

ENDURANCE

BY HAMMER NUTRITION

#131 Aug/Sept 2022

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NEWS

The Summer of CBD



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- **FRESH “MY THAI” RECIPES**
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WENDY SKEAN

Wendy rides through to the light on the Tunnel Vision Trail in Spence Basin, Prescott, AZ.

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Photo: Jeff Wolfe

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Welcome to the 131st issue of Endurance News!

Whether you are reading this publication for the first time or the 131st time, I'm glad you are and hope that you'll find the content on the following pages of keen interest. In this issue, you'll find much of what we've been printing for over 30 years; insightful articles you won't find in other media, product information and updates, race reports and heartwarming stories from you.

My favorite part of each issue of *Endurance News* is always the athlete submissions – I never tire of seeing clients from the US and all over the world doing amazing things with Hammer products in hand and a smile on their face! If you've got a Hammer story to tell, but for one reason or another, have

BEING FRANK

A WORD FROM BRIAN FRANK

Owner and Founder of Hammer Nutrition

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

not sent it in to us, please consider this your invitation/reminder to get it done! We'd love to hear from you. As I said in the last issue, success stories from famous accomplished athletes are nice, but I'm partial to the ones from "everyday" athletes and clients who are not even competitive. After all, these days life is an endurance sport and we are all endurance athletes of one kind or another.

Not sure if you saw it or not, but Dean Karnazes' ripped legs made it on to the cover of 11 million copies of Costco Connection! Turn to page 30/31 of the June issue to see a double page spread of Dean wearing a Hammer logo base layer shirt. If you have not perused our non consumable products, be sure to check them out, most are made in the USA and are of the best quality and fit you can find.

Observations from the field

This year I have been fortunate to spend a lot of time interacting with clients

and athletes at events, both as a participant and running the booth. Although I should not be, I continue to be surprised at the "collective consciousness" in the thinking of endurance athletes I encounter. No one can point to an article, book or other source of this information, but these misconceptions are so commonly repeated that there must be a source and I am determined to find it.

I'm talking about the pre race rituals and the things that people do during races that hinder rather than help their performance. Here's a few that ring in my ears as I write this:

Loading water, sodium and calories in the days leading up to their big event

There's a whole article on why you should never load on the following pages, . . .

Continued on page 64

Brian Frank

Brian Frank



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MISSION

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

OUR GUIDING PRINCIPLES

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

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

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

OUR CORE VALUES

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

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

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



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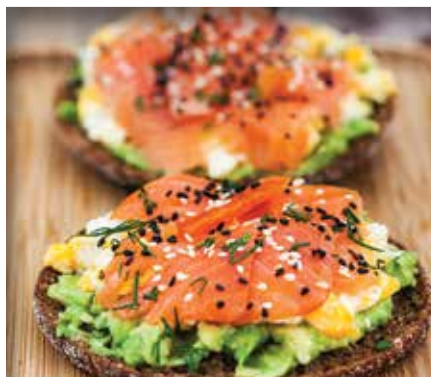
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Hammer supports hard working fit folks just like you every day!

Read more on pages 8, 28, and 46

On the cover:



Hammer answers why it is important to get that pre-race meal in and finished up 3 hours before you head out. Read more on page **12**

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Everyday Athletes Just Like You!



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Mitchell Harrison is FIRED UP! with another win. Read more on page **50**

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THE PERILS OF LOADING

by BRIAN FRANK



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

IT DOES NOT WORK!



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

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

Hopefully, you have read our

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

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

these crazy numbers, at least in the U.S. Europe and Asia are another story.

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

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

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



CARBS

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



WATER

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



SODIUM

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



Danielle Kays hammers home a 1st Place WIN at the Ironman 70.3 Puerto Rico and Pinehurst Triathlon. Photo courtesy of Daniell Kays.

WHAT ABOUT LIQUID ENDURANCE?

YES!



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

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

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

STRESSED OUT?

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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VITAMIN D and OMEGA-3's

Related to reducing the risk of autoimmune disease

by STEVE BORN

An autoimmune disease is defined as “a condition in which the body’s immune system mistakes its own healthy tissues as foreign then attacks them.” According to Autoimmune Diseases, a peer-reviewed, open access journal, “Autoimmune diseases have registered an alarming increase worldwide since the end of the Second World War. This pandemic includes more than 80 autoimmune disorders and increases in both the incidence and prevalence of autoimmune disorders such as Crohn’s disease, rheumatoid arthritis, multiple sclerosis, and type I diabetes.” Other common autoimmune diseases include psoriasis/psoriatic arthritis, inflammatory bowel disease, Hashimoto’s thyroiditis, pernicious anemia, celiac disease, and more.

Given the large number of autoimmune diseases, along

with the annual increase in people developing them, anything we can do to lower our risk is certainly worth doing. The results of new research published in the British Medical Journal (BMJ) provides a powerful strategy that we can employ: Participants who supplemented with vitamin D and omega-3 fatty acids had a significantly reduced risk of autoimmune diseases.

THE STUDY

The study included over 12,500 men ages 50 and older, and approximately 13,000 women ages 55 and older who were enrolled in the Vitamin D and Omega-3 Trial (VITAL). On a daily basis over a 5.5-year period, participants consumed either 2,000 IU of vitamin D or a matching placebo, along with 1,000 mg omega-3 fatty acids or a placebo.



A 31% lower risk of developing an autoimmune disease was reported in participants taking both Vitamin D and Omega-3.



Now for the first time we have a proven way to prevent autoimmune diseases. When my patients ask me which supplements to take, I have new evidence.



THE RESULTS

- A 22% lower risk of developing an autoimmune disease was found in participants who took vitamin D with or without omega-3s, as compared to the placebo.
- A 31% lower risk of developing an autoimmune disease was found in participants who took both vitamin D and omega-3, compared to those who received both placebos.

Dr. Karen Costenbader states: "It is exciting to have these new and positive results for non-toxic vitamins and [nutrients]. When my patients, colleagues, or friends ask me which vitamins or [nutrients] I'd recommend they take to reduce risk of autoimmune disease, I have new evidence-based recommendations for women aged 55 years and older and men 50 years and older."

Dr. Jill Hahn adds: "Autoimmune diseases are common in older adults and negatively affect health and life expectancy. Until now, we have had no proven way of preventing them, and now, for the first time, we do."



Each softgel capsule of **EnDuro D** supplies the same 2,000 IU (50 mcg) of vitamin D3 that was used in the study, along with an ideal amount of vitamin K2.



A dose of 2 softgels twice daily of **EndurOmega** will get you a little over the 1,000 mg of omega-3's used in the study.

For protecting against development of autoimmune diseases, along with a plethora of other health benefits, the **EnDuro D/EndurOmega** combination is one that should be part of your daily supplement program. 

References available upon request

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*"I have been using **Phytomax** with more sustained energy and better sleep patterns. It can be challenging to get enough fresh vegetables in my diet, and this helps fill that void." - Arlene H.*



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Lowering Blood Pressure with Optimal Doses of Omega-3 Fatty Acids

by STEVE BORN

Omega-3 fatty acids, found most prevalently in fish such as salmon, mackerel, tuna, sardines, and anchovies—as well as in Hammer Nutrition's **EndurOmega**—have often been referred to as “the heart's best friend.” And that's not a stretch at all, as these essential fatty acids provide one of the strongest defenses against cardiovascular disease. An ever-increasing body of research confirms that fish oil is a powerful ally to help protect against atherosclerosis, angina, heart attack, arrhythmias, stroke, and congestive heart failure. Fish oil helps to lower blood pressure, reduce elevated blood triglyceride levels, maintain arterial wall elasticity, and prevent blood clotting.

Regarding high blood pressure, while we know that omega-3's help to lower it to healthier levels, new research has now provided us with the ideal amounts necessary to achieve the best effect. 2 to 3 grams per day of omega-3 fatty acids may be an optimal dose to lower blood pressure, according to findings from a meta-analysis published in the *Journal of the American Heart Association*.

Using data from 71 published clinical trials, average duration of 10 weeks, and involving nearly 5,000 adults with or without hypertension, researchers evaluated the link

between intake of omega-3 fatty acids and blood pressure from food and/or supplements. Their findings:

- Participants who consumed 2 to 3 grams of omega-3 fatty acids—primarily EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid)—experienced an average reduction in systolic blood pressure of 2.6 mmHg.
- Diastolic blood pressure decreased by 1.64 mmHg (2 grams of omega-3's) and 1.80 mmHg (3 grams of omega-3's).
- Study participants with high blood pressure who consumed 3 grams of omega-3's daily saw their systolic blood pressure decrease by 4.5 mmHg.

Dr. Xinzhi Li, PhD, of the School of Pharmacy at Macau University of Science and Technology, states: “Most of the studies reported on fish oil supplements rather than on EPA and DHA omega-3s consumed in food, which suggests supplements may be an alternative for those who cannot eat fatty fish such as salmon regularly.”

For those of us who love to eat fish, we know that eating two servings a week—the amount suggested by the American Heart Association—can be expensive and challenging, the latter in terms of finding high-quality, non-farmed,

unpolluted fish. The good news from this research is that fish oil supplements were used in many of the clinical trials. That means that you can provide excellent support for your heart—including lowering your blood pressure—via **EndurOmega**.

Two softgels of **EndurOmega** contain a total of 600 mg of omega-3 fatty acids, so a dose of two softgels twice daily will provide you with a total of 2,400 mg (2.4 g) of omega-3's, putting you in a good “sweet spot” for optimal daily omega-3 intake. As 3+ grams were shown to provide even better results, an **EndurOmega** dose of two capsules three times daily may be an even more-ideal amount to aim for, especially if your blood pressure is on the high side.

EndurOmega contains molecularly distilled and deodorized fish oil, is free from all fishy odor and taste, and is tested via third-party independent laboratories to guarantee potency and purity. It's the ideal (and much less expensive) way to meet your omega-3 fatty acid requirements. Take **EndurOmega** daily... your heart will thank you over and over and over! EN

References available upon request

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- Barbara M.



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Leilah Mack

Running the San Diego 100

Running my first 100-miler has been an event four years in the making. My first attempt was back in 2018, but I broke a few ribs five weeks before race day, ending my chances. In 2020, I signed up for the San Diego 100 only to have it canceled due to COVID, and canceled again in 2021. To say this race was important that I both started and finished would be a massive understatement!

I've trained and raced with Hammer for years, so it was natural that I planned to heavily leverage their products during the 2022 San Diego 100. The race forecast was for heat during the day and near freezing overnight due to the exposure along the mountainous regions of the Pacific Crest Trail. The biggest issue would be maintaining electrolyte balance and using tested nutrition that I could keep down, despite high temperatures. The day before the race, I came down with an infection and had to start antibiotics – a surefire way to cause gut issues when running 100 miles! I decided nevertheless to tow the starting line, with limited expectations of finishing, but a willingness to give it my all.

My crew and pacers knew the plan: I intended to drink one serving of **Perpeteum**® every two hours and eat one **Hammer Gel**® every hour. To maintain my electrolytes and help with fatigue, every hour I also took

what I call “the trifecta”: one **Endurolytes**®, one **Anti-Fatigue Caps**, and one **BCAA+**. Lastly, I put a few servings of **Endurolytes Extreme** powder in my hydration bladder during sunniest hours. I would supplement all of this with a good supper after!

At mile 21, I ate part of a peanut butter sandwich and by mile 25 I had a complete gut meltdown. My energy tanked, my stomach became distended, and I questioned the next 75 miles. After that mistake, no more solid food—simply my Perpeteum and Gel combo, knowing it was safe and would give me the calories I needed.

Hammer Nutrition for the win!

My crew were amazing – every aid station, they would refill my Perpeteum, restock the Endurolytes, give me a “trifecta” flask, and load me up with Gels. **I felt GREAT!** I went from everyone passing me to making my way past everyone else, finishing in 6th overall female in 28 hours and 11 minutes, with a smile on my face and a happy gut!

Hammer products continue to amaze me – I can feel the difference just moments after taking my “trifecta” of Hammer supplements and am so impressed with how easily the products go down, even after 24+ hours! Lastly, I adore that Hammer products don't use sugar! No upset stomach, no mood swings, and no bonking! I couldn't be more appreciative to use such great products and

I will forever be a Hammer athlete and customer!

