

ENDURANCE

NEWS

BY HAMMER NUTRITION

#118 January/February/March 2020

\$4.99 US / \$5.99 CAN



IN THIS ISSUE...

Decoding Sugarspeak

Your guide to the truth about sugar

The Origins of our Diet

Dr. Bayne French demystifies fat

The Perils of Loading

Brian Frank explains this common mistake

PLUS...

■ 5 New Year Resolutions for your Health

■ Spotlight: New CBD Products



Chasing Alpenglow

After the first major snowfall in Southcentral Alaska, **Cameron Sanders** and his friends broke out their fat bikes to ride in Hatcher's Pass. They trudged through miles of loose backcountry single-track fueled on **HEED** and **Hammer Gel**. Pictured here, two of the trio pedal past two skiers on Archangel Road.

Photo: @renaissance.cyclist





Welcome to the 118th issue of Endurance News!

This issue represents some milestones for Hammer Nutrition and me! I am starting my 33rd year in business and my 27th year of publishing Endurance News. Those are some big numbers, if I do say so myself. I see them as a testament to the singular goal I have had since day one: Help as many athletes as possible achieve their best performance in their chosen sport or activity and enjoy better health while doing so, one athlete at a time. I know that's a pretty long run-on sentence, but it sums up what I've been doing with my time these past 32+ years!

In terms of our focus, priorities, and plans for 2020, they are the same as they've always been: Innovate, improve, and refine everything we do. Whether it be introducing new products (Chitolean coming soon!), reformulating or improving existing products (HEED, Recoverite, and Whey Protein for starters), or implementing a new, fully integrated website and enterprise software program, I never stop looking for ways to improve your experience with us and your enjoyment of the benefits of our products.

Case in point: In 2019, we began migrating our powders to a new facility in Montana. We started with our Whey Protein and Recoverite products, and now in 2020, HEED joins the party. These products have been completely reformulated with new flavor profiles that most clients say they love, and I hope you will love them too. Of course, I realize there will be those of you who prefer the original versions, but I hope that number will be small.

These three products, in all flavors and sizes, will now carry the following statement: "Manufactured in an Informed Choice certified facility" as an interim step until the official certification logo appears shortly. For those of you who are concerned about "supplement contamination," this will provide additional assurances of what we've known all along: Hammer Nutrition products are not contaminated, never have been, and never will be.

Before signing off, I want to draw your attention to one particular article in this issue—the one I wrote on not "loading." This errant mythology causes more subpar/failed race performances than any other I have encountered! And that's a best-case scenario! For too many, it ends with an IV in their arm or a trip to the ER.

Granted, it would be great if we could store extra water and electrolytes for an upcoming depletion event. But it cannot be done, and anyone who suggests it can be giving away the fact that they don't have a clue what they're talking about!

Calories are the only thing you can "load", it's called adipose tissue or FAT. Given that even the leanest among us has hundreds of thousands of calories available for energy demands, this is a waste of time and energy as well.

And now, as one last request, please read through my New Year's resolutions article. Even if you pick only one to master for 2020, it will make a big difference in your health and performance, which is why we are here!

Enjoy the read, and then pass this on to a friend!

Happy Training,

Brian Frank
Brian

ON THE COVER: Hammer rider **Justin Bethune** leads the pack during the 30-mile Polar Roll in Ishpeming, Michigan. Photo: Ryan Stephens Photography

ENDURANCE NEWS

The informed athlete's advantage since 1993

AN EXCLUSIVE PUBLICATION OF:



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MISSION

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

OUR GUIDING PRINCIPLES

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

Education: We educate and empower athletes with free, easily accessible information on health and performance.

Principles Before Profits: Profits never take priority over our values. If it says "Hammer Nutrition," it's good for you.

OUR CORE VALUES

Innovation: Our development of new, cutting-edge products and categories has led the field since 1987.

Product Integrity: Our consumables are researched, tested, and USA-made to the strictest standards.

Read our complete mission statement online at hammernutrition.com/company/mission-statement



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In this issue, learn the latest updates in healthy eating and dieting.

Read more on pages
12, 16, 24, 40, and 46

Hammer caps as far as the eye can see, at a triathlon last year in Cumaná, Venezuela, put on by D'Bike Caracas. Photo: TriquiFotos



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The nutrient blend in **Race Caps Supreme** aids both athletic performance enhancement AND overall health.



Test your mental limits with the tough trails and 7,000 feet of elevation gain at the **Behind the Rocks Ultra**. Photo: Mad Moose Events **Learn more on page 50.**

A LETTER FROM MIKE BRUMBAUGH “Hammer products and the Hammer sci

“Thank you, Hammer, once again! ... Your recommendations for fueling were spot-on!”

Dear Hammer,

I want to let you know that your recommendations for fueling were spot-on!

I am officially a convert. At 50 years old, I have done many decades of endurance events, including big ski days, 30-plus-hour pushes in big mountain ranges, multi-day kayak trips, and too many 80-120 mile bike rides to recall. Before this summer, I had never done an actual race but had completed dozens of Ride the Rockies, Triple Bypass, Copper Triangle, Santa Barbara Century, etc., which are just rides. My usual routine for all of these was to get up an hour or so before the event; cram down some eggs, a protein smoothie, or PB&J; hope that this didn't force an unplanned trip to the little boy's room; and then head off for several hours on the bike, river, or rock (emergency pit stop halfway through a 10-hour jaunt up El Cap was by far the most fun).

Beginning this July, I jumped on the Hammer bandwagon and began every one of my rides on an empty stomach (unless it was an evening ride), consuming just a **Hammer Gel**® as I started and then downing **HEED**®, Gel, or **Perpetuem**® (and the occasional banana) every 15-30 minutes throughout the ride. In July, I rode about 850 miles plus completed a climbing trip to the Bugaboos with a blind dude, all on Hammer. No gut issues, no drama, super easy to plan, and great energy throughout!

The activity in July was in preparation for the Haute Route Pyrenees event, a seven-day stage race that most Hammer users will have heard of. The mileage wasn't a concern, as it only averages about 70 miles per day with a 15km TT thrown in on the fifth day for a “rest day.” The climbing, however, gets everyone's attention: 60-some-thousand feet in seven days—with the 15km TT easy day. As a nearly 200-pound dude, let's just say that climbing 60K feet in six days is far from my specialty. But consuming solely Hammer Gel, Perpetuem, HEED, and **Recoverite**® (along with some bananas and oranges on the course), and then lunch and dinner got me through with flying colors.

I chuckled to myself each day, listening to 550 of my newfound friends stress and commiserate over what they were going to eat for breakfast and during the race. No such dilemma for me! The cramps and gut rot that hundreds of riders had to deal with were not a problem. Hammer products and the Hammer science just plain works. It's kind of like gravity. You don't have to buy into it, it just IS. ...



Mike Brumbaugh riding to a 1st place WIN (AG) and 6th place finish overall! Mike credits his success in part to using **Hammer Gel**, **Perpetuem**®, **HEED**®, and **Recoverite**®, along with proper fueling advice from the Hammer team of endurance fueling experts. Way to go Mike - Keep Hammering!

Photo: Richard Lee

“Try it out, and your body will thank you.”

“The entire event was a great success...and worlds easier thanks to Hammer.”

SEND US YOUR LETTERS!

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

letters@hammernutrition.com

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ence just plain works.”

I finished 125th out of 500-something so I'm certainly not looking to quit my day job anytime soon, but the entire event was a great success from my point of view, and it was made worlds easier thanks to Hammer.

Fast forward a few weeks, and I got an invite to race in the Rollfast Gran Fondo in Indy. The short version is it's billed as the fastest gran fondo in the world. I traveled to Indy with about ten like-minded middle-aged guys who work for a living but like to ride. Sitting around at dinner the night before the big event, I just had to laugh once again, listening to everyone discussing their fuel strategy and breakfast plan. I definitely got a fair bit of grief when I explained that I would get out of bed about an hour later than everyone else because I didn't need breakfast. Several people didn't know me very well, and it was obvious they were refraining from just outright calling me an idiot. Surely I would bonk. No doubt I was going to cramp. Blah, blah, blah. The gun went off at 7:30 a.m. I took one Hammer Gel at the start and then two flasks of Perpetuem (two scoops each) and three Gels on the ride, and 3:47 hours later on the front of the lead pack, and I was done. Thank you, Hammer, once again!

Most of us have been told our entire lives that you've got to stuff a bunch of food down your pie hole before a big event. But just read the success stories on the Hammer Nutrition site—there IS a better way. Try it out, and your body will thank you.

Ciao,
Mike Brumbaugh

HOW TO HAMMER

Endurance Fuels and Supplements Product Manual

The **HOW TO HAMMER Product Usage Manual** is a handy resource that 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.



16 Call for expert advice from friendly people 1.800.336.1977 hammernutrition.com

Sweet Treats celebrating his first place title with all the Hammer Nutrition products.
Photo: Rob Mackintosh

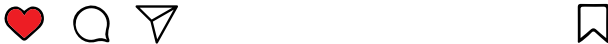
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chris_commando_666 • Follow ...



Chris Woodman and friends at Mt. Coot-tha Christmas Run early Saturday morning, and wearing felt! "Once again a great fun run with awesome people."



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Victor Sheldon: So fun! Deep mud and starting from the 69th call up in Cyclocross nations, Men's Masters 50-54. Ending the day with 5th place thanks to Hammer Nutrition!



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Joy Braun: Never underestimate the power of a run! Vanilla Gel brought along for my energy.



mtbmikehn • Follow ...



Photo: @c.o.n.g.u.i



Mikael Joya drank Melon HEED and Espresso Gel getting 2nd place at the National Downhill & Enduro Championships in Honduras! "Going to need some CBD after this beating."

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

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Samuel Courts took the win at Woolworths Cross Triathlon. *"Very pleased to see all the hard work paying off!"*
#hammerathlete

 **mattjaskol** • Follow



Matt Jaskol's top 10 Finish at SKUSA Karting SuperNationals Race in his hometown, Las Vegas, NV. *"I can't race without my morning Race Caps, Fully Charged, and Huckleberry Gel!"*

Photo: Jeff Deskins @shiftsport

— RACE RECIPE —
ERIC CHIZUM

25 HOURS IN FROG HOLLOW



"My liquid fuels were **Endurolyte Fizz** of various flavors, Lemon-Lime **HEED**, and Caffe Latte **Perpetuem**. I consumed four diluted flasks of **Hammer Gel**. I ate numerous **Hammer Bars**, protein and regular food. Most importantly, I had pre-bagged pill packets with **Endurance BCAA+** pills, **Anti-Fatigue** pills, and **Endurolytes Extreme**."

Photo: Crawling Spider Photography

FUELING RECIPE

PRE-RACE

Race Day Boost
AO Booster
Super Antioxidant

DURING

Endurolytes® Fizz, HEED®, Perpetuem®, Hammer Gel®, Hammer Bars, Endurance BCAA+, Anti-Fatigue Caps, Endurolytes® Extreme

RECOVERY

Recoverite
Tissue Rejuvenator

RESULTS

1ST PLACE OVERALL
20 Laps • 260 Miles
20K ft Elevation Gain



FEATURED ATHLETE

[EXCLUSIVE INTERVIEW] ULTRA RUNNER DEAN KARNAZES

2019 was a good year for the Ultramarathon Man, Dean Karnazes, and Hammer Nutrition. Dean and Hammer continued a longtime friendship through races, advice, and even sharing the stage at many of the North Face Endurance Challenge Series races. We caught up with Dean after he competed in the Blackall 100 in Mapleton, Australia, to ask him a few questions. Dean talked with us about his history with Hammer, the chaotic lead-up to the race, and how he fuels with Hammer Nutrition.

How did you find out about Hammer Nutrition?

My history with Hammer Nutrition goes back years and years. I met Brian Frank at university when I was finishing my graduate degree in food science. He sent me some products, and I was really impressed. At that time, I was fueling with just carbs—mostly one company's food bars. Those things were like ground-up dried fruit, and if you ate more than a couple, they would give you a stomach ache. After trying Hammer products, I realized that they actually work. I started paying attention to fueling properly and hydrating instead of using just carbs in dense form.

