

# ENDURANCE

## NEWS

BY HAMMER NUTRITION

#120 June/July 2020

\$4.99 US / \$5.99 CAN



*IN THIS ISSUE...*

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### **Defining CBD Dosages**

How to find the best dose for you

### **Trusted Home Remedies**

Brian Frank's personal tips  
for year-round health

*PLUS...*

- Research reveals new glucosamine benefits
- Spotlight: 18 years of Perpetuem®



## JUMPING TO FIRST

A Yoda statue looks on as **Thorn Bickel** clears a gap during the Mob N Mojave in Bootleg Canyon, NV. He finished the day on the podium with a win in his age group. During the Enduro race, he kept his bottle filled with **Perpetuem®** and his pockets stocked with **Hammer Gels®**.

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Photo: #SoStokedAerial



# Welcome to the 120<sup>th</sup> issue of Endurance News!

Here is the latest from a few of our clients:



## Reid Jonczak Bucks County Trail Runners

It was way beyond time to marry some bulk gel bottles. If you're a gel user and still use those single-use, hard to open, messy as hell gel packs, think about using bulk bottles. How many of us have seen discarded gel packs on the trail? Bulk gel, at least this incredibly tasty apple cinnamon gel from **@hamnernutrition** keeps just fine in the fridge for several months. One bottle is six servings, easy to handle with gloves on and all the containers are recyclable.



## Carla Cervantes

Huge shout out to **@hamnernutrition!** Temps are climbing and my mileage is increasing, so I placed an order for much-needed electrolytes. Imagine my surprise when I got all these extras for FREE! They even called to make sure I was happy with my order and to see if I had any questions. Customer Service = master level. Thank you so very much!

If you're looking for preworkout, nutrition for your endurance needs, or recovery, check them out. Gluten-free, organic, vegan options... or if you have a sensitive GI system as I do, Hammer has you covered.



## Shane Bird

Happy Dance!!! **#hamnernutrition** ordered some gels for an upcoming race some friends and I are putting on, and Hammer Nutrition included a "New Client Welcome Kit"!!! Freakin awesome!!! Really like their products, and the fact that they're a "Montana" company. Supporting locally-ish (we're a big state lol). Now I just have to have the discipline and not partake of the gels, it'll ever for the participants.

**ON THE COVER:** **Gia Madole Long** cuts through the greenery during the Black Hills 100. Gia finished 1<sup>st</sup> Female (2<sup>nd</sup> Overall) in 22:16:26. Her time stands as the 3<sup>rd</sup> fastest female finish in the race's history. Photo Jonathan Karol

## ENDURANCE NEWS

The informed athlete's advantage since 1993

AN EXCLUSIVE PUBLICATION OF:



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### MISSION

*Endurance News* provides informative and inspirational content to help endurance athletes like you achieve peak performance and health. The views expressed favor a healthy diet, hard training that emphasizes quality over quantity, and prudent supplementation to improve health and performance. Back issues are available at [hamnernutrition.com](http://hamnernutrition.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 [hamnernutrition.com/company/mission-statement](http://hamnernutrition.com/company/mission-statement)



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Patty Jo Struve placed 1<sup>st</sup> AG in the Oregon 24-hour mountain bike race. Photo: Mike Ripley

## In this issue, learn what is essential to stay healthy all year long.

Read more on pages **20, 26, 28, 38, 40 and 52**

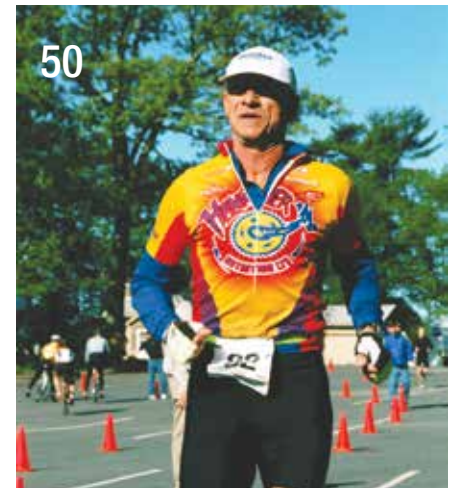
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Thoroughly tested in the world's toughest events, **Perpetuem** has a unique blend of nutrients that allows you to stay strong from start to finish.



**FROM THE ARCHIVE:** Look back at decades of memories from E-Caps and Hammer. Pictured above is longtime Hammer client Bill Riley in 2002. See more Hammer memories on page 50.

# A LETTER FROM DAVID EVANS

The trip was a wonderful adventure, so I'm very happy to have made it from Canada to Mexico thanks to your team.

## Dear Hammer Team,

I want to tell you about my experiences using your products on my forty-four-day ride on the **Great Divide Mountain Bike Route**. Your products and knowledge helped me to not only survive the 3,083-mile trip but to thrive.



Photo: David Thompson



Photo: David Thompson



Photo: Majorie Evans

Every morning started with supplements so I would be ready for the effort we would face. My day began with either **Fully Charged** or coffee, and that was soon followed with **Race Caps Supreme**, **Premium Insurance Caps**, **EudurOmega**, **Mito Caps**, **Anti-Fatigue Caps**, **Endurance BCAA+**, **Essential Mg**, and **Tissue Rejuvenator**. I felt strong in the morning riding, and then mid-day I would have one more capsule each of **Race Caps Supreme**, **Mito Caps**, and **Anti-Fatigue Caps**.

I feel one of the main reasons I was able to go day after day was following your recovery suggestions. As soon as I finished riding, along with my **Recoverite**®, I always took the following supplements: **Race Caps Supreme**, **Premium Insurance Caps**, **EudurOmega**, **Endurance BCAA+**, **Essential Mg**, **Tissue Rejuvenator**, **Super Antioxidant**, **AO Booster**, **Xobaline**, **Boron**, and **Digest Caps**. I had no problems with being sick or injured. Before the trip, I was having trouble getting dizzy when I would stand up, but after using **Essential Mg** that feeling went away. I also felt strong at altitude.

Before the trip started, I had a tight hamstring. I rubbed your **CBD balm** on it each day and the soreness went away early in the trip. I also took a **CBD softgel** before bed most nights.

“...the bottom line is without your products and knowledge, I don't think I would have been able to finish this trip.”

I needed fuel to last the long and fast-paced day. In the morning part of the ride, I would use **Hammer Gel**® and **Hammer Bars**®. In the afternoon, I would use **Perpetuem**® **Solids**. One water bottle would have **Fizz** and one would have **HEED**®. I did not have a single cramp on the trip. I had no stomach issues. Our daily mileage started to increase as the trip went along. I was glad I had Hammer products on this trip because without them I don't think I would have been able to handle the high mileage.

#### SEND US YOUR LETTERS!

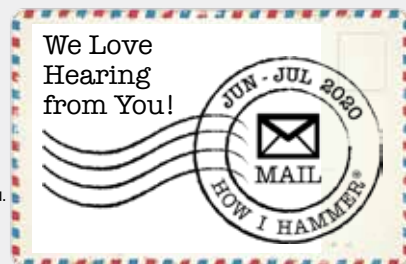
Drop us a line, share a tip, or tell us about your latest adventure.

[letters@hammernutrition.com](mailto:letters@hammernutrition.com)

#### SHARE YOUR REVIEWS ON FACEBOOK!

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

[facebook.com/hammernutrition](https://facebook.com/hammernutrition)





“ Thanks for all of your great products and your customer support over these many years! ”

I felt strong most days and was recovered the next morning. I had ten boxes of supplies that I either dropped off or mailed to spots on the route so I would have Hammer products for the whole trip. I'm having trouble putting my experience in words, but the bottom line is without your products and knowledge, I don't think I would have been able to finish this trip. The trip was a wonderful adventure, so I'm very happy to have made it from Canada to Mexico thanks to your team.

Also, thanks for all of your great products and customer support (you could teach many companies about proper customer support!) over these many years. My family has also used your helpful products. I enjoy so much that your company has products that work and the research and knowledge to help me do my best. There were some tough days on the **GDMBR**, but I was able to “fuel right and feel great.”

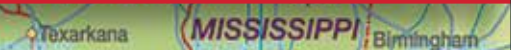
If there is anything I can do for you let me know.

Sincerely yours,

*David Cas*

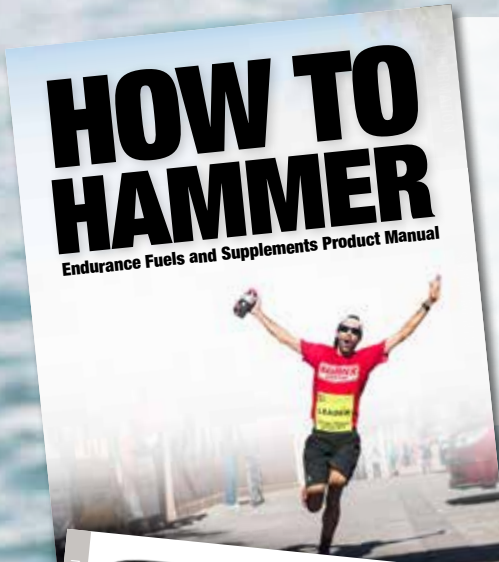
**G.D.M.B.R.**

Great Divide Mountain Bike Race



# ESSENTIAL KNOWLEDGE

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The **HOW TO HAMMER** Product Usage Manual supplies all the vital information you need to use Hammer Nutrition products for maximum benefit. This is the final word on usage with all the advanced details and specific applications you need to *Hammer* to the next level.



# #howihammer

 amandakyneur • Follow ...



**Amanda Kyneur** It helps to stick your tongue out so you don't fall into the creek.

 fazelally • Follow ...



**Fazel Ally** All roads lead to @challengecapetowntri ... be it #lockdown or not.

 cole\_shade\_racing • Follow ...



**Cole Shade** Missing this right now...

 victoriaridesbikes • Follow ...



**Marina Ramirez** Lunch break hangs! Until I can get back to @brooklynboulders, this will have to do in the meantime.



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



## RACE RECIPE

# CARY SMITH

True Grit Epic



Cary Smith started his season with a strong showing in early March as he set off to defend his NUE Series Masters 50+ title from 2019. He had his race nutrition dialed in, but then had to adjust on the fly after race organizers shortened the distance from 100 miles to 50 miles. Photo: Crawling Spider Photography

### FUELING RECIPE

#### PRE-RACE

**Peanut Butter Toast**  
**Beet Juice**

#### DURING

**Endurolytes® Fizz**  
**Huckleberry Hammer Gel®**  
**HEED®**  
**Coconut Chocolate Chip Hammer Bar®**

#### RECOVERY

**Chocolate Recoverite®**

### RESULTS

**TRUE GRIT EPIC**  
**1<sup>st</sup> Place • Masters**  
**3<sup>rd</sup> Place • Overall**  
**3:53:15**

# 401 Triathlons and Counting



**M**ike Greer (known as Greer to his friends) competed in his first triathlon in 1985. It was a noticeable change from his athletic pursuits earlier in life. He grew up playing football and running. In college, he was a running back on the football team and competed in the 100-yard dash, 200-yard dash, and sprint relays with the track team. After college, he picked up competitive handball before going on a marathon kick in 1978 with 41 finished. The monotony of marathon training up to 80 miles per week prompted him to look for something to diversify his workouts. The swim, bike, and run of triathlon was the perfect fit. Greer made the switch 35 years and 401 triathlons ago. **Today, he's 81, acts 41, and shows no signs of slowing down.**

Greer covered many miles during those 401 triathlons. He completed seven IRONMANs and finished IRONMAN Kona twice. His triathlon career, however, didn't start with instant success. Everyone has their weakest discipline. For Greer,

it was swimming. It didn't come naturally to him. Never one to shy from a challenge, he prioritized his swim training until his endurance improved. He also struggled mightily with the fourth discipline—nutrition and fueling. “I had no clue about eating, drinking, or what to take a sip from,” said Greer. Football and track never prepared him for how to hydrate, fuel, or recover. Just like swimming, he wanted to master his nutrition and fueling. His curiosity launched him on a search to find the best solution. He experimented with many different products before he found Hammer Nutrition. (Although it was called E-Caps then!)

Greer started incorporating Hammer products into his training and his daily life. Why did he stick with Hammer instead of the other products he tried? “The proof was in the pudding!” he said and went on to explain, “I can tell if I don't take my Hammer products.” **HEED®** and **Hammer Gel®** are always nearby when he trains or competes. He also

uses **Tissue Rejuvenator** and the Daily Essentials (**Premium Insurance Caps**, **Race Caps Supreme**, **Mito Caps**, and **EndurOmega**) every day. Greer says Tissue Rejuvenator plays a major role in keeping him in competitive shape at 81 years old!

The day after completing triathlon #392, Greer suffered a big bicycle crash during a training ride. The crash was a surprise—only his fifth cycling crash ever—and he couldn't figure out what caused it. After visiting the doctor, he discovered that he had suffered a stroke while riding, which caused him to jerk his handlebars to the left. The stroke was caused by a condition called atrial fibrillation. The condition can be monitored, which meant Greer was able to achieve his goal of 400 triathlons prior to turning 80. **He notched his 400<sup>th</sup> triathlon the next year and is still racing.** He has several sprint triathlons on his schedule this year, and he will be fueling with Hammer the entire way! **EN**

Mike Greer placed 1<sup>st</sup> AG in the 2017 Milkman Triathlon. Photo: Milkman Triathlon

# From Champion Gymnast to Accomplished Triathlete



For the last 30 years, Mike and Marti have worked through the summer heat to produce IRONMAN 70.3 Lubbock (originally IRONMAN 70.3 Buffalo Springs). Mike started the event in 1990, and Marti joined in 1997 as COO and Race Director. Together, they work to create a challenging course for athletes to test themselves on.