**Sincerely,
Leilah Mack**





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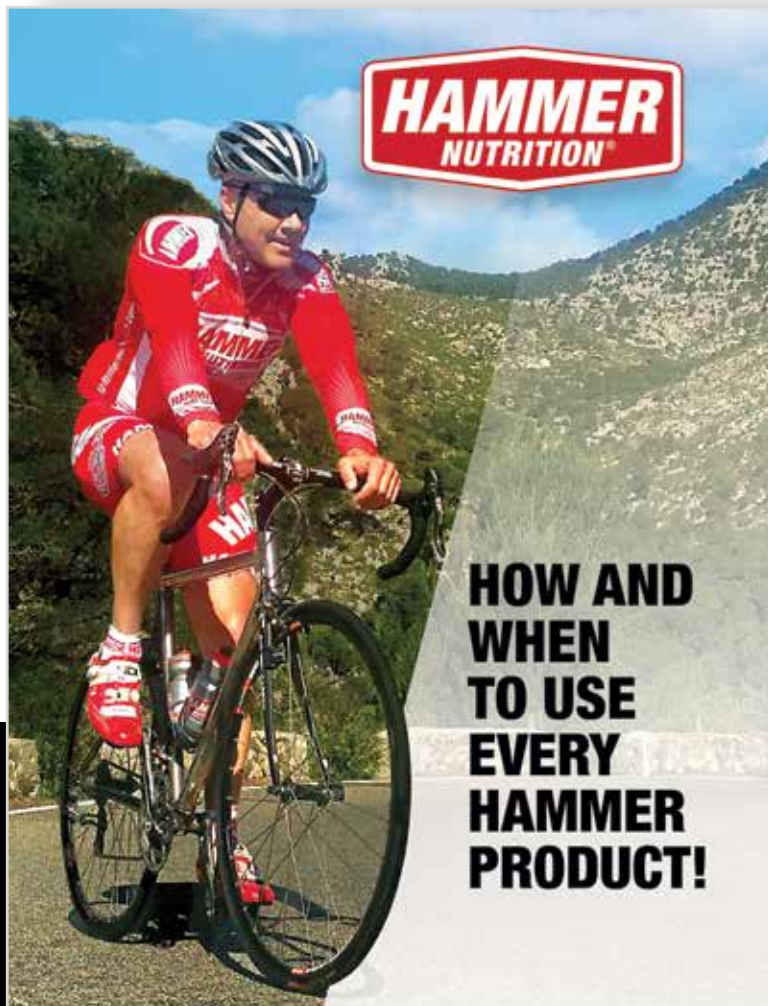
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How To Hammer provides all the vital information you need to Hammer to the next level. The final word on usage, with advanced details and specific applications.



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@trail_chipmunk



Ludi Chaves Some people call it training I call it lifestyle! #howihammer



@b.walaska



Brock Walaska I moved the bike trainer outside to make transitions quick while training virtually on the Iowa hills. I started with a 21-minute pool tether swim, rode 4 hrs/84 miles with 2,931 ft of elevation, and finished with a 6.2 mile run at the hottest part of the day. #howihammer



@ultrakatka_kasparova



Katerina Kašparová I've been using Recoverite, Endurolytes Fizz, and Hammer Gel for years. I also take Essential MG, Endurance BCAA+, and in the evening Hammer CBD! The more I use their products, the more I appreciate the quality and benefits! #howihammer



@rjenko11



Rhys Jenkins Nutrition is something I've always struggled with but with help from the Hammer experts, I've managed to plot out every calorie I will consume at the 2022 Badwater 135. #howihammer

WHEREVER YOU GO, SHOW US HOW YOU HAMMER!

Use the hashtag **#howihammer** to share your photos!



@flavester



Flavie Dokken Such a magical time running through the fluorescent forest at #Maryspeak50k! I was able to stay on top of my Hammer fueling plan, and finished 3rd female and 6th overall. It's nice when things come along! **#howihammer**



@torie_grammar



Victoria Grammar TWINNING! Anyone else show up to the groups rides like this? **#howihammer**



@dtatum6



David Tatum Great race today with tbf racing at Rancho Seco Park. Thanks @hammernutrition for the race entry. I did my first race at this location over a decade ago. Today was a great race, I had a personal best and placed first in my AG. **#howihammer**



@amandahunt_18



Amanda Hunt @hammernutrition coming in clutch with the post-race recovery! **#howihammer**

STRATEGIES *for* Dealing with the Heat

by DEAN KARNAZES

Furnace Creek is known as the hottest place on earth. Temperatures there have surpassed an asphalt-melting, hair-singeing 130° Fahrenheit. And Furnace Creek happens to be located along the 135-mile Badwater Ultramarathon course. When it comes to racing in the heat, nothing is more extreme than the Badwater Ultramarathon.

Having done this race a couple of times (okay, ten), I've learned a few things about exercising in excessively hot temperatures. The lessons I've learned can be applied to anyone working out in the heat, not just the blistering inferno of Furnace Creek in Death Valley.

When approaching the heat, I use a somewhat analytical strategy. There are two separate systems to regulate: your exterior and interior systems. Appropriate measures should be taken to keep both in check. Let's look at these below.

Exterior System

When formulating a strategy for keeping your exterior cool, I advise starting from the top (i.e., with your head). If your noggin' overheats, it's game over. So a good hat is essential when temperature creeps upward, one that offers UV protection, a brim, and also a neck cape. My personal favorite is the Ultra Adventure Hat by Sunday

Afternoons. Moving lower, a UV protective moisture-wicking shirt helps keep the body cool while protecting the skin from the sun. I prefer a breathable short sleeve shirt and a layer of cooling arm sleeves underneath, with ice pockets. Calves sleeves are also helpful to protect your lower legs, not only from direct sunlight but also from UV reflecting up from the pavement. Another beneficial cooling strategy is to wrap your neck with something cold. The cooled blood gets circulated throughout the body via the carotid artery. There are specially designed bandanas with ice pouches, though wrapping ice in a traditional bandana works pretty well. Lastly, spraying yourself with a plant mister is useful for the evaporative cooling effect. Of course, this works better in lower humidity environments. Spraying off with cool liquid still helps in humid conditions, just not to the same extent because the water does not evaporate, and thus you don't get the same evaporative cooling. Now, let's move inside.

Interior System

As most people know, the human body keeps fairly tight control on internal body heat. When temperatures dip below 95°, Fahrenheit, hypothermia can be a risk, and when a fever exceeds 105° Fahrenheit, there is the

danger of heatstroke. That's not a large range, especially when you compare it to fluctuations in outside temperatures.

So how do you keep your core from overheating when the thermometer creeps upward? One way is through consuming cool liquids, ones without lots of simple sugars, Hammer Nutrition Lemon-Lime **HEED**® being my personal go-to. The flavor wakes up the palate, and the carbohydrate source used in HEED is slowly and evenly absorbed. It is also important to note that HEED is formulated without citric acid. The stomach is already an acidic place, so it makes no sense to add more, yet many sports beverages are loaded with citric acid. Why? For the same reasons they use simple sugars, it's cheap. Another useful trick is to swallow whole pieces of ice—being reasonable with the size, of course—as getting ice directly into your belly can help with both cooling and, as a result, absorption. A common issue with endurance athletes in hot conditions is GI distress. This can come as a result of elevated core temperatures, which prevent food and liquid from emptying the stomach. It's not uncommon at hot weather endurance events to hear complaints of sloshing in the stomach, bloating, and distension. No matter how much

gets consumed, it never gets absorbed. I've been there, and it's no fun. Keeping the stomach from overheating is one factor that can assist gastric emptying, and so is having the right amount of sodium and electrolytes. That's where Hammer Nutrition **Endurolytes® Extreme** plays a critical role. Not only are the electrolyte levels optimized for high-heat conditions, but Endurolytes Extreme also contains ginger root powder, which naturally settles the stomach and aids absorption.

Next time you're training or racing in hot conditions, I encourage you to take the approach of managing two systems, external and internal. And who knows, maybe we'll see you at the start of the Badwater Ultramarathon.

EN



Dean Karnazes keeps cool with a smile, practicing what he preaches. Dean is an ultramarathoner, Hammer Nutrition Athlete, and a past winner of the Badwater Ultramarathon.

Photo by chasquirunner, courtesy of Dean Karnazes.

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ASK HAMMER



YOU ASK

WE ANSWER

QUESTION

Why do I need to finish a pre-exercise meal 3 hours in advance? And what about an early workout or race? Do I need to get up extra early just to eat?

ANSWER

As far as pre-exercise fueling is concerned, here's how it all works:

1 If you've been consistent with your training and ASAP post-exercise refueling (as soon as the workout is done), your body will eventually store somewhere between 60 - 90 minutes' worth of fuel. This muscle-stored fuel is a starch-like compound called glycogen, and it is the first fuel your body will use when you begin a workout or race.

2 Interestingly, if you go to bed with (for example) 60 minutes of glycogen in your muscles, that's **EXACTLY** what you will wake up with. Not 1 gram or calorie of the body's first-used fuel will be depleted even after a full night's sleep, which is basically a period of fasting. Now, your brain may be saying, "I'm hungry! Feed me!" and your stomach may be growling, but your muscles are actually telling you, "We're good to go! Let's do this!" So unless you **NATURALLY** wake up this early to eat prior to a race, it is totally unnecessary to do so... it is far better to obtain all the benefits of a full night's sleep.

3 Why is there a recommendation to finish all calorie consumption 3-hours prior to exercise? It is because

once you consume any calories insulin will be released, and if it is allowed to stay active what will happen is that 60-90 minutes' worth of glycogen in the muscles will be depleted much more rapidly. You spent weeks of training and consumed a lot of **Recoverite®** after all these workouts to obtain that hard-earned 60-90 minutes of muscle-stored fuel. However, simply eating at the wrong time prior to a workout or race will force your body to burn through those glycogen stores in half the time they normally would, you'll have ruined what took many weeks of training and post-exercise refueling to accomplish, and your performance will not be nearly as good as it could.

It takes 3 hours for insulin to go back to baseline level, which is exactly where you want it to be when you begin a workout or race. This then allows your body to burn its finite stores of glycogen much more efficiently, and it will also permit the body's fats-as-fuel process (aka "fat burning") to start earlier and be more effective.

4) So don't sacrifice sleep to eat a meal... it's not one bit necessary. Instead, if you must have something eat prior to the start, have a small amount of easily digested food--a few bites of a banana, a serving of **Hammer Gel®**, etc.-about 5-10 prior to the start of the workout or race. This is totally acceptable because by the time those calories are ingested and digested, you'll already be into your workout or race. You'll have given your body a little fuel and you'll have done it at a time when you won't negatively affect the efficiency at which your body will use those finite stores of muscle glycogen.

SPECIAL NOTE

Out of all the articles we have written and recommendations we have made over the years, the "no eating 3 hours prior" has been, by far, the one that receives the most skepticism. And while it may sound counterintuitive, physiologically it makes perfect sense. Every single athlete we've worked with over the years who has faithfully applied this recommendation has ALWAYS provided nothing less than positive feedback. Something we hear fairly frequently goes something like this: "I was skeptical at first, but holy cow! **This not only works; it works like magic! Complete game changer for me!**" EN

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

Single Serving **\$3.50**
32 Servings **\$59.95**



*"I use **Recoverite** after skiing, hiking and mountain biking. It helps keep lactic acid levels down and to lessen fatigue. Can't imagine my workouts and play without it!" - Julie H.*



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Resupply these vital minerals to
Finish Strong!



In addition to replenishing calories and fluids, proper fueling during exercise requires consistent and adequate electrolyte support. While it's usually easy to get your calorie and fluid needs dialed in, proper electrolyte replenishment requires a bit more effort. This is because your specific electrolyte requirements will not only differ from another athlete's—sometimes by a lot—but will also change constantly, depending on your fitness level, acclimatization level, and training duration and intensity. In fact, changes in the weather may alter your electrolyte requirements during a workout or race, so that what you need at 2 p.m. may be completely different from what you needed at 9 a.m.

Many athletes neglect consistent electrolyte replenishment because they've "never had cramping problems." But even if you've never suffered the painful, debilitating effects of cramping, you still need to provide your body with a consistent and adequate supply of electrolytes. Why? Because proper function of the digestive, nervous, cardiac, and muscular systems depends on adequate electrolyte levels. That's why we're fond of saying that electrolytes are comparable to the motor oil in your car—they don't make the engine run, but they're required to keep everything running smoothly.

