENTS

- ANCHOR DOWN ULTRA**
8/11/23
Ultra Running
Bristol, SC
anchordownultra.com

- DC PEAKS 50**
9/7/23
Ultra Running
Fruit heights, UT
dcpeaks50.com

- BACK ON THE RANCH TRAIL RUN**
9/7/23
Ultra running
Los Olivos, CA
allwedoisrun.com

- BIG RIVER GRAVEL SERIES**
9/9/23
Gravel Biking
Davenport, IA
bigrivergravel.com

- WYO 131 GRAVEL GRINDER**
9/9/23
Gravel Biking
Lander, WY
wyo131.com

- IMTUF 100**
9/16/23
Ultra Running
McCall, ID
imtuf100.com

- ALBUQUERQUE DIRT FIESTA**
9/16/23
MTB
Ruidoso, NM
ziarides.com/event/albuquerque-dirt-fiesta

- FOY's TO BLACKTAIL TRAIL MARATHON**
9/17/23
Trail Running
Kalispell, MT
ftbtraces.com/marathon

- RING OF FIRE**
9/23/23
MTB
Bend, OR
mudslingerevents.com/ring-of-fire

Whitefish Marathon

It was all hands on deck on a sunny Saturday morning at the 2023 Whitefish Marathon here in Whitefish, MT. Our Hammer hometown crew were out in force to prep, take photos, answer fueling questions, and visit with our many friends, family, clients, and neighbors who turned out from across the country and beyond for the race.

This Boston qualifier event brought out a record number of participants again this year. The out-and-back course winds around our scenic Whitefish lake and throughout the surrounding community with an elevation gain of 1170 ft.

Michael Ortley of Kalispell, MT earned the overall win with a time of 2:56:34. Hammer's own Flavie Dokken took 2nd place overall in the ladies' division, in the Half Marathon, while Ryan Fatheree placed 4th in the 5K run.

After running the race, Dean Karnazes spent time chatting and signing books for runners, fans, and patrons.



The Hammer Crew delivers expert fueling advice to runners and patrons.



Flavie Dokken, Thor Gudmunsen, and Martha Hauser represent Hammer for the win!



Hammer's own Jodi Wharton serves as a bike pacer for the runners.



Dean Karnazes and a fan show off their post-race hardware for the cameras.

HAMMER EVENTS



IMTUF 100

We are continuing our partnership with the Idaho Mountain Trail Ultra Festival. IMTUF 100 is well known as one of the toughest ultra in the country and a true mountain race. It is a Hardrock100 qualifying race for a good reason!



MAN AGAINST HORSES

This will be the 39th annual of The Man Against Horses and our 12th year of partnership. Welcome to the wild, wild west where horses and their riders get to compete alongside runners on the same course, at the same time.



TOUR OF THE WHITE MOUNTAINS

Come celebrate great mountain biking at 7000'! The Tour of The White Mountains by Epic Rides offers challenging single track among a pine forest backdrop and beautiful fall colors!



LEON'S HEROES

We are grateful to keep supporting Leon's Triathlon well known as America's Race. The event is dedicated to the support and empowerment of the US service men and Women, especially injured military veterans. The event is celebrating its 40 year anniversary this year and we have helped fuel the event since 2016.



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never tasted ***SO GOOD!***

- **Hunger Satisfying**
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- **Supports weight loss**

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- NO** added sugars
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- NO** emulsifiers
- NO** trans fat

- Chocolate
- Vanilla



“Hammer Phood® continues to be great! Tasty, easy to make and drink quickly on those mornings that I’m in a hurry to get going, and it keeps me full until time for my next meal. Keep up the great product!” - John C.

15 Servings \$44.95 each
Single Serving \$3.49 each

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SUCRALOSE



Stay away and Save Your DNA

by STEVE BORN

LISTEN UP! Now even More evidence to support what we've been saying for decades!