**M**arti Greer grew up as a self-described jock. As early as eight years old, she was swimming and competing. Her athleticism carried into her college years when she attended the University of Georgia and competed with the gymnastics team. She was no stranger to success—she won two national championships during her college career. Tragically, she tore her Achilles tendon during a gymnastic routine. It was a horrific injury, but it had a silver lining: it led her to discover the sport of triathlon.

Tearing an Achilles tendon is one of the worst injuries an athlete can suffer. It's said that one can

never regain the level attained prior to the tear. Rehab for an Achilles tear is a slow process of rebuilding strength and dexterity. To aid her healing, Marti turned to triathlon. It was an ideal combo of her lifelong love of swimming with low impact cycling and running to build strength. She was excellent in the swim and strong on the bike, but running was torture in the beginning. Nevertheless, Marti fell in love with the sport and began to compete regularly, sometimes participating in up to 10 sprint triathlons a summer. **Today, she has completed six IRONMANs and finished IRONMAN Kona in 2000.**

Competing in triathlons for over three decades doesn't come without its share of aches and pains. Recovering from her Achilles tear was the first hurdle for her to clear. Throughout the years, Marti's secret to staying on top of her triathlon game is Hammer Nutrition's recovery products. She wouldn't be where she is today without **Tissue Rejuvenator!** Recently, she also added **CBD softgels** to her daily routine and says, "They're a game-changer for me." When it comes to fueling and recovering from twice-daily workouts, Marti relies on **HEED**, **Hammer Gel**, **Endurloytes®**, **Recoverite®**, and **Vegan Protein**. This combo keeps her going strong, even in the hot Texas summers.

Marti's triathlon legacy extends beyond her personal finishes. Marti worked as part of the crew supporting the first double amputee to complete IRONMAN Kona. **Today, Marti continues to train and compete while working on IRONMAN 70.3 Lubbock.** After competing in IRONMAN Wisconsin last year, she has a few sprint triathlons planned for 2020. She's not an eight-year-old competing in a swim race anymore, but she's still the same jock that's been crushing races all her life. **EN**

(above) Marti Greer on her bike during IRONMAN Wisconsin. Photo: FinisherPix® (below) Marti with Mike in his signature cowboy hat.



## **EN** IRONMAN 70.3 LUBBOCK

Mike and Marti Greer continue to produce IRONMAN 70.3 Lubbock every year. **Read more about their event on page 48.**

# THE PERILS OF ~~LOADING~~

by BRIAN FRANK

**When you have a big event, competition, or adventure, do NOT attempt to:**

• Load carbohydrates • Load water • Load sodium

**IT DOES NOT WORK!**



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

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

Hopefully, you have read our felling booklet, *The 5 Secrets to Success*, and incorporated those practices immediately prior, during, and after your training and racing routine for complete success. **But what do you do in the 72 hours prior to race morning?** Keep reading for the answers.

In the old days, athletes were erroneously told that consuming copious amounts of calories, fluid, and sodium during endurance events would allow them to achieve optimum performance. 400-600 calories, 40-60 ounces of fluids, and 1-3 grams of sodium per hour were recommended in the '80s. Whenever exercise or competition went beyond three hours, stomach and GI problems were almost universal.

Today it’s rare to find anyone still advocating these crazy numbers, at least in this country. Europe and Asia are another story.

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

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

## ~~CALORIES~~

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

**“Unfortunately, the myths regarding ‘loading’ in the days leading up to a big, hot event are still surprisingly pervasive.”**

## ~~FLUID/WATER~~

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

## ~~SALT/SODIUM~~

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

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

# DON'T DO IT!

# WHAT ABOUT LIQUID ENDURANCE?



## YES!

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

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

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

# ENDUROLYTES®

## Precise Electrolyte Replacement



Denny Rowe III powers up a hill during a training ride fueled with his favorite Hammer fuels.  
Photo: Paige Rowe



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- Online Reviewer

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- Full-spectrum formula
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## Why we Discontinued the Product you Loved

by MILES FRANK

We recently heard from several Hammer Gel users who are less than elated to see their long-time favorite flavor leave our lineup. **It's not the best feeling: you get used to one thing, and then one day it's just not there anymore. We feel it, too.**

The products we make are as diverse as our staff and clients, who come from everywhere and go to great lengths to pursue activities they enjoy. So we end up with hardcore, dedicated clients who always buy a similar basket of goods whenever they call, visit our online store, or walk into a shop.

**We work to create outside-the-box solutions and better formulas.** And, while there is no magic formula, the products we put out are as well-thought-out and carefully considered as possible. The number of people who want them, once they are produced, designed, approved, and on the shelf, allows us to continue to make your favorite Hammer Nutrition products.

In a world of varying tastes,

***“We scrap some flavors, versions, or sometimes whole products when we’re confident we can put that energy into making something new.”***

trends, and preferences, an item like **Perpetuem® Solids** should never work. After sampling and explaining the product at trade shows and events and over the phone, I thought we would have to scrap the whole project! Users expected Perpetuem to be a product for mixing in water. Also, it seemed that they might not accept the quirks of the giant sweet tart just for the gains of Perpetuem. Luckily, Perpetuem in another form gained enough traction to dwell in, what Seth Godin would call, its own minimum viable market community.

For me, it's astounding that market response to a new product can go a number of ways, and then change entirely after the market (or the end-user) gets used to it. That was the case with Perpetuem Solids. It debuted to little fanfare, but then saw a surge in popularity a year after introduction.

On the other hand, we had a **Peanut Butter Hammer Gel** flavor. It was a great Gel, and people bought a lot of it, but they bought the singles and not the jugs. So we were in a predicament—clients and dealers were making it clear this item wasn't moving.



When a Gel doesn't sell in a particular size and flavor, it begins to take resources away from producing and stocking the rest of our great products. Awesome products with only a small number of loyalists show up in months and years of sales data and market trends, forcing us to think of a better solution or simply start a new project.

While we're relatively removed from a lot of the outdoor “industry” that congregates primarily on the west coast of the U.S., we're not entirely insulated from where people enjoy the sports and activities that we cater to. **Tastes change, and not every product we introduce can be a huge winner.** We scrap some flavors, versions, or sometimes whole products when we're confident we can put that energy into making something new, and we are looking forward to introducing great products (like a caffeinated HEED!) in the near future.

We take every call and read every bit of feedback and know that our small niche of a small specialized market appreciates the work we do, almost as much as we enjoy doing it.

# HAMMER GEL®



**“GREAT AND EFFECTIVE!”**

*“I use Hammer Gel during long runs to help replenish lost calories. It gives me the boost I need to keep going strong to the finish line.” - Online Reviewer*

## SO BERRY GOOD!



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No sugar crash, and deliciously convenient

26-Serving Jugs **\$19.95 ea**  
Single-serving packets **\$1.40 ea**

**Kristina Parmalee** finishes her first triathlon with a smile, thanks to Hammer Nutrition keeping her strong all the way.  
Photo: Drew Silvers



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Get a **FREE** 30mg CBD Balm Stick  
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# You ask, we listen

Here are answers to some of our most frequently asked questions



## QUESTIONS FROM OUR ATHLETES

### Can I use Sustained Energy or Perpetuem® as a meal replacement or pick-me-up?

For the occasional meal replacement or pick-me-up, you can certainly use either product, though we recommend limiting that practice to once a day. The reason is the complex carbohydrates (maltodextrin) we use in the products are high Glycemic Index (GI) carbs. Consuming a high-GI carbohydrate is never an issue during exercise or immediately after—it's a huge benefit—but aside from those two times, we recommend limiting the consumption of high-GI carbs because of the insulin spike and elevated blood sugar levels that result.

A great alternative boost while at work is **Fully Charged**, which supplies a number of outstanding benefits, including increased energy, mental focus, and alertness. And, with such a small amount of caffeine in the product (12-15 mg that occur naturally in the green tea extract), it's highly unlikely to cause any jittery sensations. There are no stimulants in the product and only eight calories in a serving.

Another excellent option is **Anti-Fatigue Caps**. The main ingredient—potassium/magnesium aspartate—is recommended quite frequently by holistic practitioners for helping alleviate general fatigue. The product also contains the amino acid L-citrulline, which helps boost nitric oxide levels and promote vasodilation (the widening of the blood vessels). This permits increased amounts of nutrients and oxygen to get to the working muscles and vital organs, including the brain. Increased blood flow to the brain may improve focus and alertness, with no stimulant effects at all. There are no calories in Anti-Fatigue Caps. EN



## ANSWERS FROM OUR EXPERTS

### I notice that vitamin E is in a number of Hammer Nutrition products. Should I be concerned that I'm getting too much?

Though vitamin E was (wrongfully) bashed about fifteen years ago, research over the past several years shows that increased vitamin E intake and higher vitamin E serum levels are associated with many impressive benefits in numerous areas of human health.

It's important to remember that your body will be depleting vitamin E as it neutralizes free radicals, countless numbers of which will be produced during exercise. Vitamin E will also be depleted as it donates an electron to an antioxidant that is "used up," such as the CoQ10 in **Race Caps Supreme** and the R-Alpha Lipoic Acid in **Mito Caps**, effectively renewing their antioxidant properties and capabilities. This means that your body is not storing all the vitamin E you're ingesting, but rather using it—and thus depleting it—as it accomplishes its many roles.

Hammer Nutrition products that contain vitamin E:

- Each capsule of **Premium Insurance Caps** supplies approximately 57 IU (d-alpha tocopherol)
- Each capsule of **Race Caps Supreme** supplies 133 IU (d-alpha tocopherol succinate)
- Each capsule of **Mito Caps** supplies 12.5 IU (d-alpha tocopherol succinate)



ANTIOXIDANTS MENTAL CLARITY  
 FATIGUE RELEASE BENEFITS E FOCUS  
 BOOST GO PERPETUUM

**We love hearing from you!  
 Email us or call to chat with  
 one of our experts!**

On a daily basis, let's say you are taking:

- 4 Premium Insurance Caps
- 2 Race Caps Supreme
- 2 Mito Caps

If so, you are consuming approximately 529 IU of vitamin E per day. We believe that 400 - 800 IU daily is a sufficient amount for general health purposes, with the lower amount being adequate for sedentary people. For athletes, however, because they are generating several times more free radicals than sedentary people, an amount up to or even above 1200 IU daily is rational. **EN**



**TRY HAMMER'S  
 FULLY CHARGED  
 FOR AN AFTERNOON  
 WORK PERK!**

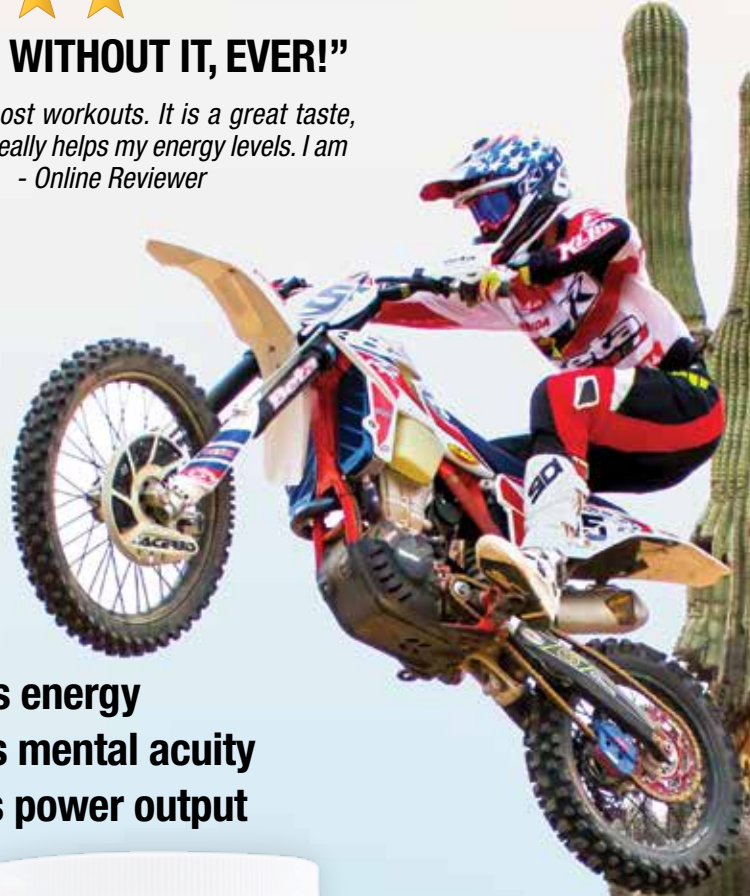
# FULLY CHARGED

Pre-Exercise Ignitor



**"I CAN'T BE WITHOUT IT, EVER!"**

*"A use it before most workouts. It is a great taste, very mellow, and really helps my energy levels. I am never without it." - Online Reviewer*



- Increases energy
- Promotes mental acuity
- Improves power output



30 Servings **\$34.95**  
 24 Singles **\$34.95**  
 6 Singles **\$8.95**

Max Gerston riding hard and flying high through the rugged desert terrain. Photo: Beta USA

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# TISSUE REJUVENATOR

Maintaining healthy joints safely and naturally for 16+ years!

In early November 2004, a new formula became an official Hammer Nutrition product; and almost as soon as it became available for sale, Tissue Rejuvenator was an instant hit. To this day, “TR,” as it’s often referred to, continues to be at or near the top of sales for all Hammer supplements.

One reason so many people—athletes and non-athletes alike—have made Tissue Rejuvenator one of their “take it daily for life” supplements is its unique formula. Containing efficient amounts of nutrients that serve as the “raw materials” for helping rebuild joint/cartilage/connective tissue, as well as an impressive blend of nutrients that provide superb relief for aches, soreness, and swelling, **Tissue Rejuvenator truly is a dual-purpose joint-health product.**

Another reason for TR’s devoted following is it flat-out works. Here are just a fraction of the 5-star reviews this amazing product has received.