Now, let's get back to muscle cramping. Though there are many theories as to why it

happens, it usually involves improper hydration and/or improper electrolyte replenishment. No one wants to cramp, of course, but remember, cramping is a long way down the road of electrolyte depletion. You never want to reach that point, it's extremely painful and your performance has already been severely compromised for some time. Just as you don't wait until you're dehydrated or bonking before you replenish fluids or calories, don't wait until you're cramping before you replenish electrolytes.

BOTTOM LINE:

The consistent replenishment of electrolytes is as important as the calories you consume and the water you drink during exercise.

“ The consistent replenishment of electrolytes is as important as the calories you consume and the water you drink during exercise. ”

SALT IS NOT THE ANSWER

Salt tablets are an unacceptable choice for electrolyte replenishment for two important reasons:

- 1) They can oversupply sodium, overwhelming your body's ability to regulate electrolyte and fluid balance.
- 2) They provide only two electrolytes—sodium and chloride—when your body requires a full array of electrolytic minerals.

THE ANSWER?

The Hammer Endurolytes® family of products

Proper electrolyte replenishment during endurance exercise requires a gradual, consistent approach that incorporates all of the electrolytes—not just salt—and in amounts that do not override normal body mechanisms. Hammer Nutrition's **Endurolytes** products help your body maintain proper electrolyte levels no matter the conditions or duration of exercise. They allow your body to perform better under the demands of exercise by:

- Ideally fulfilling the body's electrolytic mineral requirements
- Optimizing multiple bodily functions
- Helping you avoid the unpleasant issues associated with electrolyte imbalance

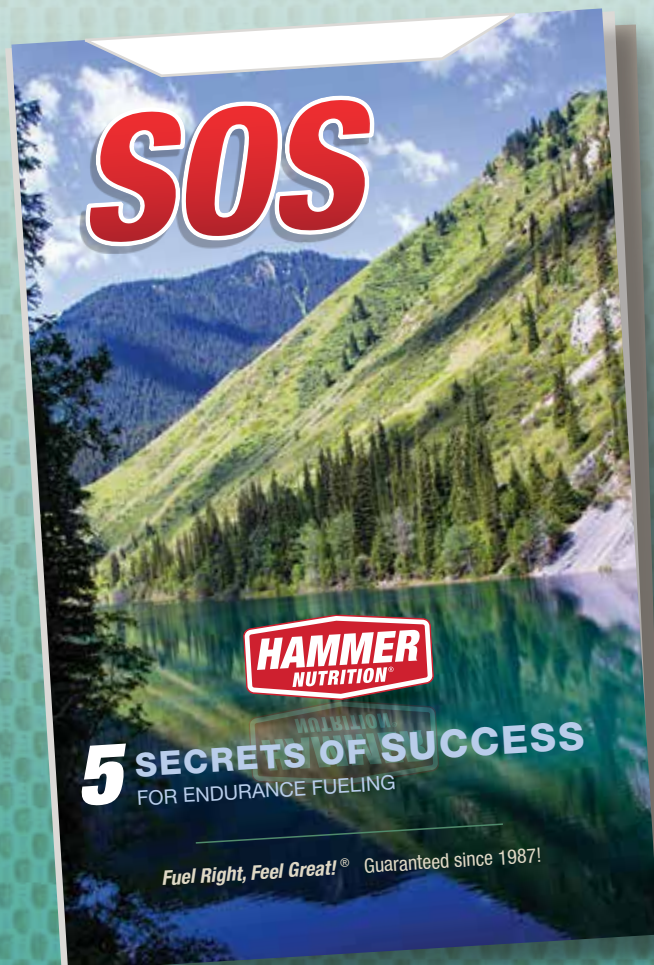
Whatever your weight, body type, fitness level, or what the weather throws at you, one of Hammer Nutrition's Endurolytes products will satisfy your body's all-important electrolyte requirements in ideal fashion, hour after hour.

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Learn more with a FREE online download today of our #1 publication, *5 Secrets of Success*, at hammernutrition.com.

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ESSENTIAL OMEGA FATS

CANOLA OIL vs. OLIVE OIL

by Dr. Bayne French



Welcome back travelers! I hope you have been able to join me for even more in depth definitions of the various types of dietary fats in our series on *Endurance News Weekly*.

Now, let's put our new-found knowledge to practical use in the wild (aka the grocery store aisles).

Here we will examine the first thing to hit the pan when cooking up that fresh trout and river leeks - the oil. So, which to use? Canola or Olive? Which is better for us? Let's break it down:

Not exactly a fight. Even though my embryonic brain was bathed in testosterone I don't condone violence, especially among oils. The following is more of a case-study, or comparison.

CANOLA OIL

This oil has a fascinating history. One fraught with misinformation and emotion, two things we sapiens excel at. Canola oil's predecessor is rapeseed oil. Seriously.

Rapeseed is a plant in the mustard family. It grows all over the world and has been processed into oil for thousands of years in India and China with stone presses and low temperatures. It had a major problem however, the presence of erucic acid. This is a long-chain (22 carbons) mono-unsaturated fatty acid. In areas of the world where the trace mineral selenium was lacking, and when not enough saturated fat was consumed, erucic acid became toxic and caused a heart condition called Keshan's disease.

As momentum against saturated fat grew, concurrently with the popularization of the Mediterranean diet, a global need for an alternative oil emerged in the 1980's. There was not enough olive oil to meet global demand, and it was just too expensive to use in processed food. Canadian researchers had already done years of work (from the 1970's) on genetically modifying rapeseed to create LEAR oil (Low Erucic Acid Rapeseed). "LEAR" and certainly "Rape" were not overly

marketable terms. "Canola" was thus coined in 1978, standing for "Canadian oil", as most farming was in Canada at that time.

Canola oil received GRAS (Generally Recognized as Safe) status from the US FDA in 1985 even though no long-term studies were done. It basically took off. Even health and wellness guru Dr. Andrew Weil recommended its use. In the summary article by Dr. Enig et al, *The Great Con-ola*, the research on LEAR and Canola oil is described. They are all animal studies, and results were not favorable for heart health.

Continued on page 26

You keep reading. I'll get the fire going.



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- Nutrition and Medical Weight Loss Specialist
- Hammer Nutrition Chief Medical Advisor
- Accomplished Spartan Athlete
- Proficient Outdoorsman and Mountain Survivalist
- Developer and founder of DeEvolution Lifestyle
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Dr. French is clearly not your average lab coat physician. Read more from Bayne on *Endurance News Weekly*.



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Five amazing flavors!



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



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ESSENTIAL OMEGA FATS

CANOLA OIL vs. OLIVE OIL

Continued from page 24



Stone press extraction of rapeseed oil as had been done for thousands of years was of course inefficient. The modern seed processing methods are well explained in the literature and underlie many reasons why canola and other seed oils are so unhealthy. The basics involve the combination of high temperature mechanical pressing and the use of solvents, usually hexane. Hexane is a known neurotoxin in animals and humans, which is why the oil then needs caustic refining, bleaching and degumming. Is all that naughty hexane removed? Many sources say no. What is consistent about all polyunsaturated fats is that they are delicate. They are easily chemically damaged. The oil through the above process is so damaged that it actually stinks, and must be deodorized. Through this process trans fats are created. Independent university research found trans fat content almost 5% in some commercial oils. This is not on the label.

In summary, canola oil is popular because of its relatively high amount of the monounsaturated oleic acid (like olive oil). It has low amounts of the oft-maligned saturated fat, and it also possesses good amounts of O3 fats. It's cheap and promoted by many reputable individuals and organizations. Interesting how the FDA will not allow its use in

infant formulas. Yes, Canola Oil is in my fanny pack. But only for my toes.

I read a humorous op ed piece by Jane Snow, that ran in the Tampa Bay Times in the early 2000's. The dietician (usually code for Food Pyramid Zombie) Donna Skoda was quoted as saying "That is such crap." I agree that canola oil is crap, but Donna didn't mean it that way. Jane Snow "spent hours surfing the Internet" trying to figure out the origin of rumors that canola oil is unhealthy. The article ends with dietician Skoda advising "canola oil for sautéing, olive oil on salads, and margarine on bread and toast." Margarine Donna? And we rely on these people? Not anymore.

OLIVE OIL

Many feel that the majority of the health benefits from the Mediterranean diet come from olive oil. It contains about 75% monounsaturated fat from oleic acid. Another 20% is saturated fat. There are also numerous antioxidants and anti-inflammatory phytonutrients.

Most of human aging and disease is driven from oxidative free radical damage. This is especially true of atherosclerosis (hardening

of arteries). The phytonutrients in olive oil help prevent this, and also help prevent platelets from clumping together thereby reducing blood clots (what aspirin also does). There is much research on effects of olive oil for cholesterol profile improvement, specifically when substituted for vegetable oil (Torres et al. Arch Med Res. Jul 2015); improvements in blood pressure (Teres et al. Proc Natl Acad Sci USA. Sept 2008); and anti-inflammation through lowering CRP (Moreno-Luna et al. Am J Hypertens. Dec 2012). Refer to *Endurance News Weekly* January 19, 2022 for a longer discussion I wrote on CRP. Furthermore there is data on enhanced gut microbiome and cancer risk reduction with regular olive oil use. I am unaware of any compelling data like this behind canola oil.

What does “extra virgin” mean anyway? It means the olives are cold-pressed. Like with avocado oil, there is no heat, and there are no solvents. Insist on this! Unfortunately, many extra virgin olive oils sold in the US are mixed with other oils including soybean and rapeseed. Tom Mueller wrote *Extra Virginity: The Sublime and Scandalous World of Olive Oil*, discussing this and other issues with olive oil.



The above seal is placed on olive oil products that have passed the North American Olive Oil Association inspection and testing. As I've written about CBD and other supplements, know your supplier!

Continued on page 62



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- Reduces muscle cramps
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Steven shows off his well-earned hardware representing Hammer at the New York marathon in 2019. Photo courtesy of Steve Svoboda.

Meet HAMMER ATHLETE STEVEN SVOBODA

World-Class Triathlete and World-Class family man

“A regular guy, living a regular life, who just happens to do insane endurance events.”

an interview by LIAM MAYO

The big joke among endurance athletes is that if your relationship is still stable, you're not training hard enough. Steve Svoboda breaks this mold though, being a great endurance athlete, while being an even greater husband and father. While his biggest achievements happened while being a family man, his endurance journey started in Wisconsin in high school, when his basketball coach -who was only 6 years older than himself- introduced him to long distance running. Although he was introduced to it as a teenager, it wasn't until he was a college student in Minnesota that he actually started. It all started when he and his friends decided to sign up for the Twin Cities Marathon in 2007, with only a couple of weeks' notice. Up until that point he had not completed a run race, so he jumped into the deep end quite

literally. Steve finished the marathon in a time of 5 hours 5 minutes, which although was a massive achievement for him, left him disappointed. Determined for redemption, he trained all year for the Twin Cities Marathon the following year, shaving over an hour off his time finishing in a time of 4 hours 2 minutes. In his own words, “I hit the wall pretty early on”, so when he pushed through it after finishing that second marathon, his ability to do anything endurance seemed limitless.

After testing the waters with running, he decided to literally test the waters by doing a sprint-distance triathlon to see “if I would drown or not”. Thankfully he did survive the swim, and used his \$25 dollar road bike that he got from a garage sale to complete the bike portion, then the run was the easy bit. But

his original goal was complete, he could in fact swim. So in classic Steve fashion, he decided to do an Ironman-distance race on his own, to see if he could even cross the virtual finish line. He did finish, and signed up for Ironman Wisconsin for the following year. Since then, his antics have continued to climb. While completing these endurance events, he discovered Hammer **Orange Vanilla Perpetuem®** in 2010, after a friend recommended it. Ever since then, Perpetuem has been his go to product for nutrition.

Steve was a pretty good endurance athlete up until that point, but he separated himself from the pack once his wife became pregnant with his firstborn son. He remembers having a conversation with his father about whether or not he would continue endurance sports with a newborn in the

house. At that point, he had already been running every single day for 6 years, and biking to work for over 3 years. So when he came to this crossroad, Steve enthusiastically said that he would do both, adapting his training with his family life, which is exactly what he did. "I don't necessarily want to compartmentalize parts of my life" Steve stated, "So if I have to set up the bike trainer next to the crib for when he is sleeping, or going running in the early hours of the morning while he sleeps, so be it".

Continued on page 30

"I get so much enjoyment from life by staying active."