What Hammer Nutrition products did you use during the Blackall 100?

Before the Blackall 100, I was traveling for two months, so it was hard to take all the fuels and supplements I wanted with me. However, I still used **HEED**, **Endurolytes Fizz Lemon-Lime** (my favorite flavor!), and, of course, **Endurolytes Extreme**. What saved me at the race like never before was **Endurolytes**. I was nauseated and dehydrated from the beginning because of a stomach bug I picked up

on the long flight, so keeping my electrolytes in balance was a major concern. Endurolytes worked beautifully.

Why did you choose to run this race? Was it the reason for your trip?

I used to live in Australia in high school when I was an exchange student. I really love Australia and have been there many times. I was overdue for another trip back when I met the race director of the Blackall 100 at the Western States Endurance Run. He extended an invitation, and I gladly accepted!

What did you like the most?

The people were amazing. The support and camaraderie at the checkpoints were unlike anything I'd experienced before. It was just a whole other level of encouragement and enthusiasm. The sense of community in the Australia running scene is very strong, and the Blackall 100 is the embodiment of it all.

What do you think you could have improved for this race?

I don't think much more could have gone wrong than what happened this year. The way I look at it, things can only get better. Thank goodness for Endurolytes!



Dean Karnazes during Blackall 100 "Endurolytes" saved my race." Photo: Mark Watson @ Incite Images

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Vegan 120 Capsules **\$34.95**



Martin Crimiale tackles the trails through the Alpine Lakes Wilderness, well prepared with **Tissue Rejuvenator**, to withstand the uphill climbs and downhill blows.

Photo: Martin Crimiale

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**When you have a big event,
competition, or adventure...**

DO NOT attempt to:

LOAD carbohydrates

LOAD water

LOAD sodium



The Perils of Loading

BY BRIAN FRANK

You have almost certainly heard experts and veteran athletes say you should “race like you train” and “never try something new on race day,” right? Evidently, most athletes don’t think this applies to the days leading up to the event too. I constantly see athletes massively changing their calorie, fluid, and sodium intake just before a big endurance event, 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 you simultaneously reduce expenditures in the taper phase leading up to your event allows you to “load” all of these things as much as possible.

Hopefully, you have read our fueling booklet, 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 hope you will avoid making these mistakes this year and beyond.

⊘ **CALORIES**

We typically eat too many 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.

⊘ **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! EN

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Mackenzie Tricker conquers the first round of GNCC in Georgia.

Photo: Ken Hill

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WHEN WINNERS WIN

OLIVER ASKEW



2019 Indy Lights Champion
2020 Arrow McLaren SP
IndyCar Driver



Hey Brian,
I had the best training week of my life in Indy following these tips you sent me. My recovery was better than it has been and I felt fresh for a longer period of time through my workout. I have been in Europe at the McLaren factory testing their simulator.
I've been making a big push towards eating as many vegetables as I can add for breakfast, lunch, and dinner. I think I am feeling a difference in my overall clarity and energy levels, especially in the gym.

Thanks, Oliver Askew

Photo: Kerick Mills

MEET THE COMPETITION



DUSTY DUSTYN

2nd AG at the 12-hour Borrego Springs World Time Trial Championships

Photo: Jen Magnuson Photo



JEFF WESTPHAL

Imsa Michelin National Pilot Challenge Winner
Photo: Courtesy Jeff Westphal

CONGRATULATIONS TO ALL OUR ATHLETES!



DEBORAH BLISS



1st AG at the 6-hour Borrego Springs World Time Trial Championships



Photo: Jen Magnuson Photo

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A Hammer athlete tackles the bike section of the Loveland Lake to Lake Triathlon.

Photo: Metro Photo LLC



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“Every weekend I do 70 miles of high-intensity riding. Using Endurance BCAA+, my ‘Finishing Power’ is significantly improved. Excellent product!” - Online Reviewer



TREVOR STEWART
2019 AMA Big 6
National Grand Prix Champion
Photo: Trevor Stewart

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5
 KEY
 New Year's
 Resolutions

“For your consideration, here are some of my favorite resolutions that will have profound positive effects on your health if you follow them:”

BY BRIAN FRANK

DRINK MORE WATER

If you are not habitually drinking ½ ounce of fresh water per pound of body weight daily (60-90 ounces for most of you), you are living in a state of constant dehydration. This is not conducive to optimal health or athletic performance. Chronic dehydration strains your organs and increases joint stiffness, risk of injury, and a whole host of additional problems. To remedy this, increase your daily fluid intake by 12 ounces per week until you reach your target. This slow weekly increase will give your body the necessary time to adapt. Start each day with a tall glass of water upon rising and consume water gradually throughout the day, ceasing intake 1-2 hours before bed.

EAT LESS SUGAR

It is said that Americans eat, on average, over 150 pounds of sugar per year. Athletes who consume sugary products in training can easily double this number. A more reasonable intake would be 20

pounds per year. We can count nearly 150 ways sugar harms your health, and we know it is a leading contributor to all of the epidemic diseases we face as a nation. Don't be hoodwinked into thinking it's ok to consume sugar because you are an athlete. No one gets a free pass. Avoid sugar-laden beverages, and read labels to check for sugar content. Anything in a package or can should contain less than 20% of total carbohydrate calories from sugar, including and especially, sports products.

EAT LESS SALT

Another “white devil” in the pantry is salt. Americans consume, on average, 8,000 to 12,000 mg per day (depending on which source you check). Here again, as with sugar, athletes who use high-sodium drinks and high-sodium electrolyte supplements can expect this number to be as high or higher than a sedentary person. No matter, it's far above the 2,500/3,000 mg per day needed for optimal health and performance. High-sodium diets are directly linked to high blood pressure and all forms of heart disease. They also contribute to a host of other maladies. And again, as with sugar, no one is exempt, especially endurance athletes. If you sweat profusely and/or develop salt stains on your clothing and skin, you're eating a high-sodium diet. Drastically reducing the sodium you consume from the foods in your diet will both improve your health and drastically improve your heat tolerance while exercising. Guaranteed!

ELIMINATE ARTIFICIAL INGREDIENTS

Artificial sweeteners, colors, and flavors are common in foods and sports products even though they are toxic. No one can argue that point. Proponents simply claim the amounts are so low they won't harm you. Not true. The cumulative effects over time are a health hazard, pure and simple. Read labels and avoid products that contain any artificial ingredients.

TAKE VITAMINS

If you are not currently taking a high-quality vitamin/mineral supplement, you are living with deficiencies in key vitamins, minerals, enzymes, and phytonutrients. Doctors and nutritionists claim you don't need to take vitamins if you eat a “balanced diet,” but they are completely wrong. Where's their proof? Research? There is none. The “balanced diet” is a myth. It does not exist. One-A-Day commercials on TV even claim that 90% of Americans don't get the vitamins and minerals they require.

Adopting any or all of these resolutions will improve your health, longevity, and athletic performance. EN

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- Online Reviewer

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- No sugar crash
- Buffers lactic acid



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■ LEMON LIME ■ MANDARIN ORANGE ■ STRAWBERRY ■ MELON

Cameron Kruse and fellow explorers conquered the mountains of Nepal fueled on **HEED** while on an expedition with National Geographic.

Photo: Corey Robinson

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SUGAR SMACK

SUGAR IN DISGUISE: What they aren't telling you

By BRIAN FRANK

Reading between the lines

The “added sugars” line is finally here!

January 1, 2020 represented a watershed moment in the battle for sugar awareness and moderation. Although the legislation that changed the beloved nutrition facts panel to include the amount of sugar added to a serving was passed in 2016 and set for implementation on January 1, 2018, the sugar industry was able to push it back two years. They were also successful in delaying implementation for companies with less than \$10M in annual revenues another year, until January 1, 2021.

It's not only the soft drink industry that is unhappy about providing this information, given that more and more people are waking up to the fact that a high-sugar diet is central to all of the diseases we see today. The sports nutrition industry now has a growing PR problem, which has led to some very creative marketing/messaging. I'll have more on that in a minute.

The updated nutrition facts panel (NFP) is now required to show three numbers for carbohydrates; the first being total carbs, the second being total sugar, and the new third line being the amount of added sugars. I say this is huge for consumers because, for the first time ever, we'll be able to easily see how much of the sugar

in a serving is from naturally occurring sources and how much is coming from actual sugar that has been added.

For example, the NFP for Hammer Gel usually is as follows: 21-23 grams of carbohydrates, 1-2 grams of sugar, and 0 grams of added sugar! Conversely, the new NFP carbohydrate numbers for a can of soda pop would look something like this: 38-40 grams of carbs, 38-40 grams of sugar, and 38-40 grams of ADDED sugar. The new line showing added sugar gives you a new and convenient way to calculate your total daily sugar intake AND see how much of that is from added sugar sources such as glucose, sucrose, fructose, high fructose syrup, etc.

Armed with this new data, you can see how much sugar you are truly eating on a daily basis. The World Health Organization's recommended 25 grams per day of sugar comes out to about 20 pounds per year! Keep in mind that the average American is said to consume 150 pounds per year, and athletes consuming sugar-based fuels during exercise and training can easily double that figure.

I know, it's scary.

“This is huge for consumers because for the first time ever, we'll be able to easily see how much sugar is naturally occurring, and how much sugar is being added.”



Nutrition Facts	
26 Servings Per Container	
Serving size	1.7 Tbsp (33g)
Amount per serving	
Calories	90
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 30mg	1%
Total Carbohydrate 21g	8%
Dietary Fiber 0g	0%
Total Sugars 2g	
Includes 0g Added Sugars	0%
Protein 0g	

“The bottom line is you've got to read labels and become an expert in finding products with the least amount of total sugars and especially added sugars.”

FULLY CHARGED

Kickstart Your Workout

DON'T BE FOOLED
by all the sweet talk

Hiding in plain sight

"clean carbs"?

Now back to ...

creative messaging

Despite the fact that their products are made primarily from sugar, they never use that word anymore. No, they say it's honey or maple syrup or "clean carbs" (whatever that is?) or dried cane juice or a half dozen other confusing labels. It reminds me of an adage my Dad taught me when I was young. He said, "If you see a creature that looks like a duck, walks like a duck, and quacks like a duck, it's a duck, and don't let anyone try to convince you otherwise." I'm looking at a duck, and it's all sugar.

The bottom line is you've got to read labels and become an expert in finding products with the least amount of total sugars and especially added sugars. That's because sugar kills; and before it kills, it makes life a lot less enjoyable. Don't be in denial about how much you eat. Do your best to reduce how much sugar you

consume every day, and enjoy the amazing, life-changing benefits that a low-sugar diet guarantees. Of course, I would be remiss if I did not point out that one of the easiest ways to reduce your daily sugar intake is to avoid sugar-based sports nutrition products!



**"GO LONGER,
GO STRONGER!"**

Fully Charged has become a game-changer for me on big training days and races. It keeps my legs moving without fatigue.
- Online Reviewer

- Increases energy
- Promotes mental acuity
- Improves power output



Gabrielle Suver runs during the USAT Duathlon National Championship. Powered with a combo of **Fully Charged**, **Hammer Gel**®, **Endurolytes**® Extreme, **HEED**®, and **Perpetuem**®. Gabrielle won her age group and finished 6th overall (women).

30 Servings	\$34.95
24 Single-servings	\$34.95
6 Single-serving stick packs	\$8.95

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You ask and we listen

BY STEVE BORN

Here are answers to some of our most frequently asked questions

ASK HAMMER NUTRITION

? Are the capsules you use vegan-friendly?

Yes. We use **Vcaps**[®] vegetable capsules for all of our encapsulated products. The following quote is taken from their website:

“**Vcaps**[®] capsules are the first-generation vegetarian capsules, meeting the needs of a wide variety of health-conscious consumers. With both KO and OU Kosher and Halal certification, and certified by the Vegetarian and Vegan Action Society, they are an appealing way to address the preferences of an important growing group of supplement users who indicate that vegetarian source is important in their decision making. Vcaps capsules are non-GMO Project verified, gluten-free, and preservative-free—a clean-label product.”