*“A product I’ve used from its beginning, with great results.”*



*“I have been using **Tissue Rejuvenator** for many years. Would not ride without it.”*



*“I am a bit of a skeptic about supplements. Not this one. This stuff is amazing.”*



*“**Tissue Rejuvenator** helps with my recovery more than I could have imagined. My favorite Hammer product!”*

In September 2018, we introduced **Vegan Tissue Rejuvenator**, and it has proven to be a godsend for those whose dietary practices do not allow for consumption of animal-derived nutrients. Like the original TR, Vegan Tissue Rejuvenator (aka “VTR”) is hugely successful at helping protect against joint-related injuries, while also providing safe and side effect-free relief from aches, soreness, and swelling.

Because each Tissue Rejuvenator formula contains a couple of unique nutrients not found in the other, many athletes are now using both. **One or two capsules of each product twice daily is the ideal way to supply your body with the widest range of nutrients for optimizing joint health, as well as effective relief from aches and soreness.**

# TISSUE REJUVENATOR

*Less pain.  
More gain.*



## “SPEEDY RECOVERIES”

*“I take **Tissue Rejuvenator** after long workouts, bike rides, and on backpacking trips ... my overall post-workout discomfort is way down as a result.” - Online Reviewer*

- Superior cramp prevention
- Full-spectrum formula
- Rapidly assimilated



TISSUE REJUVENATOR  
120 Capsules  
**\$32.95**

**VEGAN** 120 Capsules  
**\$34.95**

**Jeremy Heath** returns to the trails after recovering from a leg injury. Jeremy's road to recovery involved months of hard work and lots of **Tissue Rejuvenator**! Photo: Jared Seger



## EN GLUCOSAMINE SULFATE

Another reason to take one or both Tissue Rejuvenator formulas each and every day comes courtesy of two exciting studies on a nutrient found in both formulas—**glucosamine sulfate**. The results of this research show that glucosamine sulfate supplies profound benefits for human health that extend far beyond joint health. **You'll find information about these two studies on page 22.**

Alleviation of post-exercise muscle soreness, maintenance of optimal joint health all year long, help to return to normal training after a joint-related injury, along with significant other health benefits—that's what you'll receive from daily use of the potently effective, time-tested Tissue Rejuvenator formulas!

EN



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# WELLNESS RECOMMENDATIONS

Three of my personal favorite home remedies

by BRIAN FRANK

**G**iven everyone's extreme interest in staying healthy these days, I decided the time was right to share my favorite home remedies with you. For more than two decades, I have used these three remedies personally and for my kids. They also accompany me any time I travel domestically or abroad. They have been in widespread use for centuries, and I believe they are extremely effective. I am talking about **"Thieves Blend"** essential oils, **Vitamin D**, and **Grapefruit Seed Extract**.

What follows is based on my personal beliefs and experiences. I am not attempting to make any curative medical claims, and I have no financial interest in any company selling these products nor will I receive a commission or any form of remuneration. I am sharing this strictly for your information.

## Thieves Blend-essential oils

Use of this combination of essential oils (Citrus lemon, cinnamon leaf, clove, rosemary, and eucalyptus radiata) dates back to Europe in the early 1400s. At that time, little was known about the importance of hygiene or how disease was spread. Specifics vary, but the story goes: the Bubonic Plague was responsible for killing between 30%-60% of Europe's population. Despite the near 100% mortality rate, there was a group of people who appeared to be immune to the disease. These were the corpse robbers (or "thieves") who would circulate freely night and day, robbing the valuables from corpses of people who had fallen dead in the street.

The rulers were baffled by the thieves' immunity, so they captured a group of them and forced them to divulge their secret. The thieves explained that they blended these five essential oils and would dab the oil near their ears, below the mouth, next to the nostrils, and on the brim of their cloak hoods. The effectiveness was undeniable and this practice spread across Europe. It is thought to have slowed the spread of the plague.

Doctors adapted the practice by filling a beak-like mask with cloths soaked in the blend. They wore these Thieves Blend masks when treating patients afflicted with the plague. This is also where the term "quack" comes from in reference to doctors.

Fast forward to modern times. Little if any clinical research has been done on this blend of essential oils. Some have been researched separately and do suggest benefits in preventing bacterial and viral conditions. Nevertheless, Thieves Blend enjoys widespread popu-

**"Use of this combination of essential oils dates back to Europe in the early 1400s."**

larity in the holistic- and essential-oil-using communities. Here are the ways I use this product:

- I carry a bottle with me when traveling. I apply it to my ears, chin, and cheeks before going into public areas. When I reach my seat on the plane, I dab a bit on the headrest and seatback. At my destination, I apply to my face daily before leaving my room. Currently, I do this each morning after my shower.

- Around the house, I use a Thieves Blend foaming soap for hand washing instead of anti-bacterial soap. You can also buy mouthwash, toothpaste, mints, and even dental floss infused with Thieves Blend. I keep a tin of the mints on hand for any time I am concerned about exposure while out and about.



## Vitamin D

For more years than I can recall, I have provided vitamin D supplements for all Hammer Nutrition staff members. Our kitchen and warehouse cupboards are stocked year-round with bottles of this impressive nutrient. While our use of vitamin D supplements diminishes a bit in the summer (because we get a lot of our D from the sun), from early October to late April/early May, taking vitamin D supplements is a daily occurrence.

Space limits listing all of the roles that vitamin D plays in the body, but it's fair to say that **since nearly every bodily cell and tissue has vitamin D receptors, they all require vitamin D to function properly.**<sup>1,2</sup> In regards to the immune system—a primary focus for all of us these days—vitamin D is very much a “front line defense” nutrient.

Highly-regarded vitamin D expert, Dr. Richard F Holick, states that vitamin D “is capable of regulating a wide variety of genes that have important functions in regulating cell growth, modulating immune function and cardiovascular health.” Epidemiologic evidence and prospective studies have linked vitamin D deficiency with increased risk of many chronic diseases including autoimmune diseases, cardiovascular disease, deadly cancers, type II diabetes and infectious dis-

eases.<sup>2</sup> By now, it should be clear that vitamin D is essential for basically all aspects of health, including proper immune system function. There is a wide range of how much vitamin D one needs to take daily to maintain optimal levels—a vitamin D, 25-Hydroxy blood test is the only way to know for sure—but the general consensus is 2000 IU - 4000 IU daily.

Each capsule of **Premium Insurance Caps** contains approximately 71.5 IU of vitamin D, so a typical four-



to-six capsule daily dose will supply you with just about 285 IU – 429 IU of vitamin D. Augmenting with additional amounts can easily be done via a stand-alone vitamin D supplement, most of which are extremely affordable and readily available. Most vitamin D supplements (sold as vitamin D3, or cholecalciferol) are produced from lanolin, which is derived from sheep's wool. There are also vegan-friendly vitamin D supplements, the vitamin D3 being derived from lichen.

## Grapefruit Seed Extract

People began writing about the beneficial properties of grapefruit over 2,000 years ago. They heralded it for the benefits we now associate with all citrus: namely as an excellent source of vitamin C. It wasn't until the 1960s that people began exploring the health benefits of grapefruit seeds. Dr. Jacob Harich, a physicist and immunologist, noticed that grapefruit seeds lasted a long time in his compost—a place full of bacteria and fungi. Curious about the antimicrobial properties of grapefruit seeds, Dr. Harich began experimenting. Using grapefruit pulp and seeds, he created a liquid extract that is still common today.

**“Studies have shown that it works against bacteria by breaking down their outer membrane.”<sup>5</sup>**

The antimicrobial and antibacterial properties of grapefruit seed extract (GSE) are well documented.<sup>3,4</sup> Besides being used for consumption, it's commonly used in cosmetics, soaps, cleaning sprays, and disinfecting wipes. Studies have shown that it works against bacteria by breaking down their outer membrane.<sup>5</sup> Aside from the antimicrobial properties, GSE is packed with antioxidants, vitamin E, flavonoids, and polyphenols.

GSE has to be processed and manufactured to be put into a form that's easily used. You must get yours from a trustworthy company with stringent manufacturing standards. I like to use NutriBiotic (again, I receive no compensation from this company).

**I carry a bottle of GSE with me whenever I travel internationally.** I put 4-6 drops in a glass of water in the morning and at night. This routine always works well for me. In the fall of 2018, I used it every day while crisscrossing countries around the world. I stayed healthy the entire trip and I know the GSE helped!



**I hope you find these remedies—Thieve's Blend, Vitamin D, and Grapefruit Seed Extract—helpful. I have used them personally and with my kids for over 20 years, so I am confident in recommending them to you.** 📧

References available upon request.

# GLUCOSAMINE

Supplementation now associated with lower risk of heart disease and type II diabetes

Great for your joints **AND** so much more!

by STEVE BORN

**G**lucosamine is a staple—usually the main ingredient—in most joint-health supplements on the market, including **Tissue Rejuvenator** and **Vegan Tissue Rejuvenator**. Glucosamine is a naturally occurring compound that is chemically classified as an amino sugar.<sup>1</sup> It is noted mainly as a building block/raw material in joint cartilage, ligaments, and tendons. It also has properties that relieve aches and soreness.

New research, however, shows two new and exciting benefits for glucosamine, with supplementation of this key joint-health nutrient being associated with:

**1 A reduced risk of cardiovascular disease events, defined as coronary heart disease, stroke, and cardiovascular disease death<sup>2</sup>**

**2 A lower risk of developing type II diabetes<sup>3</sup>**

## CARDIOVASCULAR DISEASE

Researchers at Tulane University followed over 460,000 cardiovascular disease-free men and women in the United Kingdom's Biobank for an average of seven years. The participants were enrolled from 2006 to 2010 and were followed up to 2016. The researchers analyzed data that included diet, alcohol intake, and supplement use; and they used

hospital records and death certificates to establish the occurrence of cardiovascular issues.

The results showed that those who used glucosamine supplements had a 15% lower risk of total cardiovascular disease events than those who didn't. Examined individually, glucosamine use was associated with these benefits:

- ▼ **A 9% lower risk of stroke**
- ▼ **An 18% diminished risk of coronary heart disease**
- ▼ **A 22% decreased risk of cardiovascular death**

The researchers believe there is a link between glucosamine supplementation and reduced levels of C-reactive protein (CRP), which is a marker of inflammation. Additionally, they suggest that the effects of glucosamine use may mimic the cardiovascular-protective benefits of a calorie-restricted diet.

Although more studies are needed to confirm this study's results, the researchers concluded,

**“ Habitual use of glucosamine supplements to relieve osteoarthritis pain might also be related to lower risks of cardiovascular events. ”**

## TYPE II DIABETES

Avoiding type II diabetes is always vitally important. With over 83,000 deaths annually, it's the seventh cause of mortality in the United States.<sup>4</sup> There are many ways we can protect ourselves from type II diabetes; for example, removing sugar from our diet, eating low-glycemic carbohydrates, increasing our intake of fiber, not overeating, exercising, and losing weight.

Supplements that are believed to be helpful in protecting against type II diabetes are chromium (**Chromemate**) and magnesium (**Essential Mg**),<sup>5</sup> with glucosamine sulfate now being added to the list.

Over 400,000 men and women participated in the UK Biobank study from 2006 to 2010. At the beginning of the study, participants—all of whom were free of cancer, cardiovascular disease, and diabetes—answered ...



# RECOVERITE®

Recoverite Today, Hammer Tomorrow

... questionnaires reporting their regular use of various supplements. At that time, blood samples were taken to determine levels of CRP.


The results showed the following:

**1** During an 8.1-year follow-up period, the participants who used glucosamine had an approximate 17% lower risk of developing diabetes.

**2** CRP levels at the beginning of the study were significantly lower in participants who used glucosamine versus those who did not. The participants in the top 25% of lower CRP levels had a nearly 19% lower risk of diabetes compared to non-glucosamine users.

Hao Ma, Ph.D., who also headed up the glucosamine/cardiovascular disease study, stated: "Our findings indicate that habitual glucosamine use, a common supplement used for osteoarthritis and joint pain, is associated with a lower risk of type II diabetes. These findings provide support that glucosamine may act as a potential supplement for preventing type II diabetes."

## SUMMARY

For helping optimize joint health, there's nothing better than glucosamine sulfate. Now this research suggests that there are also many other powerful benefits to be derived from this compound. Taking Tissue Rejuvenator or Vegan Tissue Rejuvenator on a daily basis all year long will help you enjoy the multiple benefits that glucosamine sulfate offers! 

References available upon request.



**"AMAZING PRODUCT!"**

*"Recoverite has been such a good find for me. It's quick, it holds me over well, is full of great stuff, and is SO GOOD!" - Online Reviewer*

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

16 Servings	<b>\$34.95</b>
32 Servings	<b>\$59.95</b>
Single-serving packets	<b>\$3.50 ea</b>

- VANILLA
- CHOCOLATE
- STRAWBERRY
- ORANGE VANILLA



Tate Dunkel rides to a win on the trails at Lone Peak's Revenge in the Montana Enduro Series. Photo: Jason O'Neil Photo

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# THE FINAL TEST FOR PERPETUEM

by STEVE BORN

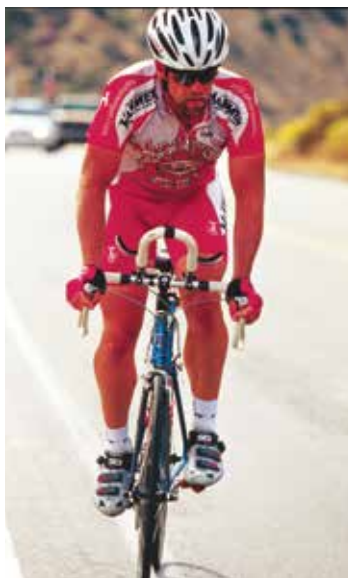
In mid-afternoon on Thursday, October 10, 2002, after a lot of planning and training, I started pedaling my bike from Twentynine Palms, CA—the finish line of the Furnace Creek 508—toward the starting line in Valencia, Santa Clarita, CA. Once there, I planned to get a small amount of sleep (couldn't sleep much, the clock was still running!), then start with the other riders competing in the "regular" Furnace Creek 508, and head back to Twentynine Palms. Armed with an awesome support crew and a newly developed fuel called Perpetuem, I was attempting to be the first person to complete a back-to-back crossing of this incredibly difficult racecourse—a Double Furnace Creek 508, or Furnace Creek 1016, if you will.