- ***Hammering since 2010***
- ***Long-distance running since age 6***
- ***First marathon in 2007***
- ***First triathlon on a whim and then Ironman***
- ***In constant pursuit of the next challenge or charitable event***
- ***4,000 consecutive days of running as of May 2022***



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More
gain!***

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- **Optimizes mobility**
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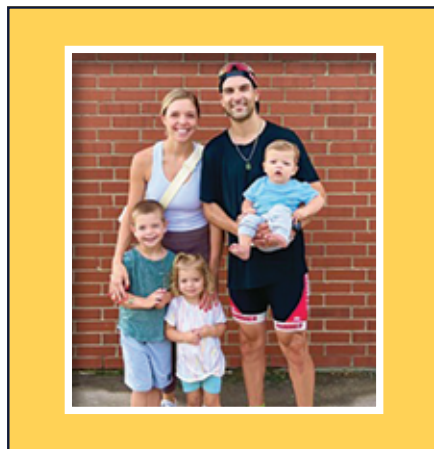
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Tissue Rejuvenator

STEVEN SVOBODA

Continued from page 29



Steven and his “support crew” make balancing family life and athletics look easy.

Today, Steve has 3 wonderful children all under the age of 5 with his wife, and he said that his training these days is a “family effort”. What he means by that is that with every activity he does, he includes his family in it. From running while pushing the kids in the stroller, to attaching the baby seat on the back of his bike so that he can go biking with his kids though the neighborhood, he loves including his kids in his day-to-day training. Steve doesn’t see his responsibilities as a dad as a hindrance to his training, but rather an enhancement. He loves the fact that he can include his children in his passion, and credits a lot of his success to his kids, as they have become his training partners.

When not training Steve loves spending time with his family, or watching sports on tv, especially Wisconsin sports teams. He loves the concept of

being a weekend warrior, as he is just a regular guy living a regular life, who just happens to do insane endurance events. But when it comes to being a warrior, Steve excels past the competition. When asked about his most memorable events, the list seemed never ending, with each one seemingly more wild than the other. From a 56 mile run where he started running 30 miles during the early hours of the morning, then showing up at the start line at a marathon and then running the marathon, to a 210 mile bike ride from the top of New Jersey to the bottom over the course of a single day, he doesn’t seem to stop. But he also does a lot of charity related events where he uses his skills for amazing causes. For example, a quarantined Ironman where he swam in a neighbor’s pool, biking on the trainer, and then doing laps around a 60 foot diameter circle until the full 140.6 miles was completed. Steve ended up raising \$6,000 dollars for New York City Covid Relief for his efforts for his Quarantine Ironman. Steve loves doing what he does, stating that “I get so much enjoyment from life by staying active like this”, and at the age of 36, it doesn’t look like he is going to stop anytime soon. As of May 2022, he has hit 4,000 consecutive days running at least a mile, and plans on continuing this 11 year process.

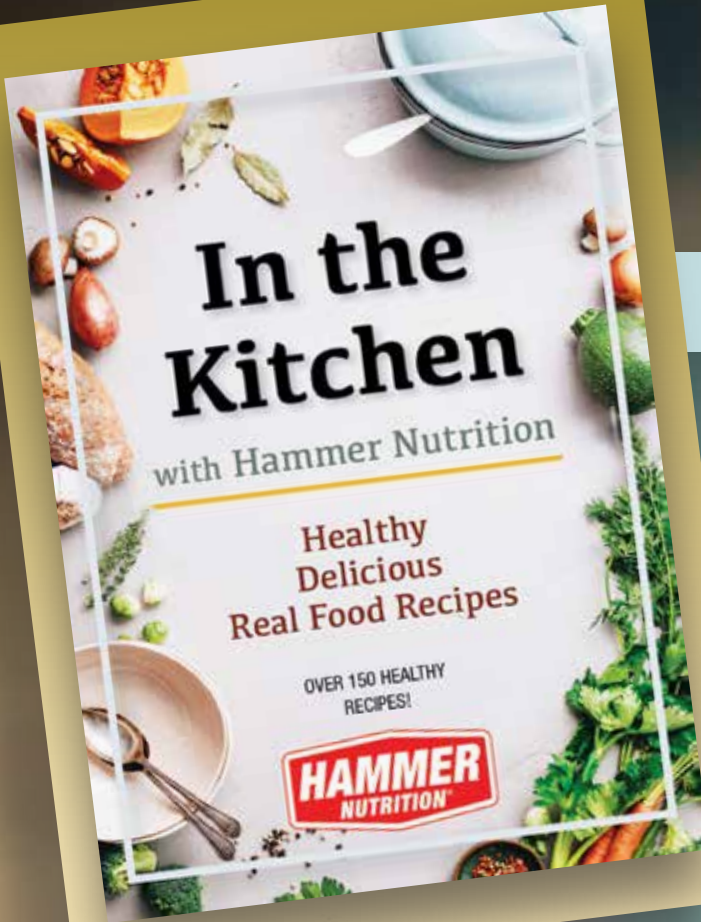
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HOUSEKEEPING

from **HAMMER HQ** Important updates from BRIAN FRANK



The loss of our Midwestern distribution center means that now 100% of our direct to consumer shipments are originating in Whitefish, Montana. For those of you in the east of the Mississippi that means your order are taking 1-3 days longer in transit. We are working hard to keep our warehouse staffed so we can expedite all orders within 24 hours of receipt. We apologize for the inconvenience and appreciate your understanding.



Call when you need to!

My last bit of house keeping is to remind you that we're just a phone call away, during normal business hours. So, if you have any questions, web site issues or anything else, just call. We're not trying to sell you anything and it'll probably save you a lot of time and energy that you could probably use elsewhere.

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- **180 Calories**
- **Soy Lecithin**
- **Now only \$39.95**
- **SPECIAL BONUS 30% OFF**
while it lasts!



Rather than have a long term outage of the Chocolate flavor of Perpetuem, I decided to do a short, "1.5" run – the difference from the original is quite minor, we used a liquid **Soy Lecithin** instead of powdered. The effect however, is a much moister powder. I did also recalibrate the serving size to **180 calories** per serving and reduced the price from \$49.95 to **\$39.95**. But it gets even better, since this is a one run product, I've moved it to the clearance page, where it'll be offered at **30% OFF** until it's gone!

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Unflavored
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First introduced under the name Energy Surge in 1991, this product revolutionized ultra fueling. Now, 31 years later, I went out and rebuilt it, better than ever. This re-formulation consisted of changing the carbohydrate source from corn maltodextrin to **Tapioca Maltodextrin**. More on that in the next issue. The rest of the macro and micro nutrient profiles are the same. However, I did also take this opportunity to “recalibrate” the serving size from a massively excessive 320 calorie, 85 gram serving down to a more reasonable **200 calories** 53 gram serving.

Regarding pricing, the servings per contain went from 30 to 32 and despite the tapioca being significantly more expensive than corn, the price went from \$56.95 to **\$47.95** per container. I promise you that all of these changes are not intended to confuse you!

I can also assure you that this new formula is a massive improvement over the original.

Try it, you'll like it, I promise.



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- Lactic acid buffering
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32 Servings **NOW ONLY** \$47.95

Now Even Better!

SUSTAINED ENERGY 2.0

Nutrition Facts

32 Servings Per Container
Serving size 2 Scoops (53g)

Amount per serving	
Calories	200
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 80mg	4%
Total Carbohydrate 43g	16%
Dietary Fiber 0g	0%
Total Sugars 2g	0%
Includes 0g Added Sugars	0%
Protein 6g	

Vitamin D 0mcg	0%
Calcium 35mg	2%
Iron 1mg	6%
Potassium 25mg	0%
Phosphorus 60mg	6%
Iodine 25mcg	16%
Magnesium 7mg	2%
Copper 0.1mg	10%
Chromium 11mcg	30%

*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



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Here are a few examples of what over 13,000 of you have been saying just so far this year!

*"Your advice was spot on. I hiked yesterday following your suggestions to a 'T', and I felt great! No lack of energy or hydration problems, all went very well. I am most thankful for taking the time to educate me. **I will keep Hammering!**" - Rocky H.*

"The products stand alone as a great success beneficial to all athletes! I keep coming back for it all for such a great selection of items and high speed accurate service! I love reading all the info you provide with the products and online. Thank you Hammer for being so awesome in all you do!" - Arabian Horse Dressage

"Based on my experience with Hammer products for over 20 years, I can enthusiastically recommend them to any athlete who desires excellence in their performance. It starts with scientifically-formulated products, great taste and desirable results! Their fueling advice is second to none! Don't try to reinvent the wheel folks, it's all right here!" - Cork T.

"Thank you Hammer! I was recently introduced to your products at an event. What have I been doing?! I called in for a fueling consultation and with a new custom regimen, I aced my next race with energy to spare. No crash, and no heavy legs. The Hammer service team expedited my order and was so helpful." - Nancy Q.

*"I just tried Hammer CBD and couldn't be happier with the results. I sleep so sound and wake rested, ready to go. **FINALLY!** Your team set me up with the AutoShip program so I'll never run out - it was super easy. Thank you Hammer for providing quality products and exceptional service." - Terry M.*



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A recap by STEVE BORN

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- 700 packets of **Hammer Gel®**
- 384 scoops of **Perpetuem®**
- 40 gallons of **Recoverite®**

When we heard that 24-hour mountain bike racing was back at Riverside Park in Spokane, Washington, we could hardly contain our excitement. That's because Hammer Nutrition had been involved with the original incarnation of the event—24 Hours Round the Clock—since its inception in 2019. Some years Hammer Nutrition staff members competed in the race, both in the solo division and the 4-person team division, and we had an expo booth/neutral fueling support station at the race every single year. Needless to say, this race has a major place in Hammer Nutrition's history.

After a two-year hiatus, the event was back on, with a new name, 24 Hours of Riverside, and an oh-so cool slogan: "A 24-hour celebration of the mountain bike." As longtime friends with the new owners/directors of the event, Eric Ewing and Patrick Bulger, and with such a long and storied history of our involvement with the event, it was a natural for Hammer Nutrition to become the Presenting Sponsor.

On May 26th, I made the "how could I forget?" drive out to Riverside Park to start setting up the Hammer Nutrition expo/neutral fueling support booth at our usual-great spot a couple hundred yards before the dismount line at the timing tent. I also had the opportunity that day to catch up with Eric and Patrick. It was great to see them again, and I could tell from the meticulous set-up job they and their staff did

at the race venue—including our "you can't miss it" finish line arch—that it was going to be an awesome time for the riders. 100% professional and thoroughly rider-friendly... Eric and Patrick know their stuff!

My co-worker, Camryn Lingle, joined me on Friday, the 27th, and we spent the entire day and well into the evening providing samples and last-minute advice to lots of riders (a "clinic a minute" we call it). We also reminded them that we were providing fueling support for all competitors for all 24 hours of the race, and that they could make a pit stop at our tent to get replenished with **HEED®**, **Hammer Gel®**, **Perpetuem®**, and **Endurolytes®** prior to heading into the timing tent and starting another lap.

Continued on page 58



WHITEFISH MARATHON MAY 21, 2022



Carly Lampert of Whitefish and friends head out from the starting line in great spirits!

It was an unexpectedly chilling morning start for the Whitefish Marathon, but perfect weather for a run!

Our Hammer home town crew was on hand to prep, take photos, answer everyone's fueling questions and visit with our many friends, clients, and neighbors who turned out from across the country and beyond for the race.

We at Hammer were thrilled to sponsor and co-host this 26.5 mile, Boston qualifier event with a record turn out of well over 1,000 participants. Runners were also eligible to run a half marathon and 5k distances. The out-and-back course winds around our scenic Whitefish lake and throughout the surrounding community, with an elevation gain of 1170 ft.

By the time the first finishers came through, the skies had parted for a sunny podium and awards celebration in Depot Park. For winning stats and more photos, see [page 58](#).

For more information, and to register for the 2023 race, visit whitefishmarathon.com

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- Helps relieve muscle cramps
- Supports optimal blood sugar levels
- Promotes deeper sleep

120 Capsules \$19.95



*"I use **Essential Mg** as an add-on to drive my triathlon training recovery. Great product to maintain proper key levels within and across recovery." - Daron H.*



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*flavor will vary

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Kaniksu 50 Ultra

Nothing Without Sacrifice



- ★ JUNE 11, 2022
- ★ 50 MILES
- ★ RUN OR RUCK
- ★ SOLO OR TEAMS
- ★ 11,100 FT. VERTICAL GAIN
- ★ 22,200 FT. ELEVATION CHANGE
- ★ 50 PARTICIPANTS

Hammer Events Coordinator, Ultra Runner, and US Army Veteran, Flavie Dokken placed 4th OA among a field of all men. It was a team effort with Race Director Ricky Haro (pictured left) and Austin Reed for a Great Event!