QUESTIONS FROM OUR ATHLETES

? Does your Chromemate product help with sugar cravings? Are there other Hammer products that may help?

Yes, not only is chromium—especially in the polynicotinate form (**Chromemate**)—considered to be THE master nutrient for helping maintain optimal blood sugar levels, but it is also highly touted as an effective nutrient for curbing sugar cravings. A typical dose is 1 capsule before every meal, along with 1 capsule of **Essential Mg**, our magnesium supplement.

Chromium and magnesium are the perfect combination for stabilizing blood sugar levels. Another nutrient that’s great for reducing sugar cravings is the amino acid L-glutamine. A popular practice to help reduce sugar cravings, and hunger in general, is to mix one scoop of **Hammer Whey Protein** in water and consume it

10-30 minutes before a meal. Not only does the body receive a most-generous 6 grams of L-glutamine, but it also receives a nice bolus of amino acids, which, among their many benefits, help to curb appetite, and with only 70 calories per serving.

ANSWERS FROM OUR EXPERTS

? I love how Race Day Boost works, but I notice that I tend to gain a little weight during the loading dose. Is that water weight I’m gaining, and is it due to Race Day Boost?

Every 4-capsule dose of **Race Day Boost** contains 1,000 mg of sodium tribasic phosphate. In that 1,000 mg compound, there is 193 mg of naturally occurring sodium. Four daily doses—the normal loading dose protocol—will add 772 mg of sodium to whatever you’re already consuming in your daily diet, which is nearly $\frac{3}{4}$ of a gram. Over the course of the four-day load, you will ingest a bit over 3 grams of sodium using Race Day Boost.

This is where the weight gain is occurring, and it is water weight that you’re gaining. As long as your water weight gain is slightly under 3% of your total body weight, this is usually not problematic at all, though it’s not performance-enhancing either.

Therefore, taking whatever steps you can diet-wise to lower your sodium/salt intake while consuming the four-day loading dose of Race Day Boost—to accommodate the additional sodium you’ll receive from the product—is recommended.

WHEY PROTEIN

Your Muscles' Best Friend

**Start strong,
finish strong!**



“FOR TOP RECOVERY, USE THIS!”

“Hammer Whey Protein is crucial for my recovery! When I use it consistently, I notice the difference in my training and performance. I highly recommend Hammer Whey Protein for all athletes who want to achieve more!” - Online Reviewer



- Maintains & repairs muscle strength
- Strengthens immune system
- Accelerates recovery

24 Servings **\$42.95**

Single Serving Packets **\$2.95 ea**

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David Tatum finishes the Napa Valley HITS Triathlon. David PR'd by 2.5 minutes using Sustained Energy, Fizz, and Recoverite®!

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Race Caps Supreme

Start now. Stay for life. By STEVE BORN

In December of 1990—30 years ago—I bought my first bottle of Race Caps Supreme.

I can honestly say that in all the time since that first purchase, I have rarely missed a serving. That's because I did a tremendous amount of independent research on its components and realized, "Hey, this stuff's not just for enhancing athletic performance naturally; there are some awesome general health benefits attached to this product!"



THE PRODUCT YOU CAN'T BE WITHOUT

The bottom line is whether you're a full-time competitive athlete, a recreational athlete who participates in athletic events, or someone whose primary goal is to stay fit and enjoy optimal health, Race Caps Supreme is the product you can't be without! For over three decades, and counting, Race Caps Supreme has supplied benefits such as:

Higher energy levels during workouts and all day long, without the unpleasant stimulant side effects that come from the ingredients in many other supplements

Noticeable increase in endurance

Less muscle soreness and enhanced recovery after training sessions

Antioxidant support for optimal immune system function

Nutritional support to help optimize cardiovascular system health and protect against many types of degenerative diseases

A UNIQUE BLEND OF INGREDIENTS

It's the unique blend of nutrients—all working together synergistically—that gives Race Caps Supreme the ability to help power you through the toughest workouts and races, to recover more thoroughly afterward, and to provide superior protection for your body, especially your heart.

"No other athletic-specific supplement available delivers the range of benefits that Race Caps Supreme does."

THE KEY PLAYERS



COENZYME Q10 (CoQ10)

Known also as ubiquinone (from the word "ubiquitous," meaning it exists just about everywhere), CoQ10 is a vital substrate (think "spark plug") for the efficient production of energy from your food and oxygen intake.

CoQ10's importance goes far beyond athletic performance enhancement. Its role in maintaining clean, efficient energy production is crucial for optimal health, especially with regard to cardiovascular and brain health and a strong immune system.

Note:

Read more about this amazing nutrient at <https://www.hammernutrition.com/blog/more-pep-in-your-step/>

IDEBENONE

A "near twin" to CoQ10 and a superb complement to that remarkable nutrient, idebenone (pronounced eye-DEB-eh-known) has garnered "superstar" status as one of the most promising energy-enhancing, cognitive-enhancing, and potential anti-aging nutrients ever studied. It supplies many of the same benefits as CoQ10, with the unique property of being able to perform its energy producing-benefits under low-oxygen conditions.

Note:

If you're taking a CoQ10 product, that's great, but you're missing out on the enormously wide-ranging benefits that only Race Caps Supreme's CoQ10/idebenone combination provides!

THE SUPPORTING CAST

VITAMIN E

A potent antioxidant that, along with CoQ10 and idebenone, helps neutralize free radicals naturally produced during energy production.

OXY-ASSIST™

A proprietary blend of trimethylglycine and inosine, which provide benefits for enhancing oxygen utilization, optimizing fats-for-fuels capabilities, and providing additional support for energy production and acid buffering.

KREBS CYCLE INTERMEDIATES

The Krebs cycle intermediates support the citric acid (or Krebs) cycle—a series of chemical reactions used to release stored energy—by supplying precise amounts of the Krebs cycle intermediates malate, citrate, aspartate, lysinate, and glycinate, which are chelators for the minerals calcium, magnesium, and potassium. Alpha-ketoglutarate, another Krebs cycle intermediate, is included in the Race Caps Supreme formula as well.

DIGESTIVE AIDS

To maximize nutrient absorption, Race Caps Supreme contains two digestive aids. One is a blend containing eight digestive enzymes, and the other is the well-researched standardized black pepper extract Bioperine®.

Note:

Bioperine® has been shown by reliable research to significantly enhance CoQ10 absorption rates.

SUMMARY

No other athletic-specific supplement available delivers the range of benefits that Race Caps Supreme does. It continues to be the athlete's supplement of choice, withstanding the test of time in a market flooded with other products that overpromise but underdeliver. The nutrient blend in Race Caps Supreme aids both athletic performance enhancement AND overall health—a one-two punch formulated for hard-training athletes, but also highly beneficial for everyone.

Over the course of many years, my athletic performance and my overall health have been greatly enhanced by daily use of Race Caps Supreme. It is a truly remarkable, nothing-else-like-it product that ALL people—athlete and non-athlete alike—will benefit from. In fact, my 84-year-old parents take Race Caps Supreme daily. So, starting now, make it a part of your daily supplement regimen. I guarantee you will be pleased with the results you receive!

EN

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Real Fuel, Ready to Roll

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



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



★★★★★ **“DELICIOUSLY SIMPLE”**
“I love every flavor of Hammer Bar. They're tasty and made with real food ingredients so they're easy to digest. Definitely going to stock up!” - Online Reviewer

Ryan Ingham works his way up the slopes of Mt. Massive with the portable Hammer Bars keeping his energy up all the way to the peak.
Photo: Ryan Ingham

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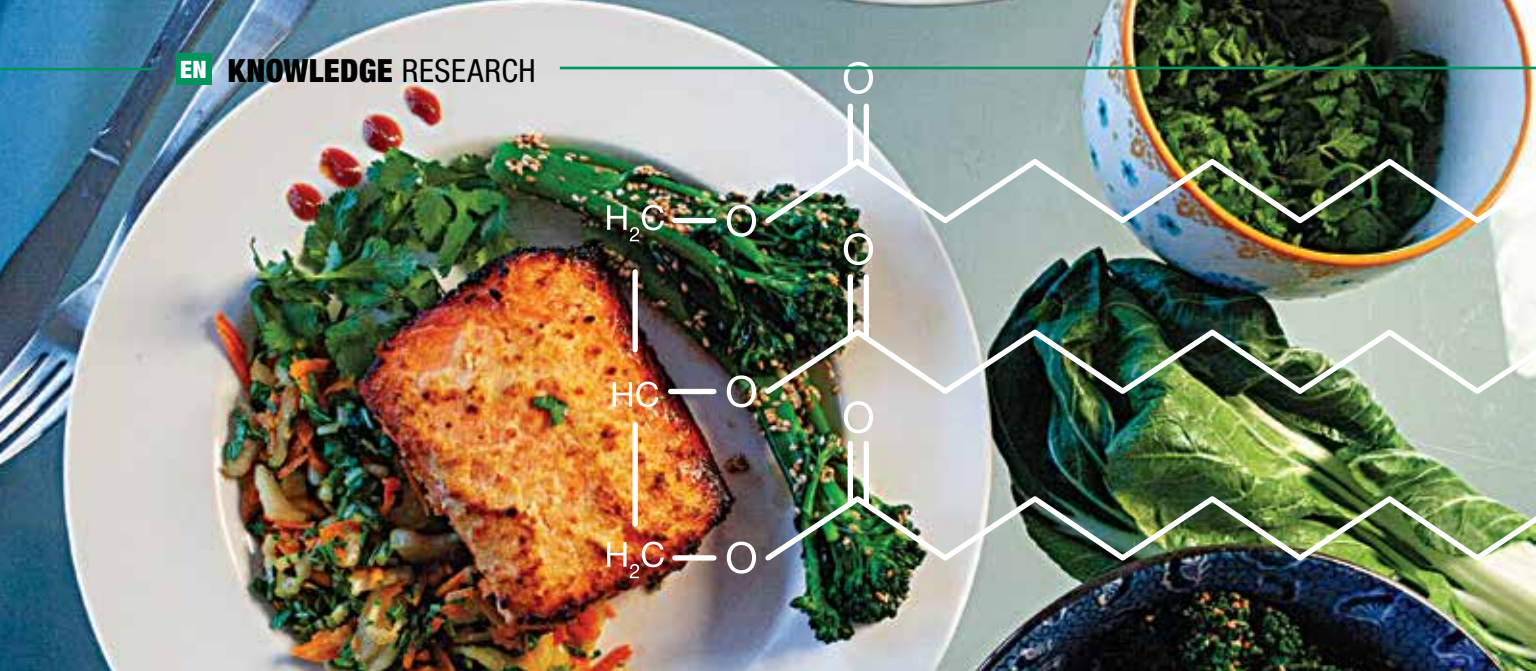
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DEMYSTIFYING FAT

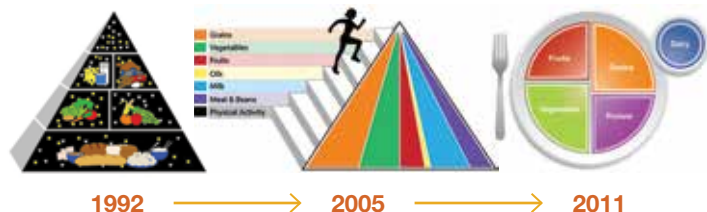
PART 1: THE ORIGIN OF YOUR DIET

BY DR. BAYNE FRENCH, MD DC

It pains me to see people spinning their wheels, exchanging years of vitality, independence, leanness, clarity of thought, and hope for years of lassitude, immobility, and polypharmacy.