While the course was indeed arduous, to put it mildly—riding a bike nearly non-stop for 1,016 miles and having to negotiate 70,000 feet of climbing is almost impossible to fully describe—I felt confident in all things: my support crew, my equipment, my training, my record attempt strategy, and my fueling/supplementation program. **Although I didn't know it at the time, this was to be the final test for Perpetuem before it became an official Hammer Nutrition fuel.** I had been using it in my training—back then Perpetuem wasn't produced in large quantities; I was relying on handmade batches of the product—and was ready to put it to this ultimate test.

Although I experienced some fatigue during the record attempt (which is to be expected when you're on the bike that long!), I never had any energy issues—or stomach issues—from my fuel. With Perpetuem as my primary fuel, augmented by **Sustained Energy** and **Hammer Gel**® (no **HEED**® back then), my energy levels were consistently rock solid. I felt terrific!

Except for a three-hour sleep break at the starting line, and a couple of brief catnaps during the actual race, I was on my bike, focused on setting this record. Mile after mile of pavement rolled underneath my bike tires, hour after hour. Lots and lots of Perpetuem was consumed. Finally, 82 hours after I started in Twentynine Palms—75.5 hours of which was spent riding—in the early morning hours on Monday, October 14, 2002, history's first and only Double Furnace Creek 508 was successfully completed.

After lots of hugs with my support crew (did I mention they were awesome?) as well as some photos and congratulations from the small gathering of people at the finish line, it was time for sleep! First, though, was a call to Hammer Nutrition company owner, Brian Frank. I didn't care that it was an ungodly hour to call anyone; I had to talk to him! Waking him from a deep sleep, I shared with Brian that I was successful in setting this new record. I also enthusiastically told him, "DUDE! Perpetuem worked amazingly well; I must have used it for three-quarters of the time I was out there! We **MUST** get this product into the hands of other endurance athletes!" (Turns out, I was pretty accurate. I used Perpetuem for around 55-58 of the hours I was on the bike.)



FROM THE ARCHIVE: Steve Born during his 2002 Double Furnace Creek 508.

**In early 2003, Perpetuem became an official Hammer Nutrition product, and endurance fueling has never been the same.** Since that successful record set nearly 18 years ago (a record that still stands), thousands of athletes competing in endurance contests of every kind imaginable have relied on Perpetuem to thoroughly and successfully fuel their bodies. Even in ultra-extreme competitions/events/expeditions, such as Race Across America, English Channel crossings, double, triple, even deca triathlons, summiting Mt. Everest, and more, Perpetuem has proven to be the supreme ultra-fuel, delivering all of the following:

- **Consistent, long-lasting energy**
- **Maximum fat utilization**
- **Reduced muscle fatigue**



Phrases like "state of the art" and "quantum leap" are used so frequently in sports nutrition formulations that their meaning is often diminished. That's not the case with Perpetuem. Unlike any other fuel—with the exception of Sustained Energy, Hammer Nutrition's original ultra-fuel—**Perpetuem has proven time and time again to be THE true state-of-the-art, all-in-one calorie source needed for anything lasting several hours to several days.**

Whether you use Perpetuem as your sole fuel from beginning to end or as your primary fuel along with other Hammer Nutrition fuels for some variety in the menu, it doesn't matter how long your workouts or races are; you will have ALL your caloric needs met thoroughly and completely. Take it from someone who put Perpetuem to a pretty severe test: no other fuel has successfully met the extreme challenges that Perpetuem has. I can honestly say without hesitation that Perpetuem will work for you! **EN**





# PERPETUEM®

**FOOD FOR THE  
LONG HAUL**

**SINCE 2002**



32 Servings **\$49.95**  
16 Servings **\$29.95**  
Single-serving packets **\$3.25 ea.**

- CHOCOLATE
- ORANGE VANILLA
- CAFFÉ LATTE
- STRAWBERRY VANILLA

# ✓ BROAD-SPECTRUM FOR A GOOD REASON!

Hammer Nutrition is in its third year of offering the wide-ranging benefits of superior-quality, broad-spectrum CBD products. And, believe me, we're well aware of the endless options for overly hyped, dubious-quality products that are also out there. As company owner, Brian Frank, appropriately states, it's been "a proliferation of the wild west."

In our February 2020 blog post, we discussed the importance of choosing a high-quality product and pointed out that Hammer Nutrition continues to set the standard by offering only the purest CBD products available. If you haven't yet read this brief article, we urge you to do so. It provides clear information as to what Hammer Nutrition's line of CBD products are about and why they should be the ones you use.

Another important factor to consider is the type or form of CBD product that's being offered to you. **Full-spectrum, broad-spectrum, and CBD isolate are all options, but Hammer sells only broad-spectrum. Here's why:**

## FULL-SPECTRUM

Within hemp extract, there are a tremendous number of cannabinoids, terpenes, flavonoids, and other plant materials, including trace amounts of THC (delta-9 tetrahydrocannabinol). The whole-plant extract in its original form is known as full-spectrum. **The issue with full-spectrum is the THC content.** If you're a drug-tested athlete or if THC is not permitted in your job (i.e., you're subject to drug tests) or if you're one of the countless people who simply don't want any THC in their bodies, a full-spectrum formula is out of the question.



## ISOLATE

This form is most often created by distilling out the cannabidiol (CBD) molecule from all the other cannabinoids, terpenes, and flavonoids. When CBD products first became available, the technology for broad-spectrum had not yet come about. Thus, the isolate form was the only choice available for those who did not want and/or could not have THC in their bodies. The benefit of no THC, as well its lower cost, made CBD isolate an attractive option. Unfortunately, while versatile in application, CBD isolate—because it is just the one cannabinoid (cannabidiol/CBD)—offers very limited benefits when compared to a full- or broad-spectrum extract.

**Research has also shown that the various compounds found in the hemp plant provide synergistic benefits when consumed together.**<sup>1</sup> This synergistic cooperation is known as the "entourage effect." This means that the various cannabinoids and terpenes provide their own individual benefits while working together and interacting with each other to increase the overall benefit. In other words, "the whole is greater than the sum of its parts."

CBD isolate does not provide these synergistic benefits due to the removal of all plant compounds, except CBD, during processing. Isolates have also been shown through research to need higher, more precise dosing than whole plant alternatives.

## BROAD-SPECTRUM

This is the best of both worlds! Thanks to advances in extraction technology. **Broad-spectrum products are produced by removing only the THC from a full-spectrum oil.** All Hammer Nutrition products are broad-spectrum formulas, allowing you to enjoy all the "entourage effect" benefits of the cannabinoid/terpene/flavonoid components without worrying about THC. Hammer Nutrition's broad-spectrum products remove the risk of failing a drug test that checks for the presence of THC.

**A Certificate of Analysis (COA) is available for all Hammer Nutrition CBD products.** A COA clearly indicates what's in the product—all the beneficial cannabinoids, terpenes, and flavonoids you want—and what's not in the product (THC), assurance that you're supplying your body with the finest, most beneficial broad-spectrum formula available.

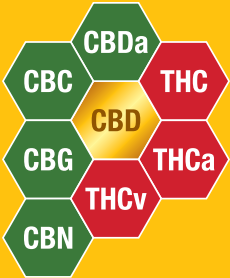


## BROAD-SPECTRUM

The Best of Both Worlds!



- ✓ Cannabidiol (CBD)
- ✗ THC
- ✓ Cannabinoids, Terpenes, Flavonoids, and plant material
- ✓ Entourage Effect



## FULL-SPECTRUM

Whole-Plant Hemp Extract

- ✓ Cannabidiol (CBD)
- ✓ THC
- ✓ Cannabinoids, Terpenes, Flavonoids, and plant material
- ✓ Entourage Effect




## ISOLATE

Just Cannabidiol

- ✓ Cannabidiol (CBD)
- ✗ THC
- ✗ Cannabinoids, Terpenes, Flavonoids, and plant material
- ✗ Entourage Effect

### BOTTOM LINE

Hammer Nutrition provides broad-spectrum CBD products because they are whole-plant products that provide the effectiveness of a full-spectrum extract and, at the same time, a THC-free solution without the limiting downsides of an isolate form.

Forget about all those “here today, gone tomorrow” companies offering dubious-quality products while making ludicrous claims about the benefits of CBD. At Hammer Nutrition, we did our homework—years before CBD products became legal—and we’ve taken the guesswork out of it for you. Don’t be on the fence any longer! Enjoy all the benefits that Hammer Nutrition’s pure, premium-quality broad-spectrum CBD products have to offer! 

References available upon request.

# HAMMER CBD

**BEST** Quality  
**BEST** Price  
**Guaranteed!**



**“EXCELLENT PRODUCT!”**

*“Knowing that Hammer Nutrition has guaranteed their **CBD** for quality takes the stress out of buying CBD products for me. Thank you Hammer!”*  
- Online Reviewer



**NEW FOR 2020**



500 mg 2 oz. Stick Solid **\$49.95**  
30 mg 0.15 oz Stick **\$3.95**

**Nick Marsh** runs the hilly course at the Kettle Moraine State Forest edition of the North Face Endurance Challenge Series. Photo: NFECS



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# Dial In Your CBD Dose

While I was immersed in trying to figure out how to describe the process of determining **CBD dosage**, the thought occurred to me that it is pretty similar to—although obviously not the same as—determining electrolyte requirements and the number of **Endurolytes®** that may be needed.

Here are the similarities:

- **There are variables that need to be accounted for**
- **Your needs may change frequently**

When it comes to calculating how much CBD will be ideal for you, you'll primarily need to look at your body weight and your current physical status, including any issues (e.g., poor sleep) you may be dealing with.

Before we discuss those two things, let's start with the Hammer CBD offerings:

## SOFTGELS

We offer two potencies/strengths: **10 mg** and **25 mg** of phytocannabinoid-rich hemp oil.

## WATER-SOLUBLE HYDRO TINCTURE

We offer a **250 mg** potency/strength, with each dropper (1 ml) supplying 8.33 mg of phytocannabinoid-rich hemp oil.

## OIL-BASED TINCTURE

We offer three potencies/strengths: **250 mg**, **750 mg**, and **1500 mg**, as follows:

- One dropper (1 ml) of the 250 mg tincture supplies **8.33 mg** of phytocannabinoid-rich hemp oil
- One dropper (1 ml) of the 750 mg tincture supplies **25 mg** of phytocannabinoid-rich hemp oil
- One dropper (1 ml) of the 1500 mg tincture supplies **50 mg** of phytocannabinoid-rich hemp oil



### CBD BALM

**500 mg** and **30 mg** sticks can be topically applied in addition to your CBD dose. Balm provides relief from aches and numerous skin conditions.

*“If you use a combination of softgels and tinctures, the dosing amounts are nearly limitless, allowing you to alter the dose on an as-needed basis on any given day.”*



SOFTGELS



HYDRO

TINCTURES



Both the Softgels and Hydro utilize the proprietary nano-sized microemulsion manufacturing process, which allows for up to five times better absorption. Not everyone will receive the highest amount, but everyone can count on greater absorption and bioavailability using the softgels or the Hydro formulations.

**NOW LET'S LOOK AT THE VARIABLES:**

- **BODY WEIGHT** While this is certainly not a recommendation that is set in stone, those under 160 pounds may find that a daily amount of 8.33 mg to 10 mg is a good starting point, and perhaps even their ideal dose. People 160 pounds and up may require higher amounts, starting at 16.7 mg to 25 mg per day.
- **CURRENT PHYSICAL STATUS/CONDITION** Using the amount determined according to body weight as a foundation, people dealing with chronic issues regarding aches/soreness/discomforts, poor sleep, or both, usually find that higher amounts of CBD ranging from 25-50 mg daily will be best for them.

We suggest that you begin with these dosing guidelines and then gauge your body's response. If, for example, you find that one dropper of CDB Hydro (8.33 mg) or one dropper of oil-based tincture (8.33 mg) or one 10 mg softgel is helping you sleep throughout the night and permitting you to wake up on time and without grogginess, you've found your dose!


On the other hand, if you find that those amounts aren't quite sufficient, increase the dose slightly until you achieve what you want: a full night's sleep and no grogginess in the morning. Of course, if you don't wake up at your normal time and/or you feel a bit groggy, you'll want to lower your dose.

The same is true with physical discomforts. Start with the suggested amounts, gauge their effect on your aches and soreness, and adjust accordingly.

**NOTE:** We've heard from numerous clients that it takes up to two weeks for their body to adjust to a specific CBD dose. Therefore, monitor your response for 10-14 days before adjusting your dosage.

If you use a combination of softgels and tinctures, the dosing amounts are nearly limitless, allowing you to alter the dose on an as-needed basis on any given day.

**EXAMPLE:** One 25 mg softgel + ½ dropper of 750 mg oil-based tincture = 37.5 mg of phytocannabinoid-rich hemp oil.

The benefits of CBD are extraordinary, and the range of premium-quality offerings from Hammer Nutrition allows you to personalize the dose to meet your individual needs! 