Hammer Nutrition is honored to have been supporting this very unique event since its inception in 2014.

Participants and proceeds honor the **U.S. Air Force SERE** community.

SERE standing for

- Survival
- Evasion
- Resistance
- Escape



SERE specialists are uniquely adapted to survive, rescue, and succeed in any environment, in extraordinary situations.

Therefore, an ultra run across and through demanding terrain is a fitting event for these remarkable participants.

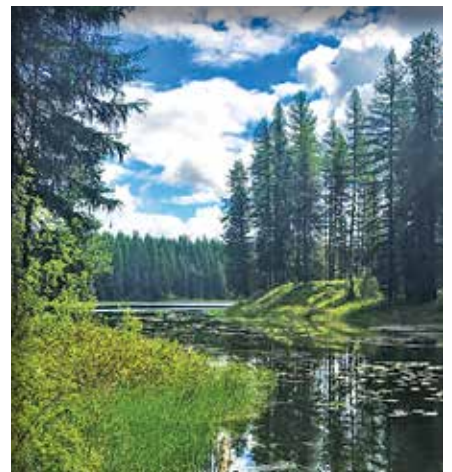
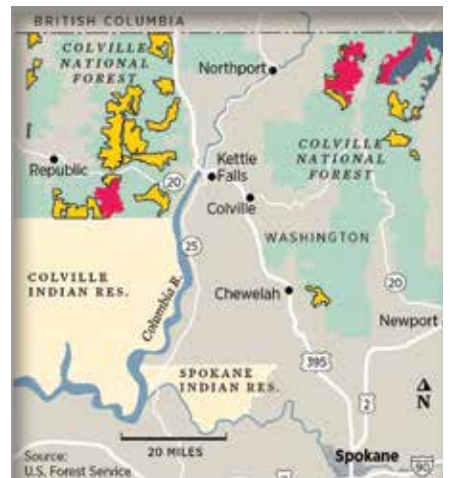
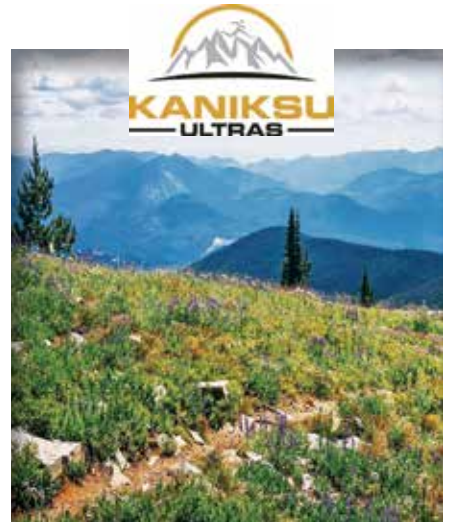
The course spanned the outstandingly-scenic Lower Selkirk Mountain Range of the Colville National Forest

in Washington state. Entrants took part in either a run or a tradition military ruck, solo or in teams.

This year's event raised funds to erect a permanent SERE memorial, provide educational scholarships, and to allocate emergency funds to military personnel in need.

Two outstanding race directors at the helm are Austin Reed and Ricky Haro. Austin is an active duty USAF SERE specialist and endurance athlete whose most notable challenge includes completing Badwater 146, self-supported, while pushing his own cart of supplies!

Hammer Nutrition is happy to support future endeavors and we give our sincere thanks to all of the SERE and US Military for all that they do. **EN**



Real Fuel Ready to GO!



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

Single Bar \$2.50 ea
12 bar Box \$30.00

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



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



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ENDURANCE NEWS

REMEMBERS EN ISSUE #59

2008

BACK in action

Achieving effective relief on your own

Back in Issue #59 of *Endurance News*, I shared with you my experience with back pain, and a few book titles that I found to be most helpful.

Circling back now fifteen years later... like most of you, this back's not getting any younger, but by following these simple recommendations I am far more cognizant of maintaining core strength and its relevance on my everyday activities.

After all, we need a strong frame to support a strong structure. It is this structure that will provide us with prolonged range of motion, coordination, balance, and thus a healthy mood as well, if from nothing else than not being in pain all of the time. A sore back and/or neck sure makes anyone crabby, and is most often caused by stress.

The obvious exception being those with a legitimate trauma, responsive to treatment and PT - but even then, residual pain from such injuries can flare up in times of high-stress situations.

Whether you experience back or neck pain resulting from strenuous athletic activity, injury, or work-related conditions, we have 3 books that I still highly recommend, available directly on our Hammer Nutrition website hammernutrition.com, or use the QR code link below.

Take care and be well.
Your back will thank you!

-Brian Frank



ENDURANCE NEWS : The Newsletter For Endurance Athletes

Back Pain

Brian Frank

Back pain? Been there, done that. I ruptured my L5* in January of 2004, and it would not heal or respond to a full year of physical therapy (PT) and exercises done religiously; I was in constant pain and suffered muscle spasms. Additionally, I was off the bike and had to work lying on the floor with my laptop propped on my knees for two years before I figured it out. Let's just say it was very stressful.

*The symbols L1 through L5 represent the five lumbar vertebrae. The lumbar vertebrae are situated between the thoracic vertebrae and the sacral vertebrae in the spinal column.

A book that I found most helpful is *Treat Your Own Back* by Robin McKenzie (available for \$10.95 from the "Books & DVDs" link on the Hammer Nutrition web site). This book deals only with restoring the lordosis of the lumbar spine. This is key because, due to poor posture and countless hours sitting on our bikes and at desks, we tend to straighten out the natural negative curvature in the lower back. For many, simply doing this exercise provides immediate, if temporary, relief from low back pain, stiffness in the lower back and sciatic pains. This is where to start.

Next, you must incorporate a core routine (see week). It can be your local sports store or recommend a DVD series offer a Cycle incorporated and include when you & DVDs" it out.

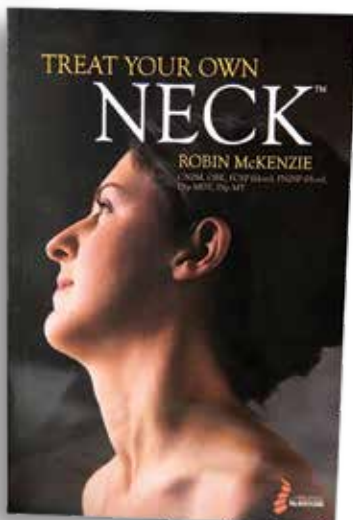
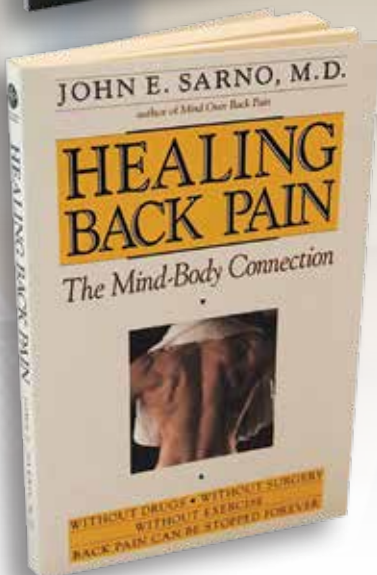
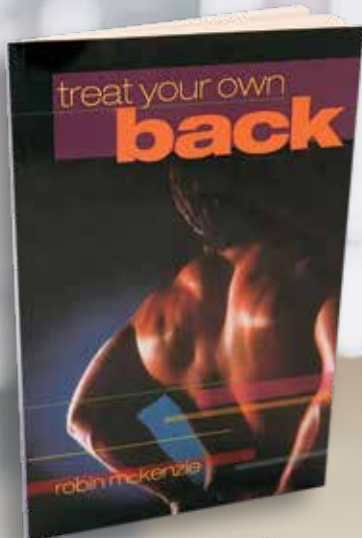
Notice the strength. That's because actually the core is because their strength and the a bit.

The last is real almost new some more pre pain. The back

Printed resources for your knowledge library!

TREAT YOUR OWN BACK

16 / www.hammernutrition.com / 1.800.336.1977



Your CBD Gold Standard



- Never fail a drug test
- Aids quality sleep
- Boosts recovery



Balm starting at **\$4.95**
Oil Tinctures starting at **\$59.95**
Softgels starting at **\$6.95**



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



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Your Kidneys Love COFFEE

“Drinking coffee is one of the best things you can do to promote many aspects of health, highlighted by its ability to decrease premature mortality risk.”

by STEVE BORN

In the past few years, I’ve read a lot of research about coffee, and I have written quite a few articles about that research regarding coffee’s benefits for many aspects of human health.

One of the most eye-opening studies that we at Hammer Nutrition have come across over the years was reported way back in late 2018 on page 42 of *Endurance News* #112. “*Reduced Risk of Dying Prematurely for Coffee Drinkers*” discusses research involving nearly 500,000 men and women. The findings were thus: coffee drinkers reduced their risk of premature mortality by a factor of 6% (less than 1 cup of coffee daily), compared to 14% (8+ cups of coffee daily). **Remarkable!**

After reviewing much research on coffee’s benefits over several years, I have concluded that coffee is one of the healthiest beverages in the world. This study dramatically solidifies that belief.

Bottom Line: Drinking coffee is one of the best things you can do to promote many aspects of health, highlighted by its ability to decrease premature mortality risk.

The good news on coffee continues!

A new study from the Johns Hopkins University School of Medicine, published in the

journal *Kidney International Reports*, shows that coffee consumption is linked to a reduced risk of Acute Kidney Injury (AKI). According to the National Kidney Foundation, AKI is a “sudden episode of kidney failure or kidney damage that happens within a few hours or a few days. Such damage causes waste products to build up in the blood, making it hard for kidneys to maintain the correct balance of fluids in the body.”

The number of hospitalizations from AKI has significantly increased over the years from 953,926 in 2000 to 1,823,054 in 2006 and 3,959,560 in 2014. Forward eight years, and the trend has undoubtedly risen even more; it’s certainly a serious issue.

In this study, researchers used data from over 14,000 adults (median age 54) enrolled in the Atherosclerosis Risk in Communities Study. Participants were surveyed seven times over 24 years as to the number of 8-ounce cups of coffee they consumed per day: zero, one, two to three, or more than three.

The results showed a 15% lower risk of AKI for participants who consumed any amount of coffee versus those who did not. Those in the group that drank two to three cups a day had a 22%–23% lower risk.

Continued on page 62





A little slow to roll this morning?

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COMING UP!**

Sunrise at Hammer HQ, Whitefish, MT



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



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*flavor will vary



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FROM THE KITCHEN OF **LAURA LABELLE**



Deliciously Healthy Recipes

THAI NOODLE SALAD

INGREDIENTS

1 Package	Clear "cellophane" noodles
4 cups	Red Cabbage veggie mix of your choice
1/4 cup	Peanuts
1	Bunch fresh bean sprouts
1	Red Bell Pepper
3	Scallions
1/2	Bunch Cilantro

Add & Season to taste

Diced jalapeño, Cayenne Pepper, Salt

PREPARATION

Cook Noodles according to package instructions, chill and set aside.
Make the peanut sauce.*see recipe below
Chop, mix, and toss all of the veggies and herbs.
Garnish with crushed peanuts

PEANUT SAUCE

INGREDIENTS

3	Thin slices of Ginger
1	Clove Garlic
1/4 cup	Peanut Butter
1/4 cup	Fresh orange juice
3 tbsp	Fresh Lime Juice
2 tbsp	Liquid Aminos
3 tbsp	Agave syrup
3 tbsp	Toasted Sesame Oil

PREPARATION

Combine all ingredients and blend until smooth using a traditional blender or a hand mixer.

Looking for more healthy recipes? →

COCONUT CURRY SHRIMP

INGREDIENTS

1 lb	Large Fresh Shrimp
2	Bell Peppers
1 lb	Yukon Gold potatoes (diced)
1	Yellow onion
1 tbsp	Cilantro
1 tbsp	Garlic
1 tsp	Ginger
4 sprigs	Thyme
1 14oz can	Full Fat Coconut Milk
2 tbsp	Olive Oil
6 tbsp	Curry Powder

Add and Season to taste

Black Pepper, Cayenne, Salt, Ground Cumin

PREPARATION

Season the shrimp in 2 tbsp of the curry powder and set aside.
In a large sauce pot, saute the onions and peppers in olive oil until soft
Saute garlic and ginger about 2 minutes
Add remaining curry powder and spices and allow to fry for 2-3 minutes
Add all liquids and the potatoes and cover.
Allow to simmer until potatoes are soft.
Add the shrimp, recover and allow to simmer until fully cooked and pink, about 5 minutes.