Most have accepted faulty advice regarding diet, especially fat, from special interest-soaked government food policy makers and those better suited to be pill purveyors than dispensers of sound advice on healthful living. Case in point: In 1990, the obesity rate in America was 10-14%. The USDA Food Guide Pyramid came out in 1992 and was massively promoted and adhered to. At its base is the recommendation to consume 6-11 servings of bread, cereal, rice, and pasta. In 2000, the obesity rate was 15-24%; in 2010, 25-30%; and in 2017, 29 states had an obesity rate over 30%, with West Virginia leading the way at 38.1%.¹ *Go Mountaineers!* How are you feeling now about the legitimacy of that advice?

The pyramid has been replaced by the plate. Different shape, same terrible advice. And there is no mention of fats on that plate at all:



I read, re-read, and mull over. I read something else and mull further. I take histories on thousands of patients, give recommendations, document observations, and measure outcomes. And I'm always checking to see if it passes the DIMADS (Does It Make Any Darn Sense?) test. That's my Scientific Method. Nutritional research is tricky, and there's a big difference between "association" and establishing "causality."

As our species grows sicker, there simply is no time to wait for quality food studies. Furthermore, if and when they are done, validity is always a concern. There are countless examples of studies that we in medicine accepted as Hoyle, only to learn years later that they were subject to some type of bias and that the truth fell somewhere in the middle, which is where I've usually seen it drop. In addition, many studies focus on one nutrient in isolation and its effect on some outcome. But we don't eat or live that way. DIMADS?

WHAT THE FIRST HUMANS ATE

What is understandable, achievable, and valid is the study of what we as human animals ate in the past. These historical insights from isotope testing of fossilized early human bones and teeth and studying in real-time what remaining hunter-gatherer cultures are eating now can help guide us. Compound-specific isotope analysis (CSIA) is precise enough to determine that a Neanderthal bone found in France came from a breast-fed baby whose mother ate mostly meat from deer and

horses. And the Paleolithic humans who followed the Neanderthals had even higher nitrogen isotope ratios, indicating high animal protein consumption.²

This anthropological perspective, coupled with scientific investigations (recent and past), immutable physiological and biochemical pathways, and my own observations have galvanized what I feel is the optimal way for most humans to eat. Human animals are hugely adaptable. We “embraced the grind” of natural selection for millions of years, coevolving with our food.

With our relatively short gut, opposable thumbs, and big brain, we are the consummate omnivore. Part of this omnivoring is the consumption of fat, in varied forms, and likely as much as we could get.

If you’ve spent any time in wild places pursuing wild game, even with modern weaponry, you know it is not an easy prospect. On average, it is estimated that hunter-gatherers obtained one-third of their calories from animals. This made the “gatherer” part pretty important.³ Now, our hunting efforts end at the first drive-through, and we may not define ourselves as hunter-gatherers anymore, but our brain and metabolism still are.

“Human animals are hugely adaptable. We “embraced the grind” of natural selection for millions of years...

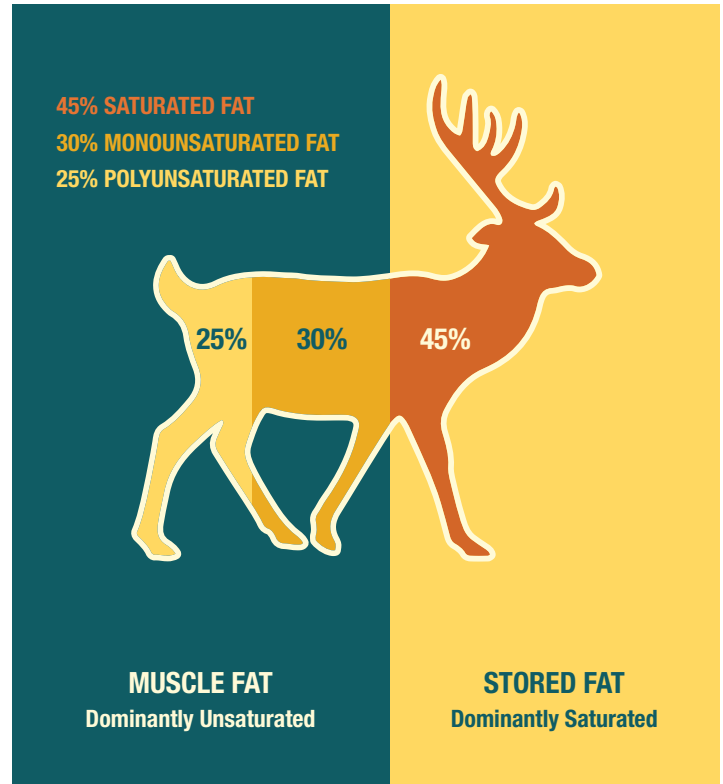
TYPES OF FATS

To understand fats, their health benefits, and their detriments, a basic understanding of their types is necessary. Fats are many structurally and biochemically distinct compounds that may be categorized into three basic groups: **saturated, monounsaturated, and polyunsaturated**. There are several types within each category, all comprised of chains of “fatty acids.” Each chain possesses linkages of carbon, oxygen, and hydrogen atoms with an acidic carboxyl group on one end. The carbon atoms are bonded to each other, resulting in different lengths. Some are held together with single bonds, and others with double bonds. These different lengths and types of bonds are what make each type of fat unique.

“The brain is primitively driving you to seek out carbohydrate.”

The University of Wyoming performed extensive analyses of the fat content of wild game (antelope, deer, elk, and bison). After trimming off external fat, approximately 45% of the total fat in the meat was saturated, 30% monounsaturated, and 25% polyunsaturated.⁴ Also, Dr. Loren Cordain, author

FAT CONTENT OF WILD GAME



of *The Paleo Diet*, and others determined that the dominant type of muscle fat of wild game was unsaturated (mono and poly), while the dominant type of stored fat of wild game was saturated.⁵

“...the future success of our species relies in part on improvements in our diet.”

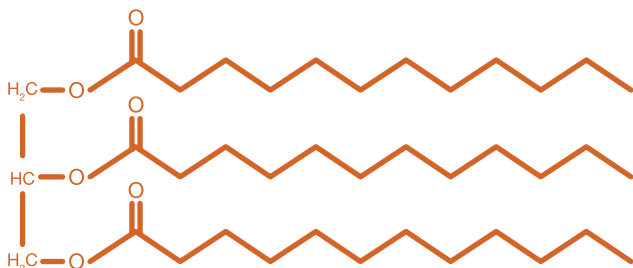
For almost the entire existence of our planetary experience, carbohydrate has been sparse. Simple sugars were found only in ripe fruit and honey. Realistically, these were rare, competed for, and guarded by venomous dive-bombers. This rarity led to our biochemical ability to *produce* sugar (glucose) from other nutrients (fat and protein) in a process called gluconeogenesis. Here’s the rub: gluconeogenesis is energetically costly. It is much easier (requires less energy) to make sugar from carbohydrate. Hence, the innate drive to seek it out. The brain is primitively driving you to seek out carbohydrate, and after eating it, quickly driving you to get more through hunger and cravings. See? You ARE a hunter-gatherer. You are programmed to be fat during times of abundance! Although this carb-seeking impetus is very natural, it is deeply unhealthy in our carbohydrate- and sugar-filled environment. **CONTINUED ON NEXT PAGE...**

FAT IN THE HUMAN DIET

About 2.5 million years ago, from the genus *Australopithecus*, humans went one way, apes another. Interestingly, that same time period of 2.5 million years ago corresponds with the first use of stone tools. **What does a chunk of granite have to do with fat?** That sediment allowed us protection while we scavenged what apex predators (predators at the top of a food chain that are not preyed upon by other animals) killed. The stone **also** provided a means to crush skulls and long bones to access FAT! There is disagreement among those I consider authorities about how much fat we evolved eating. Some would say heaps of it, others a more moderate amount. Although marbled meat is unheard of in nature, even lean wild game does contain fat. Organs, brains, and marrow are extremely fatty. Our brains grew. And when we figured out fire about 400,000 years ago, the road to jumbo brain was paved. We spread and evolved into numerous human species, of which only *sapiens* remain. I feel the future success of our species relies in part on improvements in our diet. If not, we might slowly be replaced by *Homo rotundus*.

Surrounding every single cell in our bodies (a staggering 37 trillion cells) is a lipid bilayer—two separate layers of fat linked with other molecules. Historically, this layer was thought to confer only structure to its cellular owner. Now, numerous *functional* roles of this bilayer are known, including forming a proper matrix for proteins, regulation of cell growth and cellular linking, and acting as receptors and channel pores, thus controlling the entry and exit of other molecules. The fat of the lipid bilayer is a combination of saturated and unsaturated fats. The ratio of these fats and their “health” (trans fats, oxidized fats) is of extreme importance to the vitality of the cell, and eventually the collective you.

TRIGLYCERIDES



Three separate fatty acid chains are commonly linked to a glycerol molecule, thus forming a triglyceride. This fat molecule comprises 95% of the fat we consume and is our storage form of fat, making up every single inch of our generous midsections. The three fatty acid chains may be saturated, monounsaturated, polyunsaturated, or a combination.⁶ Triglycerides are measured with a standard cholesterol panel, and the vast majority are *formed from carbohydrate* in a process called lipogenesis, driven by insulin. **We don't store carbohydrate well at all and must convert it to fat.** So, if your medical provider identifies elevated triglycerides in your blood and tells you to avoid butter, find a different provider.

In *Demystifying Fat, Part 2*, we will dive into all the types of fat. We'll cover all the ones you're familiar with and a few you've never heard of. There are mountains of rhetoric about which kinds are good for you and which kinds you need to avoid. But can you trust something you see on potato chip labels at the supermarket? Here's a brief preview of the types of fat. Next time, in Endurance News 119, we'll explore them in more detail.

TYPES OF FATS TO EAT

1 SATURATED FATS



- Saturated fat is the most contentious fat subject of them all. It is comprised of fatty acids with only single bonds (no double bonds) linking the carbon atoms together in the chain. A misguided study in the 1950s led to decades of misinformation about this kind of fat.



2 MONOUNSATURATED FATS



- This type of fat is comprised of fatty acids with single bonds and one double bond in the chain. This type of fat is widely agreed to be the most favorable for your health, and it is the primary driver behind many physicians recommending the Mediterranean diet, which is rich in olive oil.



3 POLYUNSATURATED FATS



- These are fats with single bonds and more than one double bond in the chain, and they come in two types: omega-6 and omega-3. As with other fat types, there are numerous polyunsaturated fats (LA, ALA, DHA, EPA, AA, GLA, CLA, and trans fat). Some offer myriad health benefits, and others confer an increased risk of developing disease.



SUMMARY

There is a direct relationship between how we live and the development of many diseases. We are engineered to consume certain foods, and when we do so repeatedly, we tend to remain lean and have limited need of the medical establishment. The staples of carbohydrate (all types, refined or otherwise) and polyunsaturated vegetable oil are scourges on our health. Free yourself from their grip and the abysmal advice we've all been given. It's about what you do from this day forward. **The origin of many of our modern diseases is dietary.** I have extensively read the works of Dr. Hyman, Dr. Cordain, Travis Christofferson, Dr. Davis, Dr. Perlmutter, Gary Taubes, Dr. Fung, and many others. Many of the most impactful articles I've ever read were found in the bibliographies of their books, and I owe them all a debt of gratitude. Dr. Perlmutter, in his outstanding book *Grain Brain*, states:

“Decisions about what to eat and drink have gone from habits of culture and heritage to calculated choices based on shortsighted nutritional theories, with little consideration of how human beings reached modernity in the first place.” EN

Dr. Bayne French, MD DC, Hammer Nutrition's medical advisor, competes in the Bigfork Spartan Beast. 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 2nd place finish



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RECOVERITE[®] Why Recoverite is the perfect, year-round, workout companion.

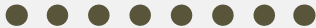
By STEVE BORN

During our meetings for this first issue of Endurance News for 2020, we were trying to decide which product to feature. When Recoverite was suggested, there was a little bit of hesitancy among some of us. “The season’s just starting—I mean, JUST starting—for a lot of athletes. Isn’t it a little early to be talking about Recoverite?”