# HAMMER CBD

**BEST Quality  
BEST Price  
Guaranteed!**



**"AMAZING RECOVERY!"**

*"I have tried all 3 Hammer CBD products and have been recovering better for the coming season. I love the softgels, and these drops are easy to take, too."*  
- Online Reviewer

- Aid quality sleep
- Boost recovery
- Soothe soreness



- CLASSIC 250 mg **\$19.95**
- CLASSIC 750 mg **\$59.95**
- CLASSIC 1500 mg **\$99.95**
- HYDRO 250 mg **\$24.95**



A runner celebrates during the Hammer-sponsored Lulu Lemon Run and Yoga event. Runners had plenty of Hammer on hand through the event. Photo: Nick Vargo Fiedler

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# WHEN IT COMES TO CBD, IT'S THE WILD WEST OUT THERE!



Hammer Nutrition's Gold Standard CBD is the best option from a company you can trust.

## 5 QUESTIONS TO ASK BEFORE YOU BUY CBD:

### IS IT TRUSTWORTHY?

Everyone and their cousin are selling CBD these days, but very few of them have trustworthy products. Every company should freely offer up-to-date independent third-party lab reports for every batch of CBD. Hammer offers these on every CBD page of our website.

### IS IT FROM THE USA?

CBD can come from anywhere. Hammer sources its CBD from the largest vertically-integrated producer, manufacturer, and distributor of CBD in the USA. From farm to bottle, we know it's handled within the strict guidelines we have for all Hammer products.

### IS IT THE RIGHT SPECTRUM?

Broad-spectrum CBD is the best option. Other types may contain THC or not work as well as they should. Be sure your CBD product clearly says "Broad Spectrum" on the label like all Hammer Nutrition CBD products do.

### IS IT EFFECTIVE?

Not all CBD works the same inside the body. Hammer offers a line of nano-micro emulsified products that are absorbed up to 5x more than normal by the human body. Hammer CBD softgels and Hydro utilize this unique process.

### IS IT A GOOD PRICE?

Prices for CBD vary wildly. Companies manipulate sizing and CBD amount to make their product look like the best price. The ideal way to compare pricing is to find the "cost per milligram." (Divide the amount of CBD in the product by the total cost.) Hammer CBD has the best costs per milligram on the market:

#### CBD SOFTGELS

Starting at  
\$39.95  
\$0.08 - \$0.13  
per mg

#### CBD TINCTURES

Starting at  
\$19.95  
\$0.06 - \$0.10  
per mg

#### CBD BALMS

Starting at  
\$3.95  
\$0.10 - \$0.13  
per mg



Steven Terry run the Grand Mesa Ultra 55k in Colorado, using HEED®, Perpetuem®, & Hammer Gel® to keep the pace along the way. Photo: Andrea Terry

# HAMMER CBD

**BEST Quality**  
**BEST Price**  
**Guaranteed!**



**“A MUST IN MY SUPPLEMENT ARSENAL”**

*“Helps me sleep better and have fewer aches. I recommend it to anyone looking for quality sleep and less fatigue.” - Online Reviewer*

- **Aid quality sleep**
- **Boost recovery**
- **Soothe soreness**

Balm starting at **\$3.95** Oil Tinctures starting at **\$19.95**

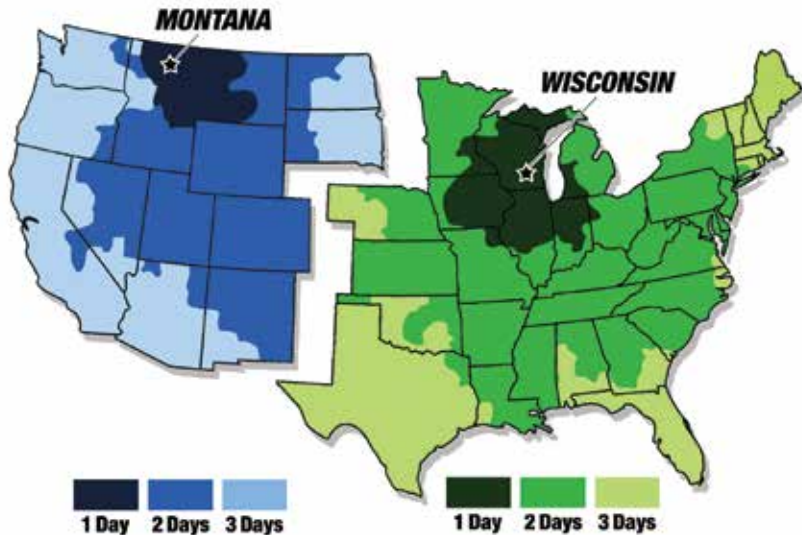
Softgels starting at **\$39.95**

**RELAX • RECOVER • REPEAT**



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Client # \_\_\_\_\_  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_  
 Phone \_\_\_\_\_ Email \_\_\_\_\_



Product	Flavor/Color	Size	Price	Quantity	AMOUNT

**ORDER TODAY!**

Shipping rates:

<b>Order Total</b>	<b>Ground FedEx</b>
\$0 to \$39.99	\$4.95
\$40 to \$99.99	\$7.95
\$100+	<b>FREE!</b>
Shopping Local	<b>NONE!</b>

Subtotal \_\_\_\_\_  
 Shipping \_\_\_\_\_  
 Tax See chart at left \_\_\_\_\_  
**TOTAL** \_\_\_\_\_

**Method of Payment** (circle one)

Check / MO • Visa • MC • Discover • AmEx

Card # \_\_\_\_\_

Exp. \_\_\_\_\_

Verification # \_\_\_\_\_

Signature \_\_\_\_\_

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# SOS 5 Secrets of Success

# #3 PROPER HYDRATION

Water is appropriately referred to as “the elixir of life.” With approximately 60% of your body being composed of water, it’s extremely important to maintain optimal hydration status during your workouts, as well as throughout the entire day.

## FLUID INTAKE DURING EXERCISE

Of all the components of fueling—calorie intake, electrolyte replenishment, and fluid consumption—it’s the last that has the most serious consequences attached to it. If you don’t drink enough water, you’ll suffer from painful and performance-ruining dehydration. But if you drink too much water, you’ll face similar problems due to water intoxication. Either way, you’ll not only end up with impaired athletic performance, you could even flirt with a potentially life-threatening situation.

Most athletes—under most conditions—will satisfy hydration needs with a fluid intake


in the range of **20-25-ounces/hour**. It’s easy to determine the amount you consume because many water bottles are made in these sizes. Lighter athletes and/or cool weather conditions may only require an intake of **16-18 ounces/hour**. Larger athletes and/or very hot and humid conditions might need a fluid intake of **28 ounces/hour**, or even 30 ounces/hour in extreme conditions.

It’s important to remember that regular fluid intake over 30-34 ounces/hour significantly increases the potential for serious performance and health problems.

## FLUID INTAKE ASIDE FROM EXERCISE

When you aren’t consuming enough water throughout the entire day, your bodily functions cannot perform properly. Vital physiological processes such as circulation, nutrient delivery to cells, organ responsibilities, metabolism, body temperature regulation,

waste removal, and more are severely compromised without sufficient water.

Optimal fluid intake—primarily from pure, clean water—should equal 0.5 to 0.6 of your body weight in pounds. 



Savvy Sipping all Summer Long!



Try Hammer powders or Fizz in your favorite smoothie, or freeze with water for an ice cold pop!

### EXAMPLE: 180 lb. Athlete

**180 x 0.5 = 90 ounces of fluid daily**

**180 x 0.6 = 108 ounces of fluid daily**

REMEMBER: This is in addition to what you consume during exercise.

# Keep Your COOL as the season heats up



When it comes to endurance fueling...

# WE WROTE THE BOOK!



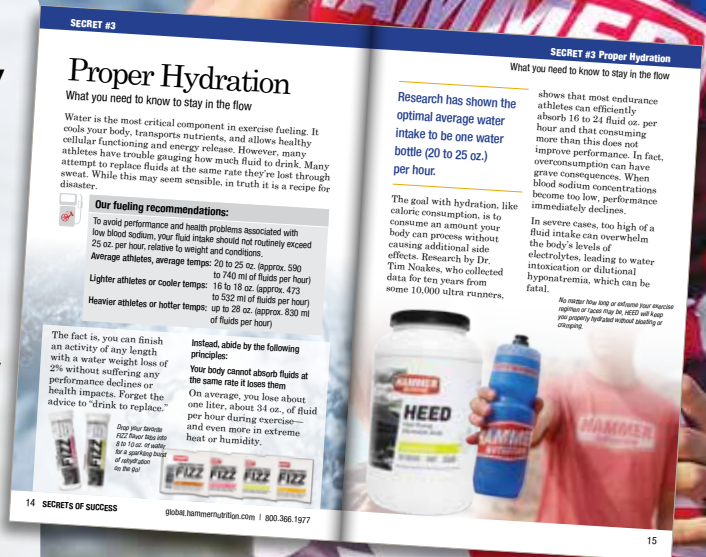
Get the answers you need to succeed with Hammer Nutrition's easy-to-read FREE fueling guide that will help you **Fuel Right, Feel Great!®**

Powerful recommendations  
Concise information  
Time-tested advice

★★★★★ **“FOLLOWING THESE GUIDELINES WILL GIVE YOU EVERY OPPORTUNITY TO RACE TO YOUR POTENTIAL.”**

*“Great source of information! This is the perfect guide for how and when to use the full array of Hammer Nutrition's endurance fuels. As an Ironman athlete, having a proper fueling strategy can mean the difference between getting a Kona slot and getting a DNF. Use the **SOS checklist** before every race and you don't have to worry about getting it right.” - Online Reviewer*

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[hammernutrition.com/media/downloads/sos.pdf](http://hammernutrition.com/media/downloads/sos.pdf)



Barbora Krsmaru celebrates her success after a podium finish at the Gladiator Race Czech Paradise. Barbora competes for the Hammer OCR Team in the Czech Republic. Photo: Barbora Krsmaru

FROM THE KITCHEN OF  
**LAURA LABELLE****SUMMER***It's summertime "and the eatin' is easy"!*

I love the summer because I love all the seasonal foods in the markets and because throwing together a quick healthy meal can be done in less than half an hour. Most of our favorite fruits and vegetables are readily available at this time of year.

Luckily, in summer, my normally ravenous appetite is not as hearty as in the fall and winter. When the weather is warm and the days are longer, I like to eat fresh and light. I usually do a lot of grilling and make side salads to go with the protein element. Heavy on the veggies and light on the carbs!

Whether you are a carnivore, vegan, or anything in between, there are always exciting ways to make food magic. Looking through food magazines and cookbooks is always fun for inspiration. Watching cooking shows or videos on YouTube is also great. There are literally thousands of ordinary people making simple, easy meals. I recommend "The Great British Baking Show." It's so fun to just curl up and see how truly creative the competitors can be in every aspect of creating food. I encourage you to find inspiration in any form and have fun. Food prepared with love is more nourishing, in my opinion.

I always prepare extra, especially grilled dishes, so that leftovers can quickly be transformed into another easy meal. Leftover grilled steak, chicken, veggies, or seafood is delicious chopped up and added to a salad. Additionally, side dishes like classic coleslaw (featured in this edition), can keep for a couple of days and are easy to add to a meal for quick nourishment and a variety of yummy flavors.

I am a funny eater. I love a variety of dishes, and I like to cook different meals by ethnicity. Sometimes I will theme my meals Chinese, Japanese, Mexican, French, Italian, or Indian. I find it fun to take little culinary journeys of my own, right in my own kitchen. If you enjoy eating, you can enjoy simple cooking to make your culinary experience exciting and different all the time. This is how I get out of the rut of cooking all my own go-to comfort foods.

Don't get me wrong; I love to eat simple and cook favorite comfort foods at certain times. It depends on my mood and how my body is feeling. Just like training as an athlete, it's key to listen to your body and feed it accordingly. I am only suggesting fun and exciting ways to mix it up and make preparing your own meals accessible and enjoyable. There is truly an easy way to have healthy home-cooked food for everyone.

EN

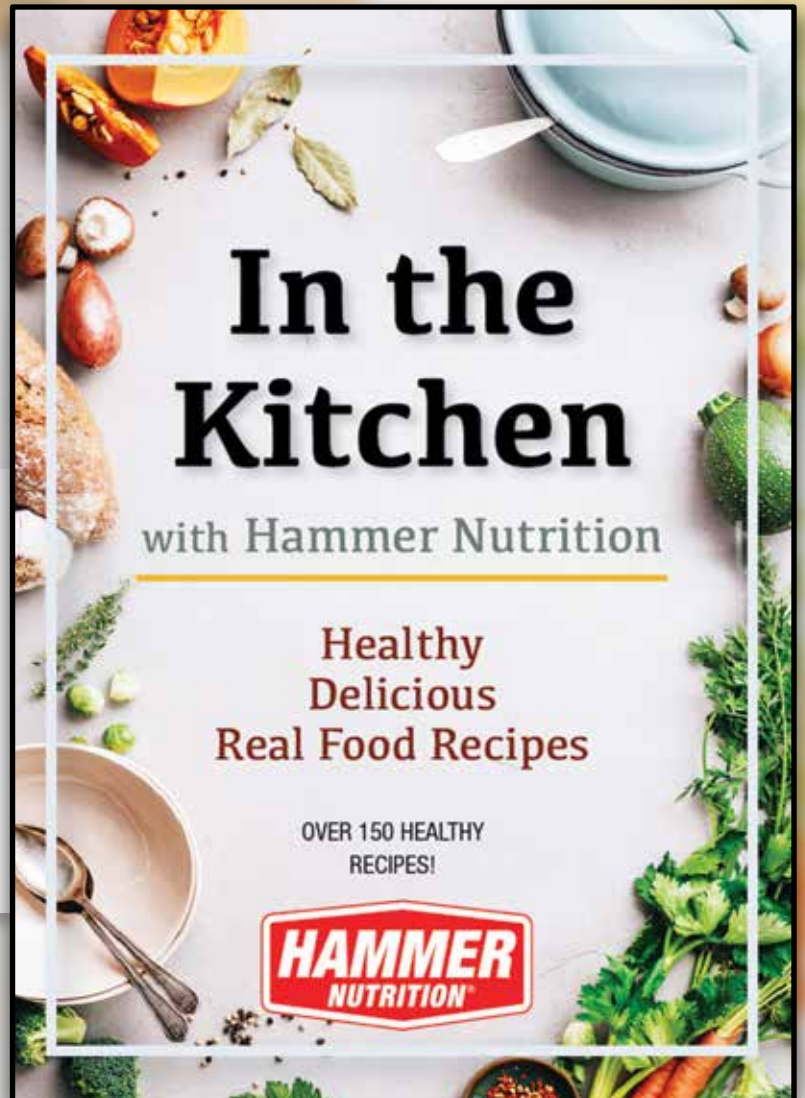


Acclaimed California-based chef Laura Labelle studied at *Ecole De Cordon Bleu* in Paris and received a "Grand Diplome" in cuisine and pastry. She has established two successful ventures, *Cafe Luna* and *Quality Food and Beverage* and also worked as a personal chef for various celebrities and

for *Mix This* music studio. Laura is an accomplished open water swimmer and enjoys practicing yoga and sharing her cooking with family and friends.