Serve and garnish with fresh cilantro.



Download your
FREE copy of
In the Kitchen
today!



HAMMER Supports and Celebrates Fit Folks just like you every day!

Gary Kanaby

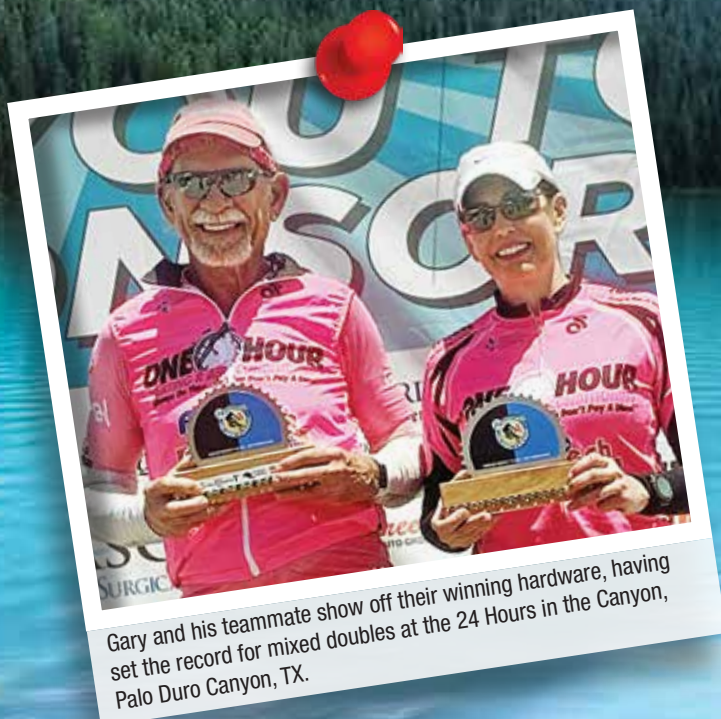
- ◆ 72 years old
 - ◆ Hammering for 20 years
 - ◆ Started cycling at age 60
 - ◆ Still averaging 7500 miles/year
- #noexcuses

I started cycling in 2010 at the age of 60 not having ridden a bike for 50 years. I began slowly working my way up to my first century within 6 months. I lived south-east of San Diego which gave me beautiful roads in the mountains to ride.

In 2012 I found myself wanting to do longer cycling rides. After some centuries I signed up for the Furnace Creek Double Century ride in Death Valley, to date my longest ride. I was hopeful I could make a good showing. It was a challenging ride from the desert and up and down mountains. I found that the aid stations were stocked with **Heed®** which was new to me. I finished averaging over 16.5 mph! I was hooked on Heed and investigated the other products. I called in for advice on long distance riding and a Hammer expert suggested I started using **Perpetuem®** as well as **Race Caps Supreme** and **Anti Fatigue Caps**. I finished the year with over 8600 miles and 585,000 ft of climbing completing a 250- and 300-mile ride during the year.

Continued on page 59

Gary's Winning Hammer Products: Perpetuem, Race Caps Supreme, AntiFatigue Caps, HEED, Fizz, and Hammer Raw Energy Bars.



Gary and his teammate show off their winning hardware, having set the record for mixed doubles at the 24 Hours in the Canyon, Palo Duro Canyon, TX.

Whether competing in an ultra distance race, or just this morning's urban rat race, we're here to help athletes and non-athletes alike to be their best each and every day!

Dan and Shelly Morgado

- ◆ Hammering for 21 years
- ◆ Avid runners
- ◆ Cycling 200+ miles
- ◆ 16 Hour Mountain Climbs
#stayactive



The Morgado's enjoy a ride through Columbia Gorge.

We have been hammering since 2001. My wife and I are avid athletes— always running, hiking, cycling, climbing, weight training, and more throughout our adult lives.

Whether we need assistance with fueling, recovery, or both, Hammer Nutrition has us covered!

Hammer's customer service is always top-notch too! Thank you Hammer for keeping going and active, and for everything you do!

Link Gunther

- ◆ Hammering since 2017
- ◆ Longest day hike: 9,000 ft. elevation gain, 23.6 miles, in 18 hrs.
- ◆ Over 1,000 hrs on the yoga mat
#staypresent



Hammer Nutrition products give me the confidence and ability to tackle activities I previously never thought possible. Whether I am sweating it out on my mat in a 90-minute heated vinyasa class or tackling a massive hike with my buddy Kepler, Hammer Nutrition helps me stay present and enjoy the moment.



Link and friend Grant Snell hike the rugged terrain of Flathead Valley, MT. Photo: Grant Snell.

FROM OUR ATHLETES



Gabrielle Suver

IRONMAN 70.3 WORLD CHAMPIONSHIP

The Ironman World Championship went well! It was a super hard course, the hardest I've ever biked or ran with 7,000+ elevation gain on the bike, 1500ft on the run, dry desert heat, and gusty strong winds. I didn't really have much time to acclimate to the weather coming from sea level but did what I could. There was also a pretty high DNF rate. I stuck to my same fueling plan that worked for Chattanooga and GFT using **Hammer Gel®**, **Perpetuem®**, water, and **Endurolytes®**. I was able to finish my first Ironman World Championship race (my 3rd Ironman distance finish) and made it in the top 10 for my age group. Thank you, Hammer Nutrition, for keeping me going strong!

Gabrielle shows off her hardware, proud of her top 10 finish. Photo courtesy of Gabrielle Suver.

Naomi Haverlick

BWR - ASHVILLE

9th AG

11:04:01



Had me at "Full Waffle" at BWR, NC (Belgian Waffle Ride) with 130 mi, 13,000 ft vert, race time of 11 hr 4 min, 9th in my age group. Had to manage the urge to quit at mile 60, a flat tire at mile 97, a bee that bounced off my eyeball at mile 104, and a Garmin that quit at mile 123. I'd say that's pretty drama free, and I'll take it!!

Hammer Kit-check! Full Hammer bottles-check! Hammer fuels-packed! Naomi is ready to roll at the starting sidelines of BWR. Photo courtesy of Naomi Haverlick.





Jessi Morton-Langehaug

SQUAW PEAK 50

2nd Place Female Masters Division



This year's Squaw Peak 50-mile trail race had record high temperatures (around 96° Fahrenheit) with very little wind. To combat the heat, I ate **Hammer Raw Energy Bars** throughout the course, along with raspberry and huckleberry **Hammer Gel®**. I also stayed on top of my

electrolytes by taking 1-2 **Endurolytes®** capsules per hour while it was cooler. I was feeling a little depleted at Windy Pass so I added a Lemon-Lime **Endurolytes Fizz** into my 20 oz bottle and drank it on my descent. No stomach issues and I finished strong!

Representing Hammer, Jessi proudly displays her Squaw 50 award.
Photo courtesy of Jessi Morton-Langehaug.

KEEP HAMMERING!

Shaw Dunkel

WOODS MOUNTAIN RACE
Pisgah National Forest

"Woods Mountain is a race in the backcountry of Pisgah National Forest. Across 36 miles, 5,472 ft elevation; this is not one for the weak of heart! Our goal was to finish, we ended up 8th in Master men and 2nd in women. Thank you, Hammer team!"

Shaw's team and crew excelled relying on their favorite Hammer products such as: **Endurolytes® Extreme**, **Hammer Gel®**, **HEED®** and **Race Caps Supreme**.

Shaw Dunkel represents Hammer as he conquers the wooded trails with ease. Photo: Icon Media Asheville



FROM OUR ATHLETES

Mitchell Harrison



"Best decision EVER going with hammer Nutrition!". Photos courtesy of Mitchell Harrison

For you moto fans out there you may know Mitchell Harrison, he spent some time with Pro Circuit and has been on a couple of different teams since but regardless we have continued to support him every step of the way making sure he is **Fueling Right and Feeling Great.**

With a new adventure in store for Mitchell he has now left for Canada to pursue winning a 250 Motocross title up north and here is what he had to say about HAMMER and how it is has helped his program, "From

the get go I felt a much different vibe from everyone at Hammer, instead of just sending me product without any idea how to use it properly they were guiding me every step of the way! They helped me figure out when the best time to use each product for my practice day and race day programs! **Brian Frank** actually gave me a lot of advice on what would work best for me, that meant a lot to me because he is the owner and to take time out of his busy schedule to walk me through

WINNING STATS

- 2020 Lucas Oil AMA Pro Motocross Championship 250 8th place
- 2021 Monster Energy AMA Supercross Championship 250SX West 10th

PLACE

- 1 career Lucas Oil AMA Pro Motocross Championship 250 Podium
- 5 career Lucas Oil AMA Pro Motocross Championship 250 top 5s
- **ROUND 2 WINNER OF the 250 PRO CLASS at 2022 TRIPLE CROWN**

SERIES

- **ROUND 1 – 3rd PLACE in 250 PRO at 2022 TRIPLE CROWN SERIES**

everything was just amazing. I love everything about the product, it has helped me recover much faster and the **Nasol** and **Clear Day** products have cleared my mind up more than I could ever imagine! My fitness is on a major upward trend because of the Hammer family, and I can't thank them enough!" Mitchell, we wish you all the best and look forward to seeing many more wins and podiums!

Josh Hernandez



WINNING STATS

2022 Big Cedar XC MTB Race – 1st Place in CAT 2 19-29

2022 Austin Ridge Riders Pace Bend Race - 1st Place in CAT 2 19-29

2022 Cameron Park Blowout – 2nd Place in CAT 2 19-29

Josh has been putting in the work and results have been following! His unwavering dedication for 2 wheels is what drives him to be better and better every day, initially Josh was chasing the dream of being a motocross racer but has now switched gears to cross country mountain biking and here is what he had to say about his recent success, “I am getting close to Cat 1 speed so next year I plan to move up. I have been relying heavily on **HEED®** and

Hammer Gel® to get me fueled for my workouts and taking in **Recoverite®** and **Hammer Whey Protein** immediately after my workouts. I have been seeing some really great gains in my speed and endurance on the bike which I’m really pleased with. One other product that has really been helping me is the **Hammer CBD** beofre bed. Sleep is something I’ve been trying to prioritize this year and this product is really helping out.” At the time this was written Josh



“Put in the work, Results will follow!” Photo courtesy of Josh Hernandez.

currently sits in 2nd place in the points for the Texas Mountain Bike Racing Association Spring Series, and we look forward to seeing how the season unfolds!

PAT SMAGE

WINNING STATS

13-time US AMA/NATC National Champion

2022 FIM North American Pro Champion

Trials de Nations team member



Pat Smage is your official 2022 NATC Trial Champion! After an awesome 6 Round season, 2 being cut short due to an unexpected snow storm, Pat came out victorious winning every round! The future for Pat in Trials is unknown as he has expressed interest in pursuing Hard Enduro but we must not forget the 13 Championships that he has won that led him to this point in his career. We had the awesome opportunity to sit down and interview Pat after winning the title and here is what he had to say about **HAMMER** and how we have

helped him this season, “I want to give big props to Hammer Nutrition and Brian Frank for helping me get through the season, it was big struggle physically getting through the season and with getting sick I really relied on all the products to get me through the rounds especially the ones in California. The **Clear Day**, **Endurolytes®**, **HEED®** and **Hammer Gel®** and everything else you guys had to offer it seriously helped.” We can’t wait to see what the future holds for Pat and look forward to supporting him in whatever he may choose!



Pat does it AGAIN! Pat shares in his victory with Brian Frank. Photo: Stephanie Vetterly



Pat scouts lines for his next run. Photo: Camryn Lingle.



Before the break of dawn, runners from around the world waited anxiously for the 3 am start time. The athletes get to experience the picturesque rolling hills of Moc Chau covered in rice patties, peach orchards in full bloom, and some of the most beautiful tea plantations in Vietnam.

With a winning time of 7:55:28, Tien Hùng Nguyen, a Vietnamese Sponsored Athlete, crushed the competition with 2nd place coming in behind at 8:21:42.