Why? Two main reasons:

1 Early season workouts may not be as lengthy or intense, but they set the stage for the rest of the season.

These initial workouts are usually associated with worse-than-normal aches and soreness, which isn’t unusual considering we’re just starting to kick things into gear. Needless to say, if we’re not properly recovering after every one of them, we run the risk of staying sore for a longer period of time, with the additional possibility of getting sick. That’s obviously not the ideal way to start the season.



2 Right now—yes, right now—is when “carbo-loading” starts. In spite of what you may have been told about how to “carbo-load,” it does not happen in the week prior to a race. Instead, true “carbo-loading” (i.e., building up stores of fuel in the muscles) is a much lengthier process, taking weeks and weeks of both consistent training and ASAP post-workout refueling to accomplish.

The most important component of recovery

The bottom line is that the direction your entire season takes is largely determined by how well you recover during the early season workouts. And, arguably, the most important component of recovery is replenishing your body with high-quality carbohydrates and protein as soon as possible after your workout—ideally within the first 30 minutes, the sooner the better.

The fuel your body is begging for after a workout? It’s Recoverite, either the original whey protein isolate-containing formula or its newer

The truth is that right now is the PERFECT time to not only discuss, but also start using Recoverite regularly.

formulation, Organic Vegan Recoverite.

The original Recoverite contains complex carbs (maltodextrin) and whey protein isolate in an ideal 3:1 ratio. Each serving also contains three grams of the multi-beneficial amino acid L-glutamine, a full-spectrum electrolyte profile, and the key recovery-benefiting nutrients L-carnosine and chromium polynicotinate. Organic Vegan Recoverite contains the same ingredients in the same amounts as the original Recoverite formula, with the exception of organic pea protein in the place of whey protein isolate. Both formulas of Recoverite will provide your body with the nutrition it needs so that it can recover thoroughly between workouts.

Now that the New Year is here, we are all looking forward to a great season of training and racing. To make that a reality, you cannot ignore ASAP post-workout refueling, a crucial aspect of athletic performance. Adopt the mantra, “When the workout is done, it’s not really done—not until I’ve put some fuel back in my body.” So before you get out of your sweaty clothes, take a shower, stretch, or take a nap, be sure you refill the tank with Recoverite first.



RECOVERITE today, HAMMER tomorrow!

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Tested, trusted, and proven for 33 years



“ENERGY FOR DAYS!”

*“After starting **Race Caps Supreme**, I noticed an immediate and sustained increase in energy. I am super impressed with this product and it will be a staple in my active lifestyle.”* - Online Reviewer

The original endurance supplement, and still second to none!

- Prolongs endurance
- Increases energy
- Supports cognitive & cardiovascular health

90 Capsules
\$49.95

3 or more
\$45.85



Naomi Haverlick powers through the woods at Hakuba Iwatake Mountain Bike Park in Japan. Naomi never tackles the trails without Hammer fuels like **Hammer Gel**, **Perpetuem**, and **HEED**®. Photo: Jared Vigil

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YOU ASKED, WE LISTENED!

Hammer Nutrition never lets client feedback go unaddressed.

NEW
Balm
and
Tincture
Coming
SOON

NEW



Every week, we review the comments we receive to see what we need to do to improve Hammer Nutrition and make the client experience even better. Last year, we heard one thing consistently: the CBD Balm was difficult to apply.

Our team went back to the drawing board to create a product that would apply easily. The answer was clear: a smooth stick solid applicator! So today we're excited to announce Hammer Nutrition's improved CBD Balm in an easy-to-use smooth stick solid. Now everyone can enjoy the benefits it provides.

Nothing changed on the inside—the CBD Balm still offers the same myriad of benefits with the same pleasant lavender and eucalyptus scent. And it's still available in the same 2-oz. size with 500 mg of CBD.

The other thing we heard from you last year was that you wanted sample sizes! We listened to that request and came up with our new CBD Balm Stick with 30 mg of CBD. This small size is a perfect amount to give CBD balm a try, for traveling, or just slipping into your pocket. It fits anywhere! Hammer CBD also makes a Great lip balm!

Our new developments aren't just limited to our CBD Balm. We added a new size of CBD Tincture with 1500mg of CBD. Our CBD Tincture is now available in potencies of 250mg, 750mg, and 1500mg.

We hope you enjoy the advances we've made with our CBD products. We're always looking for ways to improve your experience with us.

- **CBD Balm Stick Solid \$49.95**
Convenience & improved application
- **CBD Balm Stick Mini \$3.95**
Travel / Trial size / Lip balm
- **CBD Tincture 1500 mg \$99.95**
Now in a higher dosage

The Gold Standard HAMMER CBD



Hammer sponsored athlete **Ryan Mortensen** rides a fine line on the trails of Prescott, AZ.
Photo: Luke Mortensen

Relax, Renew, Recover, Repeat

- Sleep like a baby
- Boost recovery
- Soothe soreness



**“LOVE THIS PRODUCT,
THANK YOU HAMMER”**

*“I was skeptical at first, however now that I’m taking the **Hammer CBD Softgels** I cannot imagine being without them. They relieve my aches and soreness from gym work and everyday life.”*
- Online Reviewer

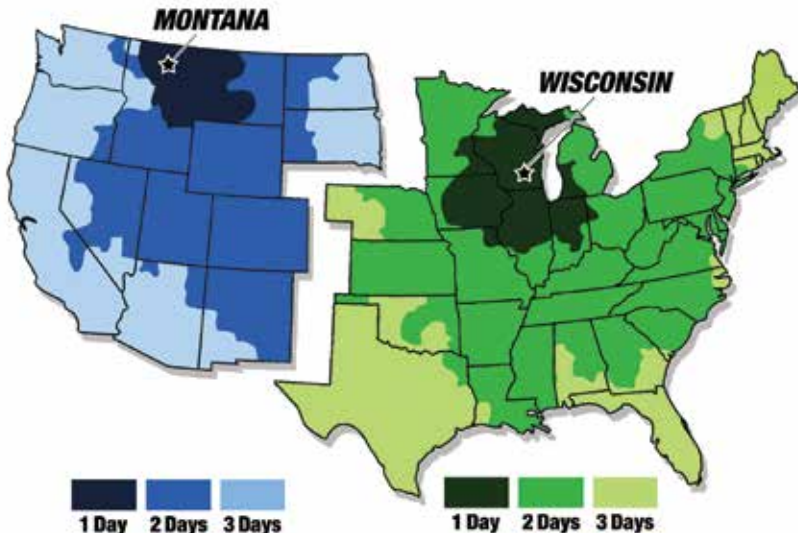
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#1 SOS 5 Secrets of Success

PRE-EXERCISE FUELING

Timing is everything when it comes to pre-race fueling. So time your pre-race meal to end no later than three hours before your event or workout. If you abide by this Three-Hour Rule, you'll achieve the following benefits:

1. **Feel “light on your feet”**—your body will devote all blood and oxygen to exercise, rather than digesting your meal
2. **Enhance your body’s ability to burn fat as fuel**
3. **Spare your body to burning through its limited reserves of stored carbohydrates**

The night before the event, choose a light, clean meal and drink water. Eat until you're satisfied, but no more. Avoid refined sugar, saturated fats, and alcohol. Don't “carbo-load” either! This practice is not beneficial, and real carb-loading takes place in choosing complex carb-rich recovery products following exercise (like **Recoverite!**).

On race day (at least three hours before you begin), eat a meal of 300-500 low-fiber, complex carbohydrates and a small amount of protein. If you need to “top off the engine” before the event starts, consume a **Hammer Gel** up to 10 minutes prior to the start for a quick burst of quality energy. **EN**



Photo: (pictured) Ricardo Cuevas

OUR FUELING RECOMMENDATIONS:

Adopt and consistently follow these pre-exercise fueling recommendations and watch your performance soar! Properly timing your caloric intake before every activity will ensure you get the most out of your time, no matter your goals, intensity, or duration of exercise.

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

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

DINNER

PRE-EXERCISE MEAL

TOP-OFF THE ENGINE

The night before your event. Eat clean and drink sufficient amounts of water. Don't stuff yourself. Eat until you're satisfied, but no more.

3 hours before your event. 300-500 calories of low-fiber, complex carbs, and a small amount of protein.

10 minutes before you start. Consume a Hammer Gel for a quick burst of energy.

When it comes to endurance fueling...

WE WROTE THE BOOK!



Get exclusive 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

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. The teams fuels on Hammer and relies on the **Secrets of Success** to give them an edge on the competition.

Photo: Barbora Krsmaru



“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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FROM THE KITCHEN OF **LAURA LABELLE**

When it's time

Small changes can add up to big results.

I have been struggling with my body image and size, healthy eating, and gluttony my whole life. I am a chef and lover of fine foods. As with many people, I've always wanted to be 15-20 pounds lighter. In my youth, I always thought I was fat. Now, in my mid-fifties, I still weigh what I did in high school.

“When I was younger, I went on every crash diet I could find. With age, I have grown to love and appreciate my curves.”

With age, I have grown to love and appreciate my curves; we can't all look like we stepped out of a fashion magazine. I do, however, occasionally let my love of delicious foods, paired with social eating, get the best of me and put on the extra pounds. Once my clothes are too tight to look good, I know I am 10-15 pounds up. That's when it's time to get serious and make changes.

When I was younger, I went on every crash diet I could find—the Beverly Hills Diet, the Atkins diet, and fasting—or whatever else was a quick fix. It was just not sustainable; I would always gain back the extra weight sooner or later.

“I decided to make only subtle lifestyle changes this time...”

And, once again, over the past two years, I have managed to slowly add that extra 15 pounds and found myself looking “stuffed” into my favorite clothes. Time to take action! I decided to make only subtle lifestyle changes this time instead of something drastic. A co-worker lost 50 pounds in three months simply by cutting out diet soda.

So, on October 1, I chose not to drink alcohol for a month and see what would happen. While I am not a heavy drinker, I do enjoy a glass of wine or two with dinner. But I am aware that wine disturbs my sleep: I wake up throughout the night feeling very acidic. Also, I do my best to avoid added sugars, as they cause inflammation, and I am aware of the high sugar content in alcohol.

I also decided to cut carbs out of my diet six days a week. I love bread, potatoes, and pasta, but at age 55, they seem to love me back by storing in fat all around my midsection! Since our bodies metabolize these starches as sugar, which is now added to most of what we eat, consciously cutting back was my goal. I wanted to make easy changes that I would be able to maintain with very little effort. My meals looked like protein and veggies mostly.

“During the first week, I shed a whopping seven pounds.”

During the first week, I shed a whopping seven pounds. I realize that this was just my body holding on to extra fluids and not actual weight loss, but wow, that's a lot. I decided to stay the course and see what the rest of the month would bring. Over the rest of the month, I lost another three pounds.

Now I have pretty easily maintained the loss and even shed one more pound. At this point, all I have to do is just not gain anything back. I do not need to do anything more to fit into my clothing comfortably. **EN**

GOAL ACHIEVED!



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.

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FROM THE KITCHEN OF
LAURA LABELLE

Lighten up! with three easy recipes that are
🌿 low cal 🌿 low carb 🌿 low fat and

100% delicious!



Gomaee Broccolini

3 Day Marinated Miso Fish

INGREDIENTS

- 4 fish fillets (salmon, sea bass, black cod, etc.)
- 2 tsp salt (kosher or sea salt; half if using table salt)
- 2 TBSP sake

MISO MARINADE INGREDIENTS

- 6 TBSP white miso
- 2 TBSP seasoned rice vinegar
- 3 TBSP sake

PREPARATION

Start by rubbing the fish with kosher salt and let it stand for 30 minutes to tenderize and preserve the fish.

Mix white miso, seasoned rice vinegar, and sake in a bowl.

Use 2 TBSP sake to rinse salt off the fish, then roll both sides in the marinade and cover, leaving it in the fridge for 2-3 days.

When ready to cook the fish, it can be pan sautéed, broiled, or baked at a high temperature.

Chef's Note: I like mine broiled; miso will burn a little, so not too close to the flame.