# Deliciously Healthy Recipes

Over 150 pages of healthy, wholesome, and fresh ideas that you and your family will love!



Start cooking  
the Hammer way  
today!

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FROM THE KITCHEN OF  
**LAURA LABELLE****SUMMER****Garlic Chicken  
Marinade****INGREDIENTS**

½ cup olive oil  
10 garlic cloves crushed  
2 lemons thinly sliced  
½ cup chopped cilantro  
½ cup chopped parsley  
1 tsp chili flakes  
salt and pepper  
8 chicken thighs

**PREPARATION**

Mix everything in a bowl or glass dish. Place in the refrigerator. The longer the chicken marinates, the better. I suggest 6-8 hours. Make sure to grill the chicken on low, so the oil will not catch fire and char the meat.

**Classic  
Coleslaw****INGREDIENTS**

1 cup mayonnaise or veganaise  
1½ Tbsp apple cider vinegar  
1 Tbsp honey  
1 tsp celery seeds  
1 tsp sea salt  
½ medium green cabbage, very thinly sliced (about 4 cups)  
½ medium red cabbage, very thinly sliced (about 4 cups)  
2 medium carrots, grated

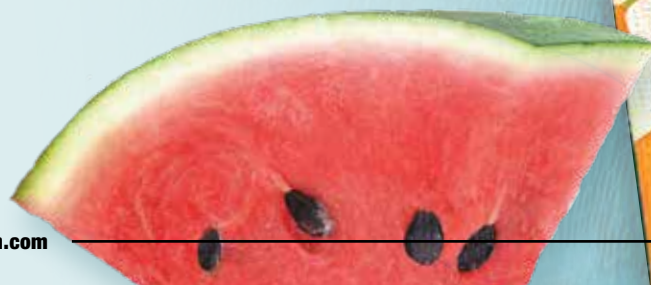
**Watermelon  
Feta Mint Salad****INGREDIENTS**

3 cups watermelon  
½ cup feta cheese  
1 Tbsp mint leaves  
2 Tbsp balsamic glaze  
3 Tbsp extra virgin olive oil  
salt and pepper

**PREPARATION**

Dice watermelon, chop mint, and crumble feta. I like to put the watermelon on a platter or in a bowl, sprinkle the feta and mint on top, and then drizzle the glaze and oil over everything. This makes a beautiful, delicious, and colorful addition to any table.

*It's summertime  
"and the eatin' is*



Time  
easy”!

Garlic  
Marinade  
Chicken

Classic  
Coleslaw

Watermelon  
Salad

# STAYING HEALTHY ALL YEAR LONG

by DR. KIRSTIN LAURITZEN, DC, MS

*“Even though there are more pressing concerns right now, it’s important for athletes and active individuals to focus on these healthy habits year-round.”*

Many patients and family members have been asking me what they can do to support their health and immune system. With chronic illnesses and viruses in the spotlight these days, especially with respect to how vulnerable we are if we have a compromised or weakened immune system, the entire concept of health is at the forefront of everyone’s mind.

One of the best ways to reduce your risk of serious illness, including chronic diseases, is to build resilience. That means, support your body’s health so that if you happen to be in danger of getting a chronic disease, either due to genetics or exposure to a contagious pathogen, you have a higher threshold (and decreased chance) for contracting an illness or developing life-threatening complications from it.

I want to remind you that these activities to strengthen the immune system are practices we can and should incorporate into our schedules every single day. Even though there are more pressing concerns right now, it’s important for athletes and active individuals to focus on these healthy habits year-round in order to avoid getting sick during peak training and competition seasons.



## HERE ARE A FEW ACTIVITIES THAT I PRACTICE ALL YEAR LONG:

### 1. The foundation of all health starts with food.

Every day I aim for 5-7 servings of vegetables in a variety of colors, 1-2 servings of fruit, and at least 4-6 oz. of protein at all three meals. I fill out each meal with starchy carbohydrates and healthy fats. Also, it is imperative to avoid sugar, alcohol, and refined carbohydrates during periods of high stress. It takes time, but mastering a solid food routine with specific choices based on your unique body and requirements is the foundation every person and athlete must have.

### 2. Maintain important supplement routines.

A majority of American adults are deficient in at least one vitamin or mineral—and this often includes athletes who, on average, require more than the “Recommended Dietary Allowance.” It’s important to test your micronutrient profiles at least yearly because they’ll shift and change over the seasons. I make sure to take a multivitamin, vitamins D and B complex, fish oil, and digestive support like prebiotics and probiotics.

### 3. Continue training and exercise.

A minimum of 30 minutes of heart rate-raising exercise is essential every single day. Intensity can vary, of course, and rest days can include walks or restorative yoga.

### 4. Try daily meditation or journaling.

Stress and overwhelming situations will never go away, and stress isn’t always a bad thing. It can help us perform to the best of our ability. Ultimately, the goal is to build up resilience so that during stressful times, we don’t tank our health and immune system.

### 5. Care for your gut.

60-70% of your immune system is in the Gut Associated Lymphatic Tissue (GALT). It plays an important role in immune system support. Hammer’s **Digest Caps** are a great way to care for your gut.

Follow some of these key steps to help build up your health and resilience for a healthy immune system year-round, especially during training and competition season. **EN**

# PREMIUM INSURANCE CAPS

Peak Health, Peak Performance



**“MY FAMILY HAS USED THIS SINCE THE 90s”**

*“I remember my dad used **Premium Insurance Caps**. My dad is still riding and racing at 71 and we 3 boys are also riding and racing at 45, 47 and 51! After 20+ years of endurance sports, we all still take these, and are still going strong!”*  
- Online Reviewer



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

**SUPER HIGH POTENCY**  
Training > 8-10hrs/wk

210 Capsules  
**\$37.95**

**HIGH POTENCY**  
Training < 8-10hrs/wk

120 Capsules  
**\$21.95**

**Mike Shaffer** crosses the finish line to win the Championship Aquabike at the LA Legends Triathlon. Photo: LA Tri Legends



(above) Hammer athlete **Jeremy Heath** finds the perfect view on a trail run in Sedona, Arizona.



Kirstin Lauritzen, DC, MS, is a Functional Medicine Practitioner in Portland, OR. She specializes in helping athletes overcome chronic illness, optimize their nutrition, and lower their risk of injury. She loves to educate athletes about nutrition and its importance in training and life. She holds a Doctor of Chiropractic, a Master of Science in Human Nutrition and Functional Medicine, two Bachelor of Arts degrees (one in Psychology and Neuroscience and one in Spanish), and a Bachelor of Science in Human Biology. She is a triathlete and CrossFit athlete. She has also been Hammering since 2011 and is training for a full Ironman in St. George, Utah. **For more information, check out her website: [gymcall.com](http://gymcall.com).**



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# AID STATION

# SELENIUM

## TRACE MINERAL SUPERSTAR

by STEVE BORN

RESEARCH SHOWS SELENIUM TO BE A POWER PLAYER IN REGULATING

- **CHOLESTEROL**
- **TYPE II DIABETES**
- **BLOOD PRESSURE**
- **CARDIVASCULAR HEALTH**
- **TELOMERE LENGTH**

Found in **Premium Insurance Caps** and **LSA Caps**, selenium is primarily known for the important role it plays in elevating levels of glutathione peroxidase, a class of antioxidant enzymes with extraordinary antioxidant properties.

Recent research on selenium is showing that it has even wider ranging benefits in human health.

A December 2019 study of participants with type II diabetes, found that supplementation with selenium—along with adherence to the Mediterranean diet—improved every aspect of cholesterol: fasting glucose, hemoglobin A1c (HbA1c), total cholesterol, high-density lipoprotein (HDL, “good” cholesterol), low-density lipoprotein (LDL, “bad” cholesterol), and triglycerides at both three and six months after the initiation of selenium supplementation.<sup>1</sup>

Dr. Dimitrios T. Karalis states, “The present study enforces the claims concerning the multiple benefits of selenium as a dietary supplement in patients with type II diabetes under the prerequisite of following the Mediterranean diet as the recommended treatment method.”

## HOT TIP

**TAKE ESSENTIAL MG DAILY!**

Supplementing with magnesium also helps lower “bad” cholesterol (LDL), reduce triglycerides, and increase “good” cholesterol (HDL).<sup>2</sup>

Another study involving 141 men and women with high blood pressure examined the effects of selenium on endothelial function.<sup>3</sup> The endothelium, as defined by Dr. William C. Shiel Jr., is “a layer of flat cells lining the closed internal spaces of the body such as the inside of blood vessels and lymphatic vessels (that convey the lymph, a milky fluid) and the heart.” Endothelial cells, which become impaired during the development of high blood pressure, control many aspects of cardiovascular health.

Subjects in this study with the lower serum concentrations of selenium were found to have significantly less flow-mediated dilatation (i.e., the widening of an artery) in the brachial artery—the major blood vessel

of the of the upper arm—as compared to the subjects with higher serum levels of selenium. This study augments other research which concluded that “selenium restores a normal metabolic profile and ameliorates vascular responses and endothelial dysfunction.”<sup>4</sup>

## HOT TIP

**TAKE RACE CAPS SUPREME EVERY DAY!**

Research has shown that Coenzyme Q10 (**Race Caps Supreme**) works together with selenium to enhance cellular function and help protect against cardiovascular disease.<sup>5</sup>

A higher intake of selenium has also been associated with longer telomeres, the protective caps at the ends of chromosomes.<sup>6</sup> The length of telomeres is considered a biomarker of aging, with shorter telomeres being associated with a greater risk of age-related conditions, such as cardiovascular disease.

## HOT TIP

**DRINK COFFEE!**


Research suggests that drinking coffee may increase telomere length.<sup>7</sup> (For more in-depth information, see our article in *EN 119* about the relationship between coffee and telomeres.)



## SUMMARY

These studies add to a growing body of research showing the multiple benefits that selenium supplies. The Optimum Daily Intake of selenium ranges from 100 mcg to 400 mcg daily, with 200 mcg daily being the amount most suggested. More is not better with selenium, so don't exceed 400 mcg on a daily basis. Some foods—mainly fish such as tuna and halibut—supply some selenium, while Brazil nuts are the richest source of this trace mineral (1 ounce contains a whopping 544 mcg).

## HAMMER RECOMMENDATION

Four capsules of **Premium Insurance Caps** (57mcg), and four capsules of **LSA Caps** (100 mcg), will supply you with an ideal amount of selenium. 

References available upon request.



# YOUR SELENIUM DREAM TEAM

# HAMMER BARS®

## Real Fuel, Ready to Roll



**"ATHLETE TESTED"**

*"These, combined with HEED® and Perpetuem®, were the perfect fueling option. No GI distress!"*  
- Online Reviewer



**FIVE GREAT FLAVORS**

**PACKED WITH HEALTHY GOODNESS**



Single Bars **\$2.50 ea**  
12 or more **\$2.25 ea**

- Reliable, long-lasting energy
- Great taste
- Suitable for all diets

Ryan Mortensen pounds the trail on a training ride in Prescott, Arizona. Photo: Luke Mortensen



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# COFFEE

## MAKE IT PART OF YOUR IMMUNE-BOOSTING ARSENAL

by STEVE BORN



Most of us coffee drinkers enjoy our morning cup (or four) primarily for the pick-me-up it gives us. However, coffee has been found to have many other benefits, as we at Hammer Nutrition have told you before:



### PROTECTS VISION, HELPS REDUCE RISK OF TYPE II DIABETES, AND MORE:

“Coffee: Wake up and Drink the Benefits!” on the Hammer Blog



### SKIN HEALTH:

“Save your Skin: Drink More Coffee!” on the Hammer Blog



### PROSTATE HEALTH:

“Coffee and Health” in the Hammer FAQs about Coffee

Another dynamic benefit that coffee provides is support for your immune system, and it's primarily because of two impressive features:

## 1 IT INCREASES THE AMOUNTS AND ACTIVITY OF A GROUP OF BENEFICIAL GUT BACTERIA KNOWN AS BIFIDOBACTERIUM SPP.

This was the finding of a study on humans who drank three cups of coffee daily for three weeks.<sup>1</sup> These bacteria perform several specific functions for many aspects of human health, such as the production of certain B vi-

tamins,<sup>2</sup> so an increase in their population and metabolic activity is an obvious benefit. More importantly, an overall increase in the healthy bacteria in the gut stimulates immune system function.<sup>3,4</sup>

With more than 70% of the body's immune cells residing in the gut,<sup>5</sup> taking every possible step to optimize the health of the gastrointestinal tract is crucial. Drinking coffee appears to be a wise strategy to employ to help support optimal GI health.