If you're interested, take a look at the other events in the Vietnam Trail Series!

10/15/22 Vietnam Jungle Marathon

11/9/22 Vietnam Mountain Marathon

2023 VMM Nam Cang

Each of these races has something unique and challenging of its own.

Vietnam Jungle Marathon has over 3,000m elevation gain while running up the mountains and into the heart of the jungle below. Trekking over turquoise rivers, and across rice paddies, you will experience rural Vietnam in its most extraordinary form.

With a staggering +8,500m elevation gain, **Vietnam Mountain Marathon** runners race over 100

Vietnam Trail Marathon 2022

 **Nguyen Tien Hung**
1st Place / 70K / 7:55:28

miles of pure northern Vietnamese rugged wilderness. Experience the golden rice fields ready for harvest and rural villages over their 100-mile journey.

Vietnam Nam Cang runners face 3,500m of elevation gain. You can see a new side to the Vietnamese wilderness, with a unique finish line! Cross over a swinging bridge above a river as you finish the glorious race! With a beautiful mix of mountains and jungle, Nam Cang is all three previous races tied into one.

Hammer Nutrition Vietnam proudly sponsors all of these exciting events!

First Place OA winner, Nyugen Tien Hung gives a "thumbs up!" while grabbing some HEED before heading out.

The Hammer Vietnam team is at your service! Fueling and educating athletes for success from start to finish.

Hammer Vietnam did a bang-up job in coordinating alongside Vietnam Trail Marathon for a fantastic event with unprecedented attendance and global recognition.





Costa Rica

Laura Sancho Cartin

Taekwondo

“When passion and hard work meet, anything is possible.”



GOLD

Puerto Rico Open



SILVER

Dominican Republic Open



BRONZE

2022 Pan American Championship

Laura Sancho Cartin from Costa Rica is a Hammer Nutrition athlete in taekwondo who is on her ten-year journey towards the 2024 Olympics in Paris.

Recently, Laura’s hard work and drive have been paying off!

“They told me something that I really liked: **Once it’s chance; Twice it’s work.** This medal summed that up, in the discipline and work I have been doing all these years. I still can’t believe I can say I’m the third-best on the continent at what I do.

I use Hammer because they meet all the requirements I need during my training and competitions. In addition, they help me recover after the weigh-ins, to arrive in good condition to compete.”



Europe

Pepo Vinueza



1st Place - Beating the Odds!

Triathlon / Olympic Distance

Triatlo TourL Relievos

Pepo Vinueza is a Hammer Athlete from Ecuador, living in Spain, representing Europe. Pepo began his athletic career primarily as a runner, but recently conquered a long-time dream of completing an Olympic-distance triathlon.

He began training in February, for the race in May, not knowing how to swim, nor owning a bike. Pepo not only finished, but did so in impressive fashion, earning 1st AG and 3rd OA - all despite having lost one arm to cancer back in his teens. **Well done!**



“So, what is a **CHALLENGE?** It is simply a sum of **EXPERIENCES** full of learning and growth.”



**KEEP
HAMMERING
PEPO!**



ENDURANCE NEWS **WEEKLY**

Since 1993, *Endurance News* has been a leading source of vital information for endurance athletes. Every issue is rich with insightful articles to help you be healthier, fitter, and faster. Between issues, we offer great new articles online every week to keep your knowledge growing!

Meet the Authors

Brian Frank



Brian's uncompromising commitment to providing superlative customer service, unlimited free educational resources, and the highest quality, all-natural products specifically engineered for endurance athletes has allowed him to achieve his goal: helping serious endurance athletes reach their highest level of performance and health, safely and naturally.

Steve Born



Steve is an accomplished, record-holding ultra-cyclist who has over 30 years of independent research in nutritional fueling and supplementation. His experience gives him unmatched familiarity with the myriad of product choices available to athletes—and the knowledge of what actually works.

Dean Karnazes



Also known as the Ultramarathon Man, Dean Karnazes is a supremely accomplished runner, author, and speaker. His passion for helping athletes achieve their personal best in sport and life aligns with Hammer's fueling- and education-based philosophy. Dean's legendary accomplishments have been Hammer-fueled since 2008.

Dr. Bayne French MD DC



Dr. Bayne French M.D. D.C. is Hammer Nutrition's medical advisor. Along with an MD from the University of Washington, Dr. French brings over 20 years of health experience, with a focus on wellness, to the Hammer team. Dr. French currently works at Glacier Medical Associates and is double board certified in Family Medicine and Obesity Medicine.

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EN KNOWLEDGE RESEARCH

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HAMMER EVENTS

EVA CASALE

Every Veteran Appreciated



I started running over 40 years ago to help my dad exercise to lose weight. He stopped and I just continued to run more and more. I ran my first marathon, the NYC Marathon when I was 18. In 2006, my life changed when I donated a kidney to a stranger. This experience left me with a longing to do more and help others. The last 15 years have been spent running with a purpose or what I call “Charitable Ultrarunning” (unique events to raise money and awareness). On April 24–30, 2022 I ran the 6th annual **Team E.V.A. (Every Veteran Appreciated)–7 Marathons in 7 Days**, an 184-mile event. In 2016, we created this event to support our troops, honor our veterans, and remember our heroes.

It is a unique event in which we stop at over 130 points of honor (memorials, national and rural cemeteries, VFW posts, firehouses, schools, homes, and monuments) and place over 300 flowers, roses, wreaths, and cones to honor



The patriotic support crew for TEAM EVA all stay fueled right with Hammer!

7 Marathons in 7 Days for Veterans

and remember the fallen.

Our 501(c)(3) organization raises donations and awareness for Veterans Organizations on Long Island. GoTeamEVA.org

My team is a great support as they take turns running each day with me. Teamwork makes this event possible. We all use Hammer products to keep us going. We have ready-to-grab small combo bags of **Endurolytes® Entreme**, **Anti Fatigue Caps**, and **Race Caps Supreme®**. I also keep in my bottle a combination of **Perpetuem®** and **Fully Charged** throughout each day. We have bins full of supplies and in one we keep dozens of **Hammer Gel®**s ready for use! We also have **Hammer Bar®**s too! I take **Recoverite®** each night—Chocolate of course!

I have been Hammering for over 10 years. I’ve completed over 150 marathons and ultramarathons. **Anti Fatigue Caps** are my best friend! Thank You Hammer for keeping me running!

“I have been Hammering for over 10 years, completing over 150 marathons and ultramarathons. Thank You Hammer for keeping me running!”



Salty & Stupid Gravel Fest

10/7/22

saltyandstupidcycling.com/the-stupid-pony/

We are excited to provide fueling for the Stupid Pony 100 and Salty Lizard 100, two of the most grueling bike races you will find in Utah's West Desert.

Along the way, you will see antelope, horses, and all the mountains you could ever want. If you are looking for a unique and remote adventure, look no further!

24 Hours of Palmer Lake

10/8/22

facebook.com/PalmerLakeEnduranceRun

24 Hours of Palmer Lake is back and we are so honored to be a part of this staple CO event! This race features 24 hours of a gorgeous 0.82 mile loop course surrounded by mountains on top of the Palmer Divide at an Elevation of 7,240 Feet. This is a low fanfare community-driven event, simply geared towards those who love to push their mental and physical limits while being surrounded by like-minded crazies.. Compete to win, set a new personal distance PR, test a nutrition plan, your choice.

Whitefish Trail Legacy Run

10/1/22

whitefishlegacy.org/event/whitefish-trail-run

A great way to explore the trails in our beautiful hometown of Whitefish, MT. Saturday's 50k Mountain Ultra will start in Depot Park in downtown Whitefish, climb to the summit of Big Mountain via the Whitefish Trail in Haskill, and finish at the Great Northwest Oktoberfest in Depot Park in downtown Whitefish!

Quick-N-Dirty - Dirty 30

12/3/22

quikndirtymtb.com/race-info/dirty-30

A great MTB race to end 2022 with a bang! Join this staple race from our longtime partner QuikcNDirty. The course features 100% hand built trails and will feature fun flowy terrain with occasional rock features, slabs, and drops that will be sure to put a smile on your face.

UPCOMING EVENTS

- ☐ **TOUR OF THE WHITE MTNS**
10/1/22
Pinetop-Lakeside, AZ
epicrides.com/events
- ☐ **SKY ISLAND TOUR**
10/1/22
Sierra Vista, AZ
skyislandtour.com
- ☐ **BLANKET CREEK MTB RACE**
10/1/22
Canton, GA
mountaingoatadventures.com
- ☐ **BACK ON THE RANCH**
10/1/22
Santa Maria, CA
allwedoisrun.com
- ☐ **PONY EXPRESS TRAIL**
10/14/22
Faust, UT
ponyexpress100.org
- ☐ **BWR KS**
10/23/22
Lawrence, KS
belgianwaffleride.bike
- ☐ **ANTELOPE ISLAND 50K**
11/4/22
Syracuse, UT
buffalorunadventures.com

CONTINUED ARTICLES

24 HRS of RIVERSIDE

Continued from page 36

The race began at noon on Saturday, May 28th, with the per-usual LeMans start, and it didn't take very long for riders to make a stop at the Hammer Nutrition booth/fueling station. Whether it was to fill up their bottles with **HEED**®, to make a fresh bottle of **Perpetuem**® for riders, to alleviate cramping issues with **Endurolyte**® or **Endurolytes Extreme**, and to provide the team riders with **Recoverite**® for the 3+ hour “down time” between laps, Camryn and I were there to help them all. We were definitely busy all day long.

The best part of the event, for me anyway, is when the sun goes down, the bike lights go on, and the racing continues into the night and early morning hours... that's when the race really begins, in my opinion. As a longtime competitor of ultra-distance road cycling events, I know from firsthand experience of the challenges that occur the longer a race goes on. Late at night and early in the morning is when a lot of fueling-related issues can arise, so aside from a short 30-minute catnap in my truck, I was awake and helping riders all night long. Camryn, who had been super busy throughout the day, taking photos and posting on social media, stayed with me at the booth well into the night before heading out for a sleep break



Steve Born, Camryn Lingle, and the whole Hammer Crew are at your service! Be on the look out for us at your next event!

at his nearby hotel. He joined me the next morning around 7:00am and we both helped many a rider during that crucial last five hours of the race.

At noon on Sunday, May 29th, the race was officially over, and that's when the **Recoverite** really started flowing. While filling up and consuming bottles of **Recoverite**, many riders took the time to thank us for being there, and Camryn and I heard a lot of “you guys really saved me out there” comments from them. For over 20 years I have been working at events for Hammer Nutrition and this is why I love doing it—I get to help other athletes have their best race possible. Having Camryn there with me this year was a blast and he was a great asset at the booth/fueling station. We can't wait until next year!

EN

WHITEFISH MARATHON

Continued from page 37

MARATHON 1st Place OA:

Paden Alexander of Ronan, MT

HALF MARATHON 1st Place OA: Drew

Coco of Whitefish, MT

5K 1st Place OA:

Lane Hovey of Whitefish, MT



Hammer Events Coordinator Flavie Dokken, and Senior Fueling Expert Steve Born are on deck to help marathon athletes Fuel Right and Feel Great!



Katherine Mizushima of West Glacier, MT stops by after checking in at registration.



Hammer's own Ryan Fatheree is awarded for an impressive finish in the 5K.



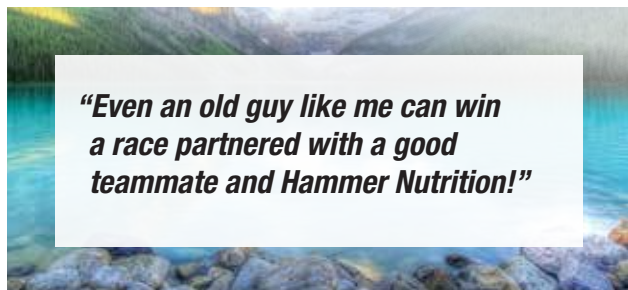
Tony Karalekas of San Francisco, CA is pleased with his half marathon performance.



Hammer's own Liam Mayo served as a pace rider to start the race.

GARY KANABY

Continued from page 46



"Even an old guy like me can win a race partnered with a good teammate and Hammer Nutrition!"