For as long as there's been a Hammer Nutrition, we've been relentlessly diligent in providing the information you need regarding the harmful effects of artificial sweeteners. They're all "worst offenders" as far as we're concerned. Still, one in particular, sucralose, the most popular artificial sweetener in the United States (used in over 6,000 food products!), seems to get even more "airtime" than the others.

Roughly 15 years ago, we unhesitatingly stated, "While sucralose may begin as a sugar molecule, the end product is a synthetic chemical with a chlorinated core. Making sucralose involves a five-step

process in which three chlorine molecules are added to a sugar molecule. This chemical process alters and converts the chemical composition of the sugar so much that it ends up being a type of molecule that does not occur in nature. This artificial sweetening ingredient is possibly worse than the processed simple sugars it replaces. It is difficult to imagine that a synthetic chlorinated disaccharide is an improvement."

Nearly a decade ago, we discussed research involving both humans and mice, revealing that artificial sweeteners, including sucralose, had a significant effect on gut bacteria, an effect that increased glucose intolerance.

Augmenting that study, in Endurance News #121, we presented research showing that the combination of sucralose and carbohydrates impairs insulin sensitivity. That will not only significantly decrease exercise capacity, resulting in muscle fatigue, but it will also put you on the fast track to diabetes. Also, from that research: "This metabolic impairment is associated with decreases in neural responses to sugar, suggesting dysregulation of gut-brain control of glucose metabolism."; Meaning that the signals the brain sends to the gut, and vice versa, are impaired for properly metabolizing blood glucose... that's not good at all!

Now, as bad as all those findings are—and there's no question about that—the most recent research on sucralose is the most damning. While we weren't too surprised, our jaws hit the floor nonetheless.

Check this out:

Findings from a very recent study (May 29, 2023) published in the *Journal of Toxicology and Environmental Health, Part B* revealed serious health concerns with sucralose. These concerns were so alarming researchers said people should stop consuming and that more government regulation should be enacted.

The researchers, led by Dr. Susan S. Schiffman, conducted experiments exposing human blood cells and gut tissue to sucralose, which produces a substance called sucralose-6-acetate. Their findings confirmed earlier research linking sucralose to gut health problems, such as leaky gut syndrome (intestinal

permeability). In this condition, bacteria and toxins leak through the intestinal wall. Bloating, a burning sensation, diarrhea, gas, and painful digestion are the unpleasant symptoms of this disorder.

The researchers then discovered something far worse than leaky gut syndrome:

The sucralose-produced substance, sucralose-6-acetate, is genotoxic and damages DNA, causing it to break apart. This most-undesirable process can result in a variety of diseases, including cancer.

HAS YOUR JAW DROPPED YET?

Disturbingly, the researchers also found sucralose-6-acetate amounts in regularly stocked food items so high they exceeded the safety levels currently allowed in Europe.

Dr. Schiffman commented: "It's time to revisit the safety and regulatory status of sucralose because the evidence is mounting that it carries significant risks. If nothing else, I encourage people to avoid products containing sucralose. It's something you should not be eating."

Sucralose, sold under the brand name Splenda, is used by countless people to sweeten their coffee or other beverages. As mentioned earlier, this undeniably harmful substance is ubiquitous, as it's in over 6,000 food products such as baked goods, drinks, chewing gum, frozen dairy desserts, and more.

Sucralose is also in numerous athletic fuels—sports/energy drinks, energy gels, bars, and more—so if you're not using Hammer Nutrition products, look at the label of the fuels you're currently using. If they contain simple sugars (glucose, sucrose, fructose, etc.), excessive amounts of sodium, and/or artificial colors, flavors, or sweeteners—especially sucralose—it's time to switch to Hammer.

Compared to the glut of harmful ingredient-containing sports fuels flooding the market, there is no comparison. Hammer Nutrition products contain no refined sugars, excess sodium, questionable ingredients, or artificial anything, and that most definitely includes sucralose.