## 2 IT IS ONE OF THE MAJOR SOURCES OF ANTIOXIDANTS IN THE DIET.

The list of antioxidants in coffee is impressive—chlorogenic, ferulic, caffeic, n-coumaric acids, polyphenols, and many more.<sup>6</sup> The body of research on antioxidants and their role in reducing damaging free radicals is summarized eloquently by Dr. Adrienne Bendich:

“The harmful activities of free radicals are associated with damage to membranes, enzymes, and DNA. The ability of antioxidants to destroy free radicals protects the structural integrity of cells and tissues.”<sup>7</sup>

At Hammer Nutrition, we have always advocated the consumption of a nutrient-dense, antioxidant-rich diet, augmented with additional antioxidant supplements. Drinking coffee is an outstanding way to supply your body with numerous antioxidants that will help support strong immune system function.

### SUMMARY

Coffee is not only one of the most popular beverages in the world; research continues to show that it's also one of the healthiest. The benefits coffee provides your immune system is yet another excellent reason to drink it!

Our **53X11 COFFEE** is Fair Trade Certified, 100% organic, and flat-out delicious. If you've never had a cup, you owe it to yourself to give it a try! Available in three awesome blends (**Early Break**, **Chain Breaker**, and decaf **Down Shift**) and a 100% Sumatra (**Big Ring**), **53x11 Coffee** delivers plentiful health benefits and satisfying flavor.

EN

**IT'S PURELY GOOD  
COFFEE**

References available upon request.

ALL 53XII COFFEE BLENDS ARE AVAILABLE IN GROUND AND WHOLE BEAN!



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

# 53XII COFFEE

Hammer life to the fullest—beginning with your morning cup of joe. If you've never tasted 53x11 Coffee, you'll be a fan after your first cup, guaranteed.

Each Fair Trade Certified, 100% organic 53x11 Coffee blend is micro-roasted daily to our exact specifications and delivered fresh to your door.



*"I love 53x11 Coffee, I can not say enough about the richness combined with a smooth finish. It is like summiting a big climb and transitioning into a smooth and long downhill."*

- Online Reviewer



Join the **Coffee of the Month Club** for discounts on monthly orders!  
For more information, visit [hammernutrition.com/products/coffee](http://hammernutrition.com/products/coffee)



## THE CHAIN BREAKER

Espresso..... 12 oz. **\$13.95**

## THE EARLY BREAK

Medium Roast..... 12 oz. **\$13.95**

## THE DOWN SHIFT

Decaf ..... 12 oz. **\$13.95**

## OUR MOST POPULAR BLEND!

## THE BIG RING - Sumatra

These beans come from Indonesia, where the climate and soil combine to produce a distinctively full-bodied yet smooth coffee. 100% Sumatra beans are medium-roasted to bring out all of the richness.

12 oz. **\$13.95**



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# 5 Questions

WITH HAMMER ATHLETES



## RYAN INGHAM

### 1. Where are you from?

I'm originally from Northern California, but I live in Arizona now.

### 2. What sport do you participate in?

I participate mainly in Ultrarunning and Obstacle Course Racing (OCR), but occasionally MTB racing and Adventure Racing.

### 3. How did you get into competing?

I got out of shape after an injury. Getting back into shape and staying motivated after an injury can be very challenging at times. So I signed up for some small OCR events just to have a goal to work for. I fell in love with competing and pushing myself to see what I was capable of. That quickly turned into raising the bar after each event, looking for that next big challenge. That's when I came into Ultrarunning and found a love for running endless miles through remote mountains.

### 4. Favorite venue and why?

There are so many amazing events that it's hard to narrow it down to one favorite. If I had to, I'd say the Leadville Trail 100. It is such a beautiful area of Colorado, rugged, huge mountains, amazing atmosphere, great people, and a course that just beats you down!

### 5. Favorite Hammer products?

It's a toss-up between **HEED**® or **Perpetuem**®, and it depends on how far I'm going. **Tissue Rejuvenator** is a daily must.

### Bonus! What keeps you motivated?

The idea of being better today than I was yesterday and setting an example for my kids are huge motivating factors. I keep pushing myself not only to see what I'm capable of but also to show my kids that you need to challenge yourself, raise the bar to goals that are slightly out of reach, fail occasionally, and get back up and keep pushing. Never give up!

Ryan Ingham crossing one of the many creeks on Copper Corridor 50K's new single track course. Photo Jubilee Paige



# JEFF CUDDEBACK

## 1. Where are you from?

I grew up in Rockville, MD, a suburb in the Washington, D.C. metropolitan area. Growing up, we were a swimming family. I swam at Gettysburg College in Pennsylvania where I was a three-time Division III All American. My coach was the soccer coach and knew little about swimming. After my freshman year, I basically coached myself for the rest of college.

## 2. What sport do you participate in?

Swimming and triathlon.

## 3. How did you get into racing?

I knew I didn't want to continue with competitive swimming after

college. I was looking for some other athletic pursuit when I saw the 1982 Ironman on ABC Wide World of Sports—Julie Moss crawled to a second-place finish. I was immediately captivated by the toughness and genuineness of triathlon and determined that it was going to be my new athletic passion.

## 4. How did you hear about Hammer Nutrition?

It was a long time ago, 1990 or 1991. A friend of mine had tried Hammer Nutrition and highly recommended it. You guys were called E-Caps back then. I've been with Hammer Nutrition ever since. I met Brian Frank in person at the

1993 Triathlon Magazine Awards banquet on the Queen Mary where I was named USA amateur athlete of the year, having won the USA Nationals, International Triathlon Union Olympic World Championship, and Hawaiian Ironman all in the same year.

## 5. Favorite Hammer products?

No doubt my favorite fuel is **Caffé Latte Perpetuem**. I've been a huge fan since it was first put on the market. It is my primary fuel source in all my races! My new favorite is **Organic Vegan Recoverite**. Oh my gosh, I just love it! For supplements, **Super Antioxidant** and **Xobaline** are both equal favorites.

## Bonus! What keeps you motivated?

I do a lot of things to stay motivated. I like to train with others, especially on the bike. I change the bike course every ride. For the last three years, I have not repeated a single bike course. But most of all, I love the process of working my body back into shape. It was very difficult getting fit again this season. After Kona, I needed a BIG goal this year to get me off the couch and start working out again. I resolved to qualify for the 70.3 World and then be as competitive as possible at the Championship. I had taken 16 months off after Kona 2018. During that time, I did almost nothing and gained 15 pounds of fat. I was soft and completely unfit! Running was torture and pathetic. But I loved seeing the very small, incremental improvements. It is very satisfying to see your hard work pay off. One of the things I love best about triathlon is that it is genuine. You almost always get what you deserve, be it good or bad. Typically, you have only yourself to answer to. Currently, I am working on my running (my worst sport) and trying to make it my best discipline. I'm excited to improve my running and see how good it can be. I am at the lightest bodyweight of my career, and I feel really good this year!

FROM THE ARCHIVE: Jeff visits the Hammer Nutrition Headquarters in Whitefish, Montana. (2005)

# Mighty Power for Body and Mind!



Hammer athlete **Liz Karcz** enjoying a sunny bike ride in her cranberry kit.

In a recent blog on the Hammer website, "10 Tips to Stay Healthy Now and All Year Long," we recommended that people should augment their consumption of the best diet possible with several antioxidant supplements, including **Mito Caps**.

While the science behind Mito Caps may seem complex, the usage instruction is very simple. **Everyone should take them. Every day.** For those in need of a more in-depth explanation of the science behind Mito Caps, check out these two articles on our website:

- "What Makes Mito Caps So Essential"
- "Four Reasons Mito Caps Are a Must for Cell Health"



plies some incredibly potent antioxidants—headed up by **r-alpha lipoic acid**—that help our bodies maintain strong immunity and increase our resistance to illness. Nowadays, that's really important!

Also important these days is maintaining a positive mood and attitude, and a key ingredient in Mito Caps—**acetyl-L-carnitine**—may be a powerful ally in helping reduce the potential for depression.

Research conducted by Dr. Carla Nasca showed a link between low levels of acetyl-L-carnitine and a greater risk of depression.

This study analyzed blood levels of acetyl-L-carnitine in men and women between the ages of 20 and 70 who had been admitted to medical treatment centers for acute depression. Their levels were then compared to 45 demographically matched men and women who did not experience depression. They found that the amount of acetyl-L-carnitine in depressed subjects' blood was significantly lower. Levels correlated directly with the

level of depressive symptoms. Those with the most severe symptoms had the lowest blood levels.<sup>1,2</sup>

This has incredible implications for acetyl-L-carnitine as an aid in supporting the treatment of depression, "one of the most common severe mental health issues in the country." Professor in the Department of Psychiatry and Behavioral Sciences in the Stanford School of Medicine, Dr. Natalie Rasgon, states:

**“As a clinical psychiatrist, I have treated many people with this disorder in my practice. It's the number one reason for absenteeism at work, and one of the leading causes of suicide. Worse, current pharmacological treatments are effective for only about 50 percent of the people for whom they're prescribed. And they have numerous side effects, often decreasing long term compliance.”**

In regard to acetyl-L-carnitine, Dr. Rasgon says:

**“We've identified an important new biomarker of major depression disorder.”**

While we have known for some time that Mito Caps' benefits are wide-ranging, this adds a new dimension to the paradigm. It also may explain why some reviewers, at a loss for an explanation, simply report that the product “just makes me feel better!”

Mito Caps has long been a crucial component of the **Daily Essentials** lineup. We have recommended them for everyone—regardless of activity level—to support optimal physical well-being. This research adds additional weight to our recommendation while simultaneously broadening the expected benefits. **Now more than ever, we know you'll feel good about taking this essential product daily.** EN

References available upon request.

## MITO CAPS FOR THE MIND? YOU BETCHA!

Users of Mito Caps can expect increased energy levels, improved blood sugar stability, better fat burning, improved recovery, and many other athletic performance benefits. For general health benefits, the Mito Caps formula sup-

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33 years

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SUPPLEMENT, STILL SECOND TO NONE!



“PURCHASED OVER AND OVER AGAIN!”

“I have used *Race Caps Supreme* for over 20 years now. I believe they helped extend my career and my abilities, allowing me to continue to train, race, and to tackle events that I would never have dreamed up.” - Online Reviewer

- Prolongs endurance
- Increases strength
- Supports cardiovascular health
- Enhances cognitive function



Bruce Balch rides his way to a podium at the Red Rock Time Trial.  
Photo: Hugh Byrne.



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# FROM BUFFALO SPRINGS TO LUBBOCK


## 30 YEARS OF TRIATHLON

### “Come do it if you’ve got the guts!”

When Mike Greer first asked about hosting a triathlon at Buffalo Springs, the park manager had no idea what he was talking about. Mike knew it was an ideal venue. The course was tough, hard, and challenging. It cried out to aspiring athletes, “Come do it if you’ve got the guts!” The first triathlon at Buffalo Springs was held in 1990 with 91 people. Over the last 30 years, the race has grown and changed along with the sport of triathlon. It returns for its 31<sup>st</sup> year this summer as IRONMAN 70.3 Lubbock.

The Greer’s triathlon always attracts some of the sport’s best athletes. Mike remembers some of the triathlon greats competing in the early days. Scott Tingley, Dave Scott, Scott Molina, and Natascha Badmann all toed the line in Buffalo Springs over the years. In 1994, Mike bid for his race to become an official Kona qualifier—and got it. That was one major stepping stone in the event’s history. Another came in 1997 when Mike’s wife, Marti, came on board. She set to work making the event into an experience that celebrated the athletes. Together, Mike and Marti work tirelessly every year to create a rewarding event. What was the key to their success? Mike says, “It’s like Hammer—we always listen to what our customers are saying. We give them what they want.”

This is the second year since the race moved from Buffalo Springs to Lubbock. The new course is fast and spectator friendly. Mike and Marti expect a busy event after over 1,300 participants last year. Whenever possible, Mike and Marti bring Hammer Nutrition on board to support their events. This year Hammer will continue supporting IRONMAN 70.3 Lubbock by sending **HEED**®, **Hammer Gel**®, **Endurolytes**® capsules, and **Endurolytes**® Fizz. Marti says Hammer products help keep all the athletes safe in the heat, which can reach 114° F. “The Endurolytes are perfect for helping athletes with the heat and the wind. HEED is so much better than any of the other options!” Hammer looks forward to equipping Lubbock triathletes with the product they need before the race and on-course.

Race day offers something for everyone: the official 70.3 distance, sprint and Olympic distances, and a kid’s triathlon. Whatever distance you choose—Hammer will be there to help you get to the finish line. 



**TO LEARN MORE ABOUT MIKE & MARTI GREER, READ THEIR STORIES ON PAGES 10-11.**



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Your Muscles' Best Friend



**"FOR TOP RECOVERY, USE THIS!"**

*"Hammer Whey Protein is crucial for my recovery! I highly recommend Hammer for all athletes who want to achieve more!"*

- Online Reviewer



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- Strengthens immune system
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- Accelerates recovery

24 Servings **\$42.95**

Single Serving Packets **\$2.95 ea**

■ VANILLA ■ CHOCOLATE ■ STRAWBERRY ■ UNFLAVORED

## Start strong, finish strong!

Craig Mason successfully tackles the trails in Kettle Moraine State Park during The North Face Endurance Challenge Series Wisconsin. Photo: The North Face.



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# FROM THE

# E-CAPS™



2002

Three decade Hammer sponsored athlete and triathlon legend Bill Riley on his way to another age group win!