The 250-mile ride introduced me to Randonneuring who I have been riding with since. I have my routine down now using **HEED®** in the first two bottles and at each stop along the route preparing an energy drink from a baggy which contains a scoop of Heed and two scoops Perpetuem. The other bottle would be water or in the summer a **Endurolytes Fizz**. Before the ride and at every stop I take a **AnitFatigue Caps**, Race Caps Supreme. During the ride I eat a variety of snack bars my favorite being **Hammer Raw Energy Bars**. I find myself keeping up with the others much younger than myself (now 72) and never having cramps which plagues many long-distance riders. This year I am halfway finished with my sixth K-Hound award which is earned with 10,000 kilometers of Randonneuring rides completed in one year.

I found a great riding partner who is willing to ride a 200k or more every Saturday even during the summer months here in Texas. She is 20 years my junior, but I keep up with her. Although I am not a racer, she convinced me to join her for the 24 Hours in the Canyon Race (Palo Duro Canyon, Texas) as a mixed doubles team last year. Not only did we win, we beat the old record logging 375 miles in the 24 hours. I can attribute our success partly due to using **HEED** and the other caps through the 24-hour race.

I found that the *Endurance News* magazine which I receive in the mail had a lot of racers but no endurance riders like myself so I wanted to make sure that group knew the benefits of Hammer Nutrition. Even an old guy like me can win a race partnered with a good teammate and Hammer products. **EN**



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- Victoria G.



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WELLNESS RECOMMENDATIONS

Three of my personal favorite home remedies

by BRIAN FRANK



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

What follows is based on my personal beliefs and experiences.

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

THIEVES BLEND OIL

Use of this combination of essential oils (Citrus lemon, cinnamon leaf, clove, rosemary, and eucalyptus radiata) dates back to Europe in the early 1400s. At that time, little was known about the importance of hygiene or how disease was spread. Specifics vary, but the

story goes: the Bubonic Plague was responsible for killing between 30%-60% of Europe's population. Despite the near 100% mortality rate, there was a group of people who appeared to be immune to the disease. These were the corpse robbers (or "thieves") who would circulate freely night and day, robbing the valuables from corpses of people who had fallen dead in the street.

The rulers were baffled by the thieves' immunity, so they captured a group of them and forced them to divulge their secret. The thieves explained

that they blended these five essential oils and would dab the oil near their ears, below the mouth, next to the nostrils, and on the brim of their cloak hoods. The effectiveness was undeniable and this practice spread across Europe. It is thought to have slowed the spread of the plague.

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

Fast forward to modern times. Little if any clinical research has been done on this blend of essential oils. Some have been researched separately and do suggest benefits in preventing bacterial and viral conditions. Nevertheless, Thieves Blend enjoys widespread popularity in the holistic- and essential-oil-using communities. Here are the ways I use this product:

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

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

VITAMIN D

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

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

Highly-regarded vitamin D expert, Dr. Richard F Holick, states that vitamin D “is capable of regulating a wide variety of genes that have important functions in regulating cell growth, modulating immune function and cardiovascular health.” Epidemiological evidence and prospective studies have linked vitamin D deficiency with increased risk of many chronic diseases including autoimmune diseases, cardiovascular disease, deadly cancers, type II diabetes and infectious diseases. By now, it should be clear that vitamin D is essential for basically all aspects of health, including proper immune system function. There is a wide range of how much vitamin D one needs to

take daily to maintain optimal levels—a vitamin D, 25-Hydroxy blood test is the only way to know for sure—but the general consensus is 2000 IU - 4000 IU daily.

GRAPEFRUIT SEED OIL

People began writing about the beneficial properties of grapefruit over 2,000 years ago. They heralded it for the benefits we now associate with all citrus, namely as an excellent source of vitamin C. It wasn't until the 1960s that people began exploring the health benefits of grapefruit seeds.

“I hope you find these remedies helpful. I have used them personally and with my kids for over 20 years, so I am confident in recommending them to you.”



CONTINUED ARTICLES

ESSENTIAL FATS

by DR. BAYNE FRENCH

Continued from page 27

CONCLUSION:

It seems strange but several authors have commented that the sheer volume of data in the literature regarding polyunsaturated fats has resulted in complications of analysis. Although preclinical, lab, and animal studies show great uniformity in the myriad health benefits of O3 fats, hopefully now you can understand how human studies of similar design that reach opposite conclusions. If we as health minded hiking enthusiasts are waiting for some definitive work on the subject and agreement from all those experts out there, they'll find our bones in the woods.

Instead, let's look at the totality of the situation:

1. Our human physiology adapted to dietary commonalities, based on what was available in our natural world, for a very long period of time.
2. We've strayed dramatically from our native way of eating in the last several decades.
3. There is irrefutable evidence that O6 fats create inflammatory compounds.
4. There is irrefutable evidence that O3 fats create anti-inflammatory compounds.
5. Although O6 fats are essential, they are nutritionally ubiquitous. Deficiency is unheard of.



6. O3 content of foods is far more meager.

7. There is a virtual lack of deleterious side effects of high dosages of O3 fatty acids in our diet or via supplementation. This fits with the Hippocratic Oath, *primum nil nocere*, first do no harm. Ok, maybe fishy burps might interfere with intimacy but that's not really harmful is it?

8. Quality O3 supplements are widely available, do not require a prescription, and are relatively inexpensive.

So much of my approach to nutrition, health and fitness is based on insights from our historical way of being. Anthropologic data and knowledge of the outdoors coupled with physiologic and biochemical principles allows for a competent treatment plan. Which **MUST** be modulated over time based on observations, tolerability, and presence or absence of sustainably enjoyable action. The foundational principles of optimal human eating are well established, but can vary a lot among individuals and cultures.

As my study of human nutrition and supplementation continues, there is no question in my mind that the biggest determinant of our health, wellness, weight, and ability to avoid getting MAD (Myriad American Diseases) is the food we eat. I find futile the reliance on governmental nutritional guidelines, advisory councils, or the food industry. They care not at all about your health and well-being. If they did cancer, diabetes, obesity and

cardiovascular disease would not be rampant. It is up to you and only you to understand these basic principles of wellness and enact a plan for yourself. Predators be damned.

EN *References available upon request*

COFFEE

by STEV BORN

Continued from page 42



Perhaps the most interesting find was that when adjusted for additional comorbidities (the simultaneous presence of two or more diseases or medical conditions), blood pressure, body mass index (BMI), diabetes status, use of antihypertensive medication, and kidney function, individuals who drank coffee still had an 11% lower risk of developing AKI compared with those who did not.

Dr. Chirag Parikh, director of the Division of Nephrology and professor of medicine at the Johns Hopkins University School of Medicine, stated, "We suspect that the reason for coffee's impact on AKI risk may be that either biologically active compounds combined with caffeine or just the caffeine itself, improves perfusion and oxygen utilization within the kidneys. Good kidney function and tolerance to AKI are dependent on a steady blood supply and oxygen."

Dr. Parikh continued, "Caffeine has been postulated to inhibit the production of molecules that cause chemical imbalances and the use of too much oxygen

in the kidneys. Perhaps caffeine helps the kidneys maintain a more stable system. We already know that drinking coffee on a regular basis has been associated with the prevention of chronic and degenerative diseases including type II diabetes, cardiovascular disease and liver disease. We can now add a possible reduction in AKI risk to the growing list of health benefits for caffeine.”

There are already several steps we can take to protect the health of our kidneys:

- 1) Consume a low-sodium diet.
- 2) Severely limit the amount of added sugar in your diet.
- 3) Avoid nonsteroidal anti-inflammatory drugs (NSAIDs)—the regular use of which can increase the risk of NSAID-induced kidney damage—opting instead for natural approaches such as **Hammer CBD**, **Tissue Rejuvenator**, and **EndurOmega**.
- 4) As kidney disease is associated with poor vitamin status, be sure to supplement with:
 - **Premium Insurance Caps** (to improve overall nutrient status and to protect against elevated homocysteine levels)
 - **Race Caps Supreme** (the Coenzyme Q10 protects kidney tissue from numerous nephrotoxic drugs, such as gentamicin, cisplatin, and cyclosporine)
 - **EnDuro D** (the kidneys play a role in converting vitamin D to its active form)
 - **Digest Caps or Life-Biotics Super 15** (research suggests that probiotics help prevent the formation of uremic toxins, which negatively affect kidney function, and assist in their removal from the blood)
 - **Essential Mg** Magnesium deficiency is associated with diabetes and metabolic syndrome, which are risk factors for kidney disease

And make sure daily consumption of coffee is part of your “Kidney Protection Package”!

The **53x11** offerings from Hammer Nutrition are the delicious way to provide your body with the multiple benefits that coffee has to offer. We utilize only sustainable organic, pesticide-free farms, and support trade wages and direct purchasing to give more to those growing the beans. 

References available upon request

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CONTINUED ARTICLES

WELLNESS REMEDIES

by BRIAN FRANK

Continued from page 61

Dr. Jacob Harich, a physicist and immunologist, noticed that grapefruit seeds lasted a long time in his compost—a place full of bacteria and fungi. Curious about the antimicrobial properties of grapefruit seeds, Dr. Harich began experimenting. Using grapefruit pulp and seeds, he created a liquid extract that is still common today.

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

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

I carry a bottle of GSE with me whenever I travel internationally. I put 4-6 drops in a glass of water in the morning and at night.

This routine always works well for me. In the fall of 2018, I used it every day while crisscrossing countries around the world. I stayed healthy the entire trip and I know the GSE helped!

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

References available upon request

A WORD FROM BRIAN FRANK

Continued from page 4

We are not camels, we cannot store large volumes of water or sodium and loaded calories just end up as stored fat. Any loading possible will be accomplished through your taper – reducing activity but maintaining normal fluid, sodium and calorie intake. Next, it's necessary and effective to begin replacing these things at the time of loss, once you've begun exercising.

Cramping

It continues to baffle me how many athletes encounter cramps regularly as part of their exercise/training/competitions and how many think it's unavoidable. Like I always say; cramping is old school, like from the 80's. Even more puzzling is athletes allowing themselves to cramp up when

they have electrolytes on board! How much sodium/electrolytes should you take during exercise is one of our most frequently asked questions. The answer is; as much as you have to take to avoid cramping. Start with a good base and take more as needed. That's why we make electrolytes in four different forms, plus **HEED®** our electrolyte rich sports drink.

Pre-exercise meal timing

Except for 5-10K and marathon runners, almost no athletes have this figured out. The simple rule is to eat 3 hours before exercise or not at all. I follow this axiom with “**never sacrifice sleep/rest for food**”.

If you have not done so already, please read my 24 page booklet called **5 Secrets of Success** for endurance fueling. It will fully explain in simple terms how to avoid all of the common fueling mistakes athletes make and how, specifically, to do it right. When you use Hammer products, and follow our fueling protocols, your success is assured.

Quality and purity

There has been a significant uptick recently of inquiries concerning the origins of our products, quality control and so on. One client even surmised that our increasing number of items going on back order was due to sourcing from Asia. I'd like to assure you that is not the case now and never has been. The truth is that since 1987, I've

had a strict policy of using USA made materials in all of my products, unless an ingredient or raw material can only be sourced outside of the USA. On top of that, every product we make undergoes multiple test for quality, purity and lack of contaminants. On top of that, I've never sold a product that I would not or don't use myself and give to my family. Quality may be slipping and corners getting cut elsewhere, but that will never happen at Hammer. You have my word on that.

Speaking of back orders and out of stock products, unfortunately, the end is not in sight. Despite my absolute best efforts this issue will continue for at least the remainder of the year and most likely for much of 2023. As much as I hate to say it, if you've got some favorite products that you'd rather not go without, it's probably a good idea to stock up a bit.

In other news:

I'll save the full report on my competitive season for the next issue, but here is a teaser from the latest happenings:

The 2022 NATC Moto Trials National season consisted of 6 rounds this year, two in Tennessee, two in California and the final two rounds in northern Minnesota. I competed in 5 rounds, missing day two in Tennessee, and landed on the podium three times in the Sportsman class with two thirds and a second place. Proper fueling and meal timing gave me a big advantage over riders with more experience and skills. My goal for 2023 is to improve enough to ride in the next higher class, called Expert Sportsman.



Thank you for joining us in this issue of *EN*, and enjoy the rest of your summer after you've finished reading the rest of the magazine. Then, pass it on to a friend! Happy Trails! 

- Brian Frank

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Congratulations!

Nguyen Tien Hung of Vietnam, fueled by Hammer, WINS the Vietnam Trail Marathon with energy to spare!

Nguyen crossed the finish line with an impressive time of 7:55:28.

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Friends don't let friends overpay for CBD!

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

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