Bok Choy Slaw

INGREDIENTS

- 1 large head bok choy (or 2-3 baby bok choy)
- 1 bunch cilantro
- 1 bunch green onions
- 2 large carrots
- ¼ cup seasoned rice vinegar
- ½ cup extra virgin olive oil

PREPERATION

Cut bok choy crosswise into thin slivers, chop cilantro and green onions, and grate carrots. Mix all ingredients together in a large salad bowl and enjoy.

Gomaee Broccolini

INGREDIENTS

- 1 lb. broccolini
- ¼ cup toasted white sesame seeds
- 1 TBSP toasted sesame oil
- 1 TBSP coconut sugar
- 2 TBSP soya sauce

PREPARATION

Wash broccolini and cut the ends off.

In a large pot, bring water to a rolling boil and plunge the stems into water to boil for 3 minutes.

Remove the stems and immediately put into ice water to stop the cooking process. Once cooled, drain and pat dry.

Mix broccolini with remaining ingredients to make a delicious side dish, which is lovely with our Marinated Miso Fish.



Marinated Miso Fish



Bok Choy
Slaw

Healthy eating never has to be boring

CLEAR DAY

Insight for healthy living by STEVE BORN

Protect yourself against colds and flu with **CLEAR DAY**

No, that's not a typo!

Hammer Nutrition's **Clear Day** product—though primarily known for helping to protect you from allergy occurrences and alleviating allergy symptoms—contains four nutrients that many nutritional experts consider to be immune system “superstars.”

Olive Leaf Extract is one of the most potent antioxidants known, with an astounding oxygen radical absorbance capacity (ORAC) value of 7,608. Its main component is a chemical compound called oleuropein (pronounced oh-lee-OR-oh-peen), with another chemical compound—elenolic acid—found within oleuropein. This dynamic combination has been shown to have a number of beneficial properties for the immune system. Regarding olive leaf extract's powerful effects, Dr. Lisa Weinrib states,

“It's the missing link that functions as an antiviral and antiretroviral agent by slowing down the organism's reproductive cycle. A slow-down . . . allows the patient's immune system to go on the attack.”

“When allergy season is here, you'll find no better ally than **Clear Day.**”



Quercetin (pronounced KWAIR-keh-tin) is a compound that occurs in a variety of fruits and vegetables. In addition to its antihistaminic properties, quercetin is well known for its beneficial effects against aches and soreness, which is why it's in **Tissue Rejuvenator** and **Vegan Tissue Rejuvenator**. It's a potent antioxidant and powerful protector of the lungs and cardiovascular system, and research reveals it has extraordinary properties for resisting infection.^{1,2}

“...the **Clear Day** formula may very well be the most powerful immune system-boosting protection you can find.”

Bromelain (pronounced BRO-muh-lane), derived from pineapples, is the perfect complement to quercetin, as it has similar anti-irritation/soreness properties and significantly increases the absorption of quercetin. Research suggests that helping alleviate bronchitis and sinusitis symptoms may be some of bromelain's most powerful effects.³


Resveratrol (pronounced rez-VAIR-ruh-trahl), found in red grape skins, berries, and the Japanese Knotweed plant, is one of the most studied compounds to date and may have the widest range of health benefits of any researched compound.

BREATHE EASY THIS SPRING

Its antioxidant and immune system-boosting properties are without peer. According to research, "The effects of this biologically active compound on the immune system are associated with widespread health benefits for different autoimmune and chronic inflammatory diseases."⁴

“**Two Clear Day capsules twice daily provide the immune system protection your body wants and needs!**”

SUMMARY

When allergy season is here, you'll find no better ally than Clear Day. But why limit its use to just that specific time of year? The multi-beneficial nutrient quartet that makes up the Clear Day formula may very well be the most powerful immune system-boosting protection you can find. Two Clear Day capsules twice daily provide the immune system protection your body wants and needs! 

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- Helps limit allergy occurrences
- Alleviates allergy discomfort
- Makes exercise more comfortable



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Ryan Ingham uses Clear Day to breathe easy all season long on his training runs through the mountainous trails of Colorado. Photo: Ryan Ingham

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AID STATION

TOO MUCH SALT IS BAD FOR YOUR BRAIN

BY STEVE BORN

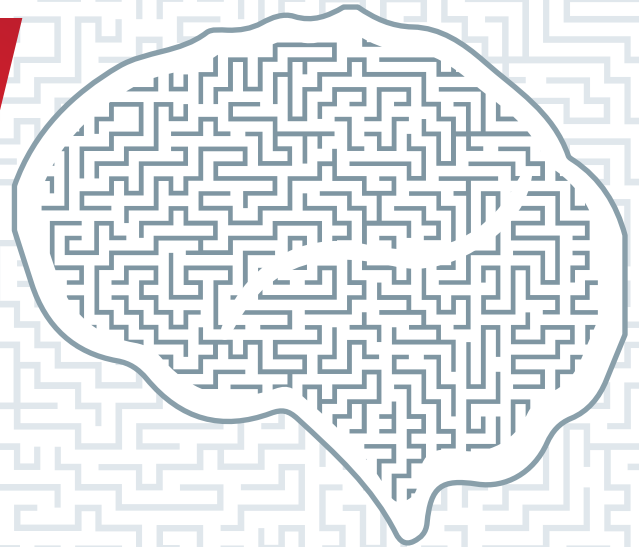
Increased risk of high blood pressure, stroke, heart failure, kidney disease, and osteoporosis—these are some of the more well-known health consequences of a diet containing too much salt (sodium chloride).¹ One health issue that you may not have heard about is cognitive impairment.

A longstanding belief has been that salt's negative impact on brain health was most likely due to high blood pressure associated with sodium intake. But recent research shows that excess salt intake can cause problems even among those with normal blood pressure.

Led by Drs. Giuseppe Faraco and Costantino Iadecola, researchers at Weill Cornell Medicine in New York investigated why salt caused deleterious effects on the brain. They fed one group of mice a normal amount of salt, while the other group received an amount of salt ranging from 8 to 16 times more than that of the first group. After two months, the mice receiving the high amounts of salt were unable to perform a number of functions, such as recognizing new objects they were presented with and building their nests. The high-salt diet mice also took longer to navigate their way out of a maze compared to the mice on the normal salt diet.

The researchers determined that the high-salt diet was causing cells in the small intestine to release the pro-inflammation molecule interleukin-17 (IL-17). Once in the bloodstream, IL-17 was shown to prevent the production of nitric oxide, a gas that signals blood vessels to relax and dilate to allow for increased blood flow. So, at first, the researchers believed the deteriorating brain performance was due to restricted blood flow to the brain. But while that decreased blood flow was indeed occurring, they found that it wasn't severe enough to prevent proper brain function.

What they discovered was that decreased levels of nitric oxide in the brain—in addition to restricting blood flow—increased the activity of a brain cell enzyme known as cyclin-dependent kinase 5, or CDK5.



This enzyme promotes the buildup of tau proteins, excess amounts of which are linked to Alzheimer's disease. **The researchers believe that healthy levels of nitric oxide not only promote optimal blood flow, but they also help protect against tau buildup and instability.** According to Dr. Iadecola, nitric oxide *“puts the brakes on activity caused by a series of enzymes that leads to tau disease pathology.”*

At the end of the study, Dr. Faraco concluded,

“Our study proposes a new mechanism by which salt mediates cognitive impairment and also provides further evidence of a link between dietary habits and cognitive function.”

Dr. Iadecola summarized,

“Although research on salt intake and cognition in humans is needed, the current mouse study is a reminder for people to regulate salt consumption. We've got to keep salt in check. It can alter the blood vessels of the brain and do so in [a] vicious way.”²

As Brian Frank appropriately states in his New Year's Resolutions article on page 16, salt is *“another ‘white devil’ in the pantry,”* and when we consume too much—as the majority of Americans do—it negatively affects our athletic performance and, more importantly, many aspects of our health. As this latest research shows, lowering the amount of salt we consume in our diet is a major step we can take to maintain the health of our brains. EN

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Ben Lustgarten charges up a hill during the US SuperTour / Canadian NoraAm race weekend. Ben took 3rd in the 10K classic, and 1st place in the 15K skate!
Photo: Doug Stephens

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COFFEE PROTECTS YOUR DNA!

BY STEVE BORN

Deoxyribonucleic acid, more commonly known as DNA, is, in the words of the National Institutes of Health, “*the hereditary material in humans and almost all other organisms.*”¹ Dr. Jill Seladi-Schulman explains why DNA is so important:

“*Put simply, DNA contains the instructions necessary for life. The code within our DNA provides directions on how to make proteins that are vital for our growth, development, and overall health.*”²

A variety of factors can damage DNA. And, as we age, that damage tends to accumulate, leading to accelerated aging of our organs and tissues, which can result in a wide range of health disorders.



Drew Silvers pouring a hot cup of **The Early Break** medium roast.
Photo: Kristina Parmalee

Obviously, we want to protect our DNA, and recent research reveals an unlikely defender against DNA damage—coffee. That’s right. The world’s most popular beverage,³ the one that many of us routinely reach for to get our day started, has been shown to protect our DNA. **In fact, this latest research shows that coffee reduced DNA damage by 23%!⁴**

In the study, 100 adult coffee drinkers first went through a four-week preconditioning period when coffee and other caffeine-containing products were removed from the diet. At the end of this four-week period, blood work was performed and analyzed for DNA damage (measured by the number of broken DNA strands). During a second four-week period, study participants consumed 500 ml (about 17 ounces) of either freshly brewed dark roast coffee or water daily. Then additional blood work was performed and analyzed for DNA damage.

The results: at the conclusion of the study, the blood work of the coffee-drinking group showed a 23% reduction in DNA damage, as compared to the water-drinking group. The researchers concluded:

“*Our results indicate that regular consumption of a dark roast coffee blend has a beneficial protective effect on human DNA integrity in both men and women.*”

This new study complements similar coffee/water research from a few years back that showed “*consumption of the study coffee substantially lowered the level of spontaneous DNA strand breaks in WBC (white blood cells).*”⁵ It also adds to an ever-growing body of research demonstrating coffee’s multiple benefits in numerous areas of human health.⁶

I don’t know about you, but I’m going to grab another hot cup of coffee. **My DNA will thank me for it!** EN

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5 Questions

WITH HAMMER ATHLETES



Troy DeLong during Furnace Creek 508. Team 2x Ichthyosaurus won duo class. Photo: Troy DeLong

1 Where are you from?

I'm originally from San Diego. Now I live in northeastern Nevada.

2 What sport do you participate in?

Currently, cycling with an emphasis on gravel and ultra-distance.

3 How did you hear about Hammer?

I had a bad bonking experience at a mountain bike race and didn't want to have that happen again. I didn't know as much about nutrition as I thought I did. I found Hammer Nutrition in my search for answers and have been using the products ever since. That was over 25 years ago!

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

My family.

5 Favorite Hammer supplement?

I use a lot of Hammer supplements, from **Premium Insurance Caps** and **Mito Caps** to **Boron** and **Chromemate**, and the list goes on. I have always loved **Endurolytes** when I race and train. Currently, I am using **Hammer CBD**.

Bonus!

What keeps you motivated?

As I have gotten older, the same things motivate me. Number one is just staying fit so I can keep doing what I love. I also want to set a good example for my son. He has started racing on the bike, and that puts a smile on my face. I also have enjoyed all the great people and places I have met along the way. I still like to race, but it's always been about having fun and enjoying the experience.

"Thank you, Hammer Nutrition, for all the years of support!" - Troy DeLong



Trevor Stewart

AMA FMF NATIONAL GRAND PRIX CHAMPION

1 Where are you from?

Rancho Cucamonga, California.

2 What sport do you participate in?

Off-road motorcycle racing.

3 How did you hear about Hammer?

When I started working with my trainer, **Ethan Jaudas**, he swore by Hammer products. I needed something that was going to make a difference in my training and athletic ability.

4 Favorite race venue and why?

The Adelanto Grand Prix. It's the first stop of the NGPC series and is an extremely packed venue. The track is always super rad, and the turnout is massive for off-road!