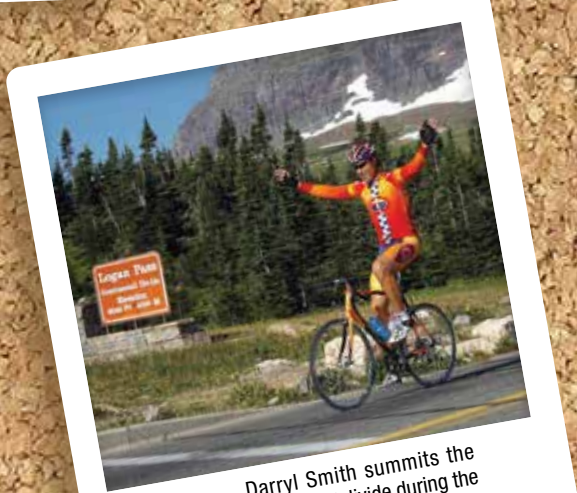
2004

Troy DeLong: expert cyclist to this day!



1978

Joe Arnone and Tom Blood on their 21 day adventure, riding all the way from Kalispell, MT to San Francisco, CA!



2006

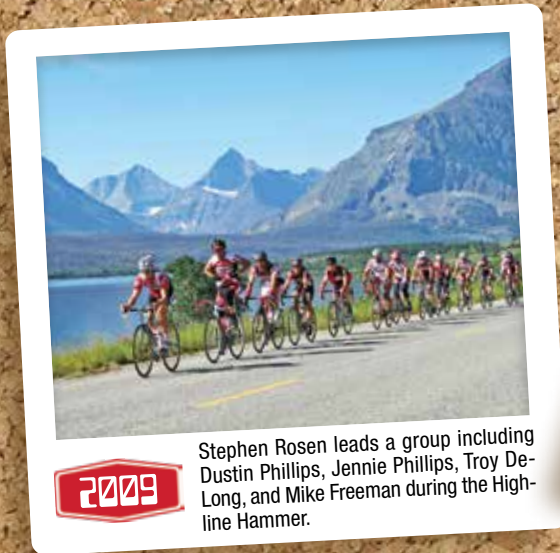
Darryl Smith summits the continental divide during the Highline Hammer.



5667



# HAMMER ARCHIVE



2009

Stephen Rosen leads a group including Dustin Phillips, Jennie Phillips, Troy De-Long, and Mike Freeman during the High-line Hammer.



2011

Suzy Degazon running at the Ultraman World Championships in Kona.



2001

Jane & Sam Tullis compete in the IRONKIDS national Championships.

Thank You!  
 To all of our Hammer Family, Friends, and Athletes for all of your support over the years!  
 - Keep Hammering!



2005

Kayleen Uibel finishes the 2nd annual Two Bear Marathon in Whitefish, MT in 3:28:36.



2022

# What Oxidation Means for You



by DR. BAYNE FRENCH, MD DC

In the last two issues of *Endurance News*, we covered the origins of the human diet and the role different types of fats play in the human diet. Most fats are good for you. They reduce appetite, raise metabolic rate, and do not clog arteries or make us fat. Some types however are right up there with sugar as something to avoid. What all fats have in common is that they are poorly understood, even by those giving nutritional advice. Please review the explanations in “Demystifying Fat: Part 1” and “Part 2.”

**A full understanding of fats requires familiarity with the concept of oxidation.** This term is fraught with confusion. It is used often, yet poorly understood by those who use it. Oxidation is a normal process of thousands of types occurring in and out of our bodies. The “ox” implies the involvement of oxygen. The older definition of oxidation involved the interaction of a compound with oxygen. The classic example is iron being “oxidized” by oxygen to form iron oxide, or rust. The modern definition is far more expansive since it is simply the loss of an electron (a subatomic particle with a negative charge), and it may not involve oxygen at all.

A specific type of oxidation of fats, called **beta-oxidation**, is the biochemical set of reactions where fat is broken down, yielding heaps of energy. But a type of fat oxidation called **peroxidation** generally describes the process where free radicals attack fats, specifically the double bonds of polyunsaturated fats. Though potentially harmful, this is also a naturally occurring process. Through normal cellular metabolism, trillions of free radicals are produced each day, and these unstable structures want to steal back an electron from something else. Even with optimal, low-level oxidation in our bodies, “rust” does occur, as evidenced by aging. Human physiology has developed numerous protective antioxidant pathways. Higher oxidation levels over time reflect a toxic condition and overwhelm our innate antioxidant capacity. Molecular damage and cell death occur from this oxidative stress, resulting in accelerated aging and disease.<sup>1</sup>

Saturated fats possess no double bonds. They are ox-

idized in our beta-oxidation pathways to yield energy, but are not pathologically oxidized by free radicals. The oxidation of polyunsaturated fats, however, is a big concern in the food industry, as this degradation affects flavor, appearance, smell, storage, and safety. Interactions with oxygen, heat, solvents, and UV light result in damage. This is commonly referred to as rancidity. **The oils you consume may already be deeply damaged and toxic prior to ingestion!** This is particularly true of highly processed vegetable oils. The vast majority of vegetable oils are processed using high heat and solvents, creating OXLAMS (damaged omega-6 fats).

Consuming OXLAMS and high amounts of omega-6 fats drives inflammation, as does a deficiency of omega-3 fats, overwhelmed natural antioxidant mechanisms, low-level antioxidant consumption from a diet with minimal fruits and vegetables, a lack of antioxidant supplementation, excessive free radical formation, and high blood sugar levels or spikes. We all recognize inflammation. It occurs when a person is stung by a honeybee or when an ankle is twisted. And we certainly feel it during those days after we swap the couch for the treadmill. **Inflammation is meant to clean up invaders, remove toxins, lay down scar tissue, and get its host back up and running.** In no way is inflammation meant to be turned on continually. Chronic inflammation promotes disease, so getting it under control is key to living a healthy life.

EN References available upon request.



Dr. Bayne French, MD DC, is Hammer Nutrition's medical advisor. Along with an MD from the University of Washington, Dr. French brings over 20 years of health experience, with a focus on wellness, to the Hammer team. Dr. French currently works at Glacier Medical Associates and is double board certified in Family Medicine and Obesity Medicine. Bayne picked up obstacle course racing in 2013. He won the Masters division of the Bigfork, MT Spartan Beast (2016) and the Monterey, CA Spartan Super (2016). He competed in the Spartan World Championship Ultra Beast in 2016 and earned a 2<sup>nd</sup> place finish in his division.

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Hammer athlete **Gabrielle Suver** on a training run, rocking her new custom kit! Photo: Gregory Vasquez



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## MATT HEALY

Hammer Nutrition South Africa athlete Matt Healy is coming off a great summer season in the Southern Hemisphere. After a top 15 finish at the Ultra-trail Cape Town 100K race, he went on to win the Addo Elephant Trail Run 76K, aka Africa's Wildest Ultra. Temperatures soared, and Matt steadily consumed **Endurolytes**® to keep his pace consistent. Almost immediately after Matt was rested and recovered from that win, all following races were canceled.

With his legs still feeling good, Matt decided to run an FKT in his own garden! He ended the day with 56K. He tuned his engine for the super hot South African heat with Endurolytes, **HEED**®, **Hammer Gels**®, **Endurolytes Fizz**, and **Hammer Bars**®. With temperatures near 45°C/113°F, he had a tough but successful run to beat the heat. Photo: Richard Pierce Photography



A letter from Hammer Client



## CHRISTIAN GATICA

“Hammer Nutrition Chile has the same excellent customer service as Hammer Nutrition USA thanks to Renato Sandoval and his team in Chile who are representatives of the brand and support it admirably well.

I’ve been practicing triathlon for just three years, having done three IRONMAN races, a Patagonman, and over ten 70.3s. I also have nearly 20 years of involvement in endurance, adventure races, such as the Eco-Challenge. The fueling for the Challenge of the Volcanoes and the Living Water always influenced my performance and the result of my individual sports!

I was introduced to Hammer Nutrition at the IRONMAN 70.3 Coquimbo 2019 expo. I was looking for a solution to bring my Coca-Cola mixed with Nuun for the run, and I met Brian Frank. After a one-hour talk, my position on fueling completely changed. We ended our conversation with the following bet: “If you give me the 48-hour fueling plan, and I get a PR on my time, I will follow your plans.” I had success at that race, and I wish to share my experience.

After reading and understanding the booklets *SOS (Secrets of Success)* and *How to Hammer*, I changed everything about my fueling. I was surprised at how simple my fueling preparation became, and I noticed the results in terms of fatigue, hunger, cramps, strength, mood, and less stress during training and in my times in competition. I still rely heavily on Endurolytes. I also take **Recoverite**® consistently and **Whey Protein** before bed for my recovery combination. I am not an elite athlete, but believe me, I searched long and hard for how to fuel my training. I finally found it and owe that to the good person of Brian Frank and Hammer Nutrition Chile. Now I am sharing it with you to fulfill my promise.

Good friends, I hope my story can help you find a real ally in the fourth sport of triathlon: Fueling!” Photo: Consuelo Escobar



From Hammer Nutrition Hungary comes one of the premier grassroots sporting magazines in Eastern Europe. Featuring interviews with racers and competitors of sports as varied as rally, autocross, trail running, martial arts, cycling, and soccer, this Hungarian magazine is a gem on the Danube River. The most recent issue features translated Hammer articles, exclusive interviews with **Joakim Brodennel** and **Marko Hietalaval**, lifestyle and cooking tips, and updates from the Hungarian endurance scene.



# FROM OUR ATHLETES

## MARK ALDRIDGE

Zion 50K Virtual Race

Mark took advantage of his open events schedule by tackling his longest run yet on his own terrain. For the Zion 50K Virtual Race, he set up a solid fueling plan:

*“Anti-Fatigue Caps 30 minutes before, with Fully Charged and one Espresso Hammer Gel. During, I used Perpetuem at 2 scoops per 600 ml of water, with Anti-Fatigue Caps and Energy Surge as needed. Post-race was 1 scoop of Recoverite immediately after, with another 20 minutes later.”* Photo: Keith Fearnow



## MARK GAUDET

2<sup>nd</sup> Place Ultra Virus 12-Hour Virtual Race

Mark hammered out 85 miles and 2nd place in the Ultra Virus 12-Hour Virtual Race. Usually an OCR athlete, Mark performed well amid a stacked field of ultrarunners. He finished just behind Mark Batres but was able to edge out Michael Wardian for 2nd place. His fuel was HEED®, Perpetuem®, Hammer Gel®, Endurolytes® Extreme, Endurance BCAA+, and Anti-Fatigue Caps. After the race, he devoured Recoverite®, Whey Protein, and Tissue Rejuvenator.



## ZACH ADAMS

Quarantine Backyard Ultra

Zach wasn't inclined to sit around and he wanted to help. He took to his treadmill to raise money. 30 miles was his record, but he set his sights on setting a new distance record of 50 miles! Fueled on plenty of Perpetuem Caffé Latte, Peanut Butter Hammer Gel, assorted Endurolytes Fizz, Zach finished with 51 miles and raised over \$2,600.



## JAMES HANSON

24-Hour Charity Ride

James answered a challenge on social media to ride 100 miles as a fundraiser. However, the challenge quickly escalated to a full 24-hour event! During his 24-hour charity ride, James broke the BikeErg 24HR Distance World Record by 46,000 meters. He fueled with 24 water bottles of HEED, Endurolytes Extreme, Hammer Gel, Hammer Bars, and some Anti-Fatigue Caps.







## JOHN BENHAM IV

### 4x4x48 Challenge

John undertook David Goggins' 4x4x48 challenge, which is running 4 miles every 4 hours for 48 hours. 12 runs and 48.5 miles later, John finished with an average of 9:14 per mile. He fueled his multi-day effort with **Endurolytes**, **Endurance BCAA+**, **Anti-Fatigue Caps**, **Premium Insurance Caps**, **Tissue Rejuvenator**, **Lemon Lime Fizz**, **Perpetuem**, **Hammer Gel**, **10mg CBD softgels**, and plenty of **Recoverite**.

## BREESE WHITE

### American River 50 Mile Virtual Race

In 1980, Breese ran the first-ever AR 50. He's run the race eight to ten times since, including the 40th-anniversary race last year. When this year's AR 50 went virtual, Breese knew he couldn't miss it. He laid out a 5-mile loop around his house since all the parks were closed. One perk of the small loop was easy access to the aid station at his house! Breese kept it fully stocked with **Perpetuem**, **HEED**, **Endurolytes**, and more to keep him running strong. Photo: Debra Cecelon





## CAN'T STOP THAT FEELING

"34 hours and 20 minutes after the start, I found myself at the finish line. Without any sleep, I was pushing the boundaries of what I thought myself capable. I had run through storms on tough, rocky trails. I post-holed through snow and found the bottom half of my body in a hidden, icy creek. I slipped through horrible mud for close to 10 miles. I experienced a lifetime of trail experiences within 34 hours and 20 minutes. This was my finish line."

- Rob Steger on his 2019 Bighorn 100

Photo: Mile 90 Photography

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## Friends don't let friends overpay for CBD!

Start referring your family and friends today! Our generous Referral Reward program is ideal for introducing all of your friends and family to the amazing benefits of CBD and getting some nice Hammer Bucks in your account! They get 15% off of their first order, and you get a 25% credit to your account.

- Aid quality sleep
- Boost recovery
- Soothe soreness
- ... And so much more!

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10 mg 90 ct <b>\$89.95</b>	<b>\$0.10 per mg</b>	Classic 250 mg 1 fl oz <b>\$19.95</b>	<b>\$0.08 per mg</b>	500 mg stick 2 oz <b>\$49.95</b>	<b>\$0.10 per mg</b>
25 mg 30 ct <b>\$69.95</b>	<b>\$0.09 per mg</b>	Classic 750 mg 1 fl oz <b>\$59.95</b>	<b>\$0.08 per mg</b>		
25 mg 90 ct <b>\$179.95</b>	<b>\$0.08 per mg</b>	Classic 1500 mg 1 fl oz <b>\$99.95</b>	<b>\$0.06 per mg</b>		

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# Endurance News

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## HAMMER CBD THE GOLD STANDARD

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Darren Parham races during the Vail Lake MTB XC as part of the California Mountain Bike Series. Photo: Erick Gonzalez