Steering clear of sucralose will help you perform at your best athletically, save your DNA and help protect you from many serious health consequences. EN

References available upon request

The original non-acidic sports drink

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- Sustained energy, no sugar crash
- Reduces cramps
- Buffers lactic acid

■ Lemon Lime ■ Orange
■ Cherry Bomb*
*Contains Caffeine

70 Serving **\$64.95**
 32 Serving **\$37.95**
 Single Serving **\$1.95**



"The Cherry Bomb flavor is outstanding! I have been a Hammer Nutrition user since the early 1990s, and have used every flavor of Heed. Great flavor and it holds up well as the day and the bottle heats up." - Chris H.

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CONTINUED ARTICLES

Welcome

Continued from page 3

Everything above is supported and verifiable via my absolute, all-time favorite noun: TRANSPARENCY! Hammer is an open book. Call us, and we'll be happy to speak with you and won't try to sell you anything you don't need - you can find our toll-free number in the upper left-hand corner of every page on our website. Or better yet, stop by for a visit, our HQ is open, and we love to give tours. Our physical address is prominently displayed on our "contact" page, so if you find yourself in the Flathead Valley anytime in the future, plan a visit during regular business hours.

Another thing I remember my Dad telling me was, "If you can align your passions with your career, you'll never work a day in your life and never need to retire." I've been fortunate to live this dream for 36 of 56 years, with no plans to retire. I am forever grateful for your help in realizing this dream. Thank you! I'm looking forward to many more years helping you with the best products, protocols, and support possible.

Until the next issue, enjoy the read, pass it along to a friend or family member, and enjoy the rest of the summer! 

- BRIAN FRANK

Sleep

Continued from page 47

CBD interacts with the body's endocannabinoid system, which, among its numerous benefits, augments the body's natural production of cannabinoids. This ensures sufficient amounts are available to positively regulate sleeping patterns and promote night-long quality sleep.

★★★★★ "I love this product! I use it to help me relax to sleep. I also use it to help me relax my muscles. I only need a few drops at night! It really works! There are no side effects from this product."

★★★★★ "I use it every day. Great for sleep and recovery."

Essential Mg

Of the hundreds of roles magnesium plays in the body, one of its primary benefits for aiding sleep is that it helps the muscles and nerves to relax. Additionally, along with the valerian root extract in REM Caps, Essential Mg may provide noticeable relief for anyone suffering from night cramping.

★★★★★ Essential MG is a great relaxer. I was looking for a better night's sleep; this gem saved me. I'm recommending it to all my friends. Thank you, Hammer Nutrition!


★★★★★ Subjectively this blend of magnesium aids in felt recovery without a digestive impact, and objectively my Garmin sleep tracking shows improved recovery when using this product before bed.

Summary

Lack of sufficient sleep will negatively impact your recovery, and massively so, which translates into inferior-quality workouts (assuming you don't get sick and can't train at all), along with poorer race results.

Lack of consistent, optimal sleep, according to well-known coach Nate Llerandi, "can put you in one of the worst holes you'll ever experience. It goes hand in hand-in-hand with over training, erratic training, and poor performances."

Even worse, this latest research shows that not obtaining consistently sufficient amounts of high-quality sleep is linked with higher mortality risk.

There's irrefutable evidence showing just how important consistent high-quality sleep is for athletic performance and overall health. To ensure you get the sleep you need—both in quality and duration—our Sleep Kit Trio is ready to provide the nutrient support you need! 



Better than Ever!

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“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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Journey to 100

An Epic Adventure of Grace, Grit and Gratitude

Completely unbeknownst to us at Hammer, in December 2019, at age 61, Turner finished his 105th Ironman-distance, self-supported triathlon in two years, fueling with Hammer Nutrition. To achieve this insane feat, he spent 2018 and 2019 in an almost nonstop cycle of swimming, biking, and running, sometimes completing multiple “races” on consecutive days.

Be sure to read and admire the unbelievably beautiful book of photography documenting this monumental effort by Will Turner and Chris DeStefano, available online at [LiveYourBold.com](https://www.LiveYourBold.com)

And watch for their upcoming documentary, “65”, following Will’s next great challenge.



Endurance News

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