5 Favorite Hammer fuel?

Oatmeal Apple Hammer Bar. It contains everything I need for a healthy alternative to "snacking" and tastes so good!

Bonus!

What keeps you motivated?

Motivation for me comes in all shapes and sizes. But at the end of it all, it comes down to knowing that what we do will not last forever. I learned that at a young age and use it to my advantage because it keeps me striving for greatness in all aspects of life. If you want something, go get it. Nobody's gonna do it for you!

(pictured) Trevor Stewart Photo: @madmoosemedia

Vitamin E

by STEVE BORN

New research confirms its benefits

During the years I've been studying nutritional supplementation, I can't recall a nutrient that has received as much bad press as vitamin E. Some "studies" (I use that word loosely) about 10 or 15 years ago even suggested that high doses could decrease lifespan.

Of course, due to a number of flaws in those studies, that research has been called into serious question, with many nutritional experts advising that it's completely invalid.¹

these studies, Chinese researchers found an 11% decreased risk of bladder cancer for those whose vitamin E intake was the highest compared to those with lower intakes.²

ALZHEIMER'S DISEASE,

In an abstract published in *Nutritional Neuroscience*, researchers began by noting, "Findings from observational studies and clinical trials on the associations between vitamin E and dementia remain controversial." Then they explained, "Here we conducted a

Lead researcher, Stephanie Ashley, noted that other studies "have demonstrated the beneficial effects of vitamin E supplementation on various markers of inflammatory stress, cellular signaling, and immune function in humans and its influence on Alzheimer's disease-associated pathology."

MORTALITY

In a large comprehensive analysis of the association between circulating vitamin E and long-term mortality, 29,092 male smokers participated in the Alpha-Tocoph-

“These studies add ammunition to the ever-increasing body of research showing that vitamin E supplementation has multiple positive benefits.”

Still, even though the research since then has been quite promising, taking vitamin E supplements seems to be a "gray area" in terms of whether or not it's truly beneficial.

I hope that stance will head in a more positive direction now in light of a wealth of new research showing that increased vitamin E intake and higher vitamin E serum levels are associated with a number of beneficial areas in human health.

BLADDER CANCER

New research—a meta-analysis of three randomized clinical trials and eight cohort studies—was reported in the *International Journal for Vitamin and Nutrition Research*. After analyzing the data from over 575,000 participants in

meta-analysis to determine the difference in blood tocopherol levels between patients with Alzheimer's disease (AD) or age-related poor cognitive function and healthy controls."³

After reviewing data from the 31 articles used in the meta-analysis, the researchers found that men and women participants with AD or other age-related cognitive deficits and impairments had lower serum levels of alpha-tocopherol (the most common form of vitamin E) compared to the healthy control participants. They concluded, "Lower alpha-tocopherol levels have a strong association with AD and mild cognitive impairment, supporting evidence for the role of diet and vitamin E in AD risk and age-related cognitive decline."

erol, Beta-Carotene Cancer Prevention Study, which took place from 1985 to 1988. The men were ages 50-69 at the time. When they enrolled in the study, their serum vitamin E levels were measured. Then the men were followed for up to three decades—through the end of 2015. During that time, 23,787 died, most from cardiovascular disease and cancer.



**Supports
cognitive
brain
function
and cardiovascular health**



E for Everyone

Researchers reviewed the data over this 30-year follow-up time. They found the following: “The men with higher serum alpha-tocopherol levels had significantly lower all-cause mortality and significantly decreased mortality from cardiovascular disease, heart disease, stroke, cancer, respiratory disease, and other causes, with risk reductions from 17% to 47%” as compared to the men whose levels were in the lowest 20%.

The researchers concluded: “This large prospective cohort analysis with over 30 years of observation provides strong evidence that men with higher vitamin E status (i.e., serum alpha-tocopherol) experience significantly lower overall and cause-specific mortality for CVD, heart disease, stroke, cancer, and respiratory disease. The associations observed during this long-term follow-up were independent of several other important mortality risk factors.”⁴

SUMMARY AND SUGGESTIONS

These studies add ammunition to the ever-increasing body of research showing that vitamin E supplementation has multiple benefits. Still, there are some who believe that higher vitamin E intake is unnecessary and may, in fact, be detrimental. Dr. Bill Misner suggests otherwise, stating, “The only warning for limiting vitamin E intake is if you are taking a prescription anticoagulant. In that case, you should follow your physician’s counsel. The therapeutic dosage of vitamin E commonly used by athletes seeking to prevent free radical damage during and following exercise is 1,200 IU per day. Dosages of up to 3,200 IU of vitamin E have been used daily in a wide variety of subjects for periods of up to two years without any unfavorable side effects occurring.”



FOR ALL OF THESE REASONS


this important vitamin exists in a few Hammer Nutrition products. It’s important to remember that your body will be depleting vitamin E as it neutralizes free radicals and performs its other functions. In other words, you’re not storing all the vitamin E you’re ingesting, but rather using it up as it completes its antioxidant work (donating part of its molecular structure to counteract the negative effect caused by free radical production and accumulation).

Let’s say, on a daily basis, you are taking (for example):

- 4 *Premium Insurance Caps*
- 2 *Race Caps Supreme*
- 2 *Mito Caps*
- 1 *AO Booster*

Delay cognitive decline and cellular aging.

Each capsule of **Premium Insurance Caps** supplies approximately 57 IU of vitamin E (d-alpha-tocopherol); each capsule of **Race Caps Supreme** supplies 133 IU; each capsule of **Mito Caps** supplies 12.5 IU; and each capsule of **AO Booster** contains approximately 10 IU (as part of the tocopherol “matrix” in the product).

That means you are consuming approximately 529 IU of vitamin E. The Optimum Daily Intake (ODI) for vitamin E is 400–1,200 IU daily. I 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 of even more than 1,200 IU daily is rational. 

Vitamin E has many benefits including:

- Maintaining cell membrane integrity and helping to reduce cellular aging
- Acting as a fat-soluble free radical scavenger
- Maintaining healthy platelet aggregation
- Protecting ocular (eye) health
- Helping to delay cognitive decline
- Enhancing immune function



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Photos: QnD and Wildglass Photo

REVIVING RACING IN SAN DIEGO

Victor Sheldon never set out to pump life into the mountain biking scene around San Diego. His passion and career were professional jet skiing. But a single conversation with friend Kurt Gensheimer, aka The Angry Singlespeeder, changed all that. Victor and Kurt realized the void around mountain biking in San Diego—the scene wasn’t great and nothing was consistent. Together they hatched a plan to provide mountain bike races for everyone: short, fast, and with lots of dirt. Seven years later, Quick n’ Dirty Mountain Bike Racing is revolutionizing the sport in San Diego.

Today, Quick n’ Dirty (QnD) hosts hundreds of cyclists at each of their events, with record numbers of women and children competing in 2019. Their first race, however, started with just 75 riders. Victor focused on creating a fast, professional event that would keep people coming back. Word spread quickly, and more people starting coming. **“You have to build it, and then people will come,”** says Victor. **“We created a mountain biking culture.”** The culture was built on three

bedrocks at the events: a good course, a fun time, and great organization. Above all, Victor made sure the people were treated well.

Brian Frank was one of the first people to get behind Victor’s vision. Victor and Brian met at Interbike, where Victor told Brian of his plans for QnD. This wasn’t Hammer’s typical event. Since QnD was offering short intensity races, it didn’t fit the mold of Hammer’s usual endurance events. However, Brian saw the vision and the primary goal: get more people on bikes. Soon after they met, a shipment of **HEED**, **Endurolytes**, and **Hammer Gel** made its way to San Diego.



Victor and his wife Piper at the 2019 QnD podium.

Over the last seven years, QnD has grown and now hosts big-name events such as the Sagebrush Safari, the Filthy 50, and the Dirty 30. At each event, the air is filled with a spirit of camaraderie. There’s good music, wonderful stories, great givebacks for the riders, and Hammer products at every aid station. It’s hard to say what’s in store for Victor, Hammer, and QnD next. But one thing is for sure: there will be more people on bikes!

There’s good music, wonderful stories, great givebacks for the riders, and Hammer products at every aid station. It’s hard to say what’s in store for Victor, Hammer, and QnD next. But one thing is for sure: there will be more people on bikes!

HAMMER GEL[®] Real endurance fuel, not candy.



“HAMMER GEL WORKS PERFECTLY FOR ME”

“*Hammer Gel has even and predictable energy supply without spikes or crashes and is absorbed without stomach upset. I can ride all day thanks to Hammer Gel!*”
- Online Reviewer

- Smooth, sustained energy
- No sugar crash
- Deliciously convenient

26 Serving Jugs **\$19.95**

Single serving packets **\$1.40 ea**

*Ask about our convenient, custom Gel Flask.

Hammer athlete **Andrea Koenig** powers up a steep rock face in the Canadian Rockies.

Photo: Simon Meis



- | | | | |
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| ■ CHOCOLATE | ■ NOCCIOLA* | ■ RASPBERRY | ■ PEANUT BUTTER |
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WE SUPPORT



From incline to descent and across the long trek, Hammer

Whatever your sport, you'll find plenty of challenging Hammer Nutrition-sponsored events to choose from this spring. We already have over 200 events on our calendar for the upcoming months, covering practically everything associated with endurance. And more requests for sponsorship support are pouring in daily.

BEHIND THE ROCKS ULTRA

March 21, 2020 • Moab, UT

For all trail runners seeking a break from the snow, head to Utah for one of the best introductions to trail running the desert can give you! Test your skills on single- and double-track, desert sands, and the famous red slickrock that Moab is known for, all the while enjoying views of the La Sal Mountain Range. Wild and remote parts of the course will test your mental limits, while trail conditions and 7,000 feet of elevation gain in the 50-mile race will provide plenty of climbing to make this one of the toughest courses put on by Mad Moose Events. Behind the Rocks is the final race in the Triple Crown

of Moab challenge, a series in which participants can choose a race distance and compete for the top finisher prizes. Hammer is partnering with Mad Moose Events for the 6th year. Count on the fact that the aid stations will be fully stocked with **HEED**, **Hammer Gel**, and **Endurolytes**. If you want to see whether your early season training has paid off, sign up for Behind the Rocks to find out!

Mad Moose Events, directed by Justin and Denise Ricks, hosts several notable races through the year between Utah and Colorado, including Red Hot 55K, the Pueblo Marathon, and Pikes Peak Ultra. For a full list of ultramarathon adventures, visit madmooseevents.com



Running Behind the Rocks in Moab.
Photo: Mad Moose Events

OUACHITA CHALLENGE

March 28-29, 2020 • Oden, AR

One of the oldest events in Arkansas, the Ouachita Challenge is an exciting, fast-paced mountain bike touring race over 60 miles of the scenic Womble Trail in the Ouachita Mountains. Returning for the 8th year with Hammer, this race is fully stocked with **HEED**, **Hammer Gel**, and **Endurolytes** that the cyclists need to finish strong. For those looking for a mix of steep climbs and technical trail, great aid stations, and a first-rate director, Scott Hopkins, as well as an energetic team of supportive volunteers, consider this great spring race to experience all of the above!

Visit ouachitachallenge.com for race and registration details.

Ouachita Challenge

60 mile mountain bike tour & race



Ouachita Challenge riders get down and dirty!
Photos: Dewayne Holloway, Montgomery County News

YOUR SPORT

UPCOMING EVENTS

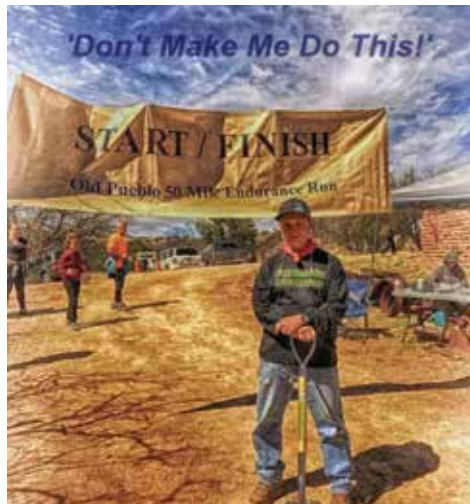
applauds your rock-steady success mile after mile!



OLD PUEBLO ENDURANCE RUNS

March 7, 2020 • Sonoita, AZ

If you think the Santa Rita Mountains sound like a beautiful place to run one of the oldest ultras in Arizona, look no further than the Old Pueblo Endurance Runs directed by Bob Bachini and pick your distance: 25, 50, 75, or the 100-mile race. Every distance is supported with Hammer products like **Hammer Gel**, **HEED**, and maybe even some **Fully Charged!** As the route begins and ends at an old mining site, runners will be treated to a little bit of



Race Director Bob Bachini. Photo: Margaret DeHesse & Kerry Whelan

history while making their way through the looped course and crossing Jerry's Pass at over 6,000 feet! With the looming 9,452-foot Mt. Wrightson overlooking the course, this race will make you feel like you're stepping back through history... or rather, running back through history, and is sure not to disappoint. For registration, go to **oldpueblo50.com**

At this event, Hammer Nutrition will supply runners with a reusable SpeedCup to fill at aid stations.

J. Liggett tames the Old Pueblo trail. Photo: Steve Williams

Renegade Rambler

Greenville, Texas

2.29.20

facebook.com/events/375709803309299

Sierra Vista Trail Run

Las Cruces, New Mexico

2.29.20

ultrasignup.com/register.aspx?did=72947

Mountain Bike Showdown

Roseville, California

3.8.20

totalbodyfitness.com

Labor of Love

Las Vegas, Nevada

3.21.20

calicoracing.com/events/labor-of-love/

Dirty 30 Gravel Bike Race

Grand Rapids, Michigan

3.28.20

dirtythirtygravelgrinder.com

Scratch Ankle Gravel Grinder

Munson, Florida

3.28.19

chainbusterracing.com

17th Annual Spring Bartlett Lake Olympic & Sprint Triathlon/Duathlon

Phoenix, Arizona

3.29.20

trifamilyracing.com

Saluda Roubaix

Leesville, South Carolina

3.29.20

100percentgive.com

33rd Mudslinger Classic

Blodgett, Oregon

4.4.20

mudslingerxc.com

Hungry Mother 25K & 50K

Marion, Virginia

4.4.20

smythchamber.org/hungry-mother-ultra

Rage Triathlon

Lake Meade, Nevada

4.4.20

bbsctri.com/rage

Dirty Dixie Gravel Grinder

Sylacauga, Alabama

4.4.20

southernfriedrides.com

Shenandoah Epic Adventure Race

Bentonville, Virginia

4.18.20

adventureenablers.com



INSIDE CAMERON KRUSE'S

NEPAL EXPEDITION



BY CAMERON KRUSE

Photos: Corey Robinson & Cameron Kruse

In October of 2019, we set out on a National Geographic-supported expedition to the Mustang District of Nepal to document the story of a group of climate refugees (people who were forced to leave their homes because of changes in the environment). North of the Annapurna range, the Mustang District is one of the most remote areas of Nepal, and until 2008, it was a forbidden kingdom off-limits to outsiders.

Our story focused on the village of Dhey, a community nestled up against the Tibetan Plateau high in the Himalayas. The village of Dhey is cut off from the developed regions of Nepal, and it maintained a self-sustaining lifestyle for centuries. But, over the past few years, changes in the climate included rising temperatures and decreasing snow and rain, along with glacier retreat. The resulting scarcity of water and loss of pastureland made it virtually impossible for the villagers to continue their agricultural practices and feed their livestock.

Collectively, the residents decided they needed to move the village down toward a river valley and trade in traditional agriculture for apple, apricot, peach, and walnut farming.

While in Nepal, our team shot a short film, still photos, and content. Our goal is to create a digital experience on the adaptations of the villagers and how they are charting a course for communities working to find balance on a changing planet.

During our time in Nepal, we were fueled by several Hammer Nutrition products: **Hammer Bars** and **Hammer Gel** frequently served as breakfast when we were running up hills to shoot content during sunrise; **Endurance BCAA+** supplemented a diet heavy in white rice and lentils (dhal bhat); and **Endurolytes Fizz** helped us stay hydrated while adapting to elevations over 16,500 feet above sea level. Staying healthy and nourished while on an expedition is always a challenge, but Hammer products made this much easier for our team this time around. EN



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*"I run ultras and the **Hammer Bergamo Tee** is my race day shirt. It is absolutely comfortable, whether you're going 5 miles or 50. I've never owned another running shirt this good."*

- Online Reviewer

Rachel Monaco-Wilcox crosses the finish line in style and comfort at the Ice Age Trail 50K.

Photo: Mile 90 Photography



Cameron Kruse is a National Geographic Explorer and Creative Technologist in Booz Allen Hamilton's Strategic Innovation Group. Day to day he works on multiple rapid prototyping efforts within the AR/VR and AI space. Cameron has led three expeditions with National Geographic. In addition to his technology work Cameron struggles to climb large rocks in Yosemite and gets out trail running as much as he can. Follow Cameron on social media [@camkruse](https://twitter.com/camkruse)



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MY FIRST *IRONMAN 70.3*

IN JULY OF 2019, I COMPLETED MY FIRST HALF IRONMAN, AND IT WAS AN AMAZING EXPERIENCE.

Many people have asked me what my training was like and the nutrition approach I used, so I'm going to share that with you today.

BY DR. KIRSTIN LAURITZEN, DC, MS

I took a different approach to training because I'm a chiropractor and I work with athletes on Functional Medicine and Nutrition. Part of my decision was based on the time I had available to train, but also to keep my body from breaking down and to avoid injuries. When I started training, I was primarily a CrossFit athlete, so I had a lot of endurance to build.

For most of my training, I didn't run 7-10 miles weekly and cycle 50 miles frequently. Only a few of my workouts were longer swims, runs, and rides. Most of my training was short, high-intensity interval

training. High-intensity exercise in shorter periods of time can have beneficial effects on long-distance endurance.

I handled all of my nutrition. Throughout training, my nutrition was predominantly "paleo." My meals were mainly animal protein, lots of vegetables, starchy carbohydrates, some fruits, nuts, and seeds. I avoided most alcohol, dairy, wheat, and sugar throughout the year.

About three months before the event, I completed a squat workout, and I was sore for almost two weeks. With all of my training, this was unusual, and I knew something was wrong. I pulled a functional lab and discovered nutrient deficiencies that are common for athletes, despite my balanced nutrition. Some slight tweaks to nutrition fixed the difficulty in recovery and gave me an even deeper insight into the effects that nutrition can have on our performance. It also reminded me how important it is to test periodically throughout a season.

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“BEST ELECTROLYTES OUT THERE!”

“Endurolytes Fizz is the best electrolyte drink. I’ve been using it for years and I love it!” - Online Reviewer



(left and above) **Kirstin** finishing strong at Ironman Canada. Photos: Jaeson Lauritzen

At about one month before the event, I cut out all “inflammatory” foods strictly in hopes that it would help reduce any pain I might experience during the event and speed up recovery.

For the event, I used Hammer Nutrition’s **HEED**, **Endurolytes Fizz**, and **Hammer Gel**, and post-workout, I used **Recoverite**. I made sure to have some solid food on my bike, which included a gluten-free peanut butter and jelly sandwich.

I finished the event and was back in the gym after two days of recovery and have my eyes set on becoming an Ironman in 2020! 🏆



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.**



- Prevents cramps
- Encourages steady fluid consumption
- Virtually calorie & carbohydrate free



Steven Terry runs the 50K race at the North Face Endurance Challenge Series in San Francisco. Fueled by his favorite Hammer products, Steven podiumed in his age group.

Photo: North Face

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FROM OUR ATHLETES

ONE MILLION FEET OF CLIMBING ON 1 HAWAIIAN ISLAND



ROB ANDERSON: ONE MILLION FEET



“On my last ride to climb one million feet (305.000 m) on the bike in one year!”

Photo: Rob Anderson

Rob Anderson has called the island of Maui home since 1985. Since 2002, he’s used and sold Hammer Nutrition products with Donnie Arnoult at Maui Cyclery, in the picturesque town of Paia. It was at Maui Cyclery where Rob came into contact with Brian Frank, who was visiting the island for XTERRA World Championships.

“...Hammer Nutrition was a big part to help me get a million feet of climbing. No sick days and only one day all year that I felt a little iffy in the morning. Thanks for keeping me healthy, fueled, and recovered!”



To complete tens of thousands of miles since then, and altogether during 2019, Rob relied on the full Hammer Nutrition catalog of supplements, fuels, and recovery products for his tours and explorations of the island of Maui, Hawaii. Climbing over 2740 feet every day on average, Rob drank **Perpetuem**® or **HEED**®, Espresso **Hammer Gel**, and **Endurolytes**® on the bike before recovering with **Recoverite**®, **Super Antioxidants**, **Antioxidant Booster**, and **Xobaline**.

CAMRY PENROD

1st place in her Age Group at Spartan Texas Beast & Spartan Texas Sprint

She won her age group in both of her final races for 2019! Camry reflected that these “were two of the best races I ever ran.” Camry fueled with **HEED**®, **Endurolytes**®, **Hammer Bars**®, and **Vegan Recoverite**®.

“This kept me at my peak and feeling good, I don’t really remember ever hitting a ‘low’ point!”

Camry looks forward to 2020, which will be her first season as a Hammer Nutrition Sponsored Athlete.



PRESENTED BY:
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ADRIAN REYNOLDS

Sub-10 hour Ironman at Ironman Barcelona (9:55)

Adrian achieved his first sub-10 hour Ironman at Ironman Barcelona! He dialed in his fueling with the help of Hammer and used **Perpetuem®**, **Hammer Gel®**, **Endurance BCAA+**, **Anti-Fatigue Caps**, and **Endurolytes®** to power his new PR. Adrian wrote to say,

"The plus for Hammer was the following:

- Zero hunger
- Zero cramping
- Zero gastric distress
- Perfect supply of energy
- Dream marathon with 5:22 km average

And a sprint down the carpet. At 51 that's all one can ask."

Photo: FinisherPix

JEN RESCHKE

Wins: Colt State 1/2 Marathon & Rhode Island Masters 1/2 Marathon Championship

Jen races as a professional triathlete, but still finds time to compete in running events. She worked with her coach to dial in a winning fueling plan: **Fully Charged** beforehand, an **Espresso Gel** and an **Endurolyte** before the start, and 1/2 of a gel every two miles.

Photo: Neil Gallivan



HAMMER ATHLETES
NAIL IT
EVERY DAY!



LINDA FULTON

1st place in her Age Group at the Bisbee 1000

That's ONE THOUSAND stairs!

"I can tell you for the rest of my life I am a HAMMER fan and recommend it to anyone that asks me how I can do all that I do at 80 years old. I am already registered for next year's event so keep your fingers crossed for me.

THANK YOU FROM THE BOTTOM OF MY HEART."

Photo: Tom Fulton



Another Sub-3 PR

In 2017, Wade Gerencsér broke into the exclusive sub-three hour marathon club with a 2:55 finish at the California International Marathon. Wade wasn't satisfied and dedicated himself to improving his time in 2019. He underwent an extensive 8-month training regimen fueled exclusively on Hammer. When he crossed the finish line last December, the clock showed a new personal record of 2:51!

Photo: Griffin Kelly / FlashFrame

REAL ENDURANCE FUEL NOT SUGAR!



Bikepacking across
Spencer Glacier, Alaska.
Photo: @renaissance.cyclist



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“I absolutely LOVE these Hammer CBD Softgels. They have truly changed my life. I sleep more soundly and have had a significant reduction in soreness. I make sure to not miss a dose...”

- Online Reviewer



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- Maximum absorption & effectiveness
- Tested 0.0% THC



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Past AMA Supercross Lites West Champion Broc Tickle cross-trains in California. Broc uses Hammer products to stay in peak shape whether he's cycling or racing motocross. Photo: Swapmotolive.com