



ENDURANCE NEWS The informed athlete's advantage since 1992

Welcome to the 99th issue of Endurance News!

Spring is in the air, and that means racing season is upon us. As I said last issue, if you think there is room in your fueling and nutrition plan, we are here to help you take it to the next level for 2016. If you have not already read our two key publications The 5 Secrets for Success and How to Hammer, you can download free copies, or tell your Client Service advisor and we'll include print copies in your next order. Those tools are just the start: Our knowledgeable and friendly staff is standing by to help you dial in your fueling and nutrition for your individual needs. Don't pass up this great, free resource. Give us a call today.

Of course, reading this issue is also a good start. It is full of great articles by our growing list of staff, ambassador, and athlete

contributors. We are also excited to share our exclusive interview with the amazing Dean Karnazes and know that you will enjoy it.

Also in this issue, you'll find informative articles supporting our stance on low sodium and low sugar intake. Sugar and salt are not your friends. They are more like that friend you try to avoid, because every time you hang out, bad things happen and you live to regret it. The evidence supporting sugar and sodium reduction is overwhelming. So, if you are looking for support in your efforts to reduce these substances in your diet, you've come to the right place. We even have a cookbook filled with low/no sugar, low sodium recipes that taste so good you won't even miss the sugar and salt!

In the new and updated products category, we told you last issue about our new Chocolate Perpteum. It's now in stock, and many of you have shared your positive reviews. If you use Perpetuem regularly for your training/racing and you like chocolate, this new flavor is a must. As with the other flavors of Perpeteum, my favorite way to use this product is as a thick, multi-hour fuel.

Even though we position Perpteum as an "ultra" product for efforts in the 3-hour and beyond range, a master road racer reminded me recently that it also works great for shorter duration efforts. He uses Perpetuem on all of his workouts, even 60-minute spins. He explained that it's more satiating and takes care of his hunger at the start of a workout when it's been 3 hours since the last meal. Even at the upper limits of intensity, Perpeteum delivers the energy you need to put the hammer down! If you've never tried Perpetuem because you don't "go long," it may be time to rethink that idea. Whichever Hammer fuel or combination you prefer, you can be sure our fuels support a low-sugar, low-sodium diet and provide steady energy for exercise of any duration and intensity.

Before I go, one more Spring reminder. Many of you will soon be doing your first extended workouts in warm weather. These early workouts are ripe for cramps and other signs of electrolyte depletion as your body recalibrates its thermostat. Be sure to bring along extra Endurolytes and take them more freely than you do when you are properly acclimatized to warmer temperatures.

So, emoy the read, and then pass along the issue to a friend or someone you know will benefit from our message.

Brin Ful

Brian Frank Hammer Nutrition Owner On the cover: Calabrated ultrarunner Dean Karnazes always has his eyes on the prize. Read our exclusive interview on page 36. Photo: Courtesy of Fithit AN EXCLUSIVE PUBLICATION OF:



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MISSION

Endurance News provides informative, 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: www.hammernutrition.com

OUR GUIDING PRINCIPLES

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

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

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

OUR CORE VALUES

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

Product Integrity: Our consumables are researched. tested, and USA-made to the strictest standards. Read more at www.herromemutation.com "Mission"



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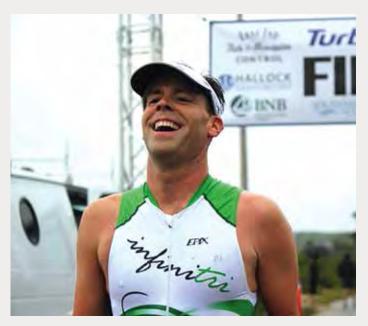
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HEEDed advice solves leg issues



I wanted to let you know what an amazing difference HEED has made in my racing. I started sprint tri's in 2014 and won my age group at the Mighty Montauk. I was thrilled at how far I had come in a short time, but at the end of the season I developed hamstring and calf problems. At that point, I had never used your products - mainly just water.

In early 2015, I slowly started training again, made some progress, and did half a dozen races, but the calf and hamstring problems continued to plague me. Because of my win in Montauk, I had qualified for Nationals in August, and my coach recommended I try HEED, which contains electrolytes. I made it through the race with no issues, and within a couple of days my leg issues disappeared. I did nothing else different.

I won my AG again at Montauk and have been pain free since then, with my run times steadily improving - all the while using HEED for training and racing. Thank you for a great product!

DAVID HORTON / CLIENT

Research-based, field proven

Hammer Nutrition is the quintessential source for athletes, spanning the full spectrum of fitness goals. The educational foundation and research that support your products are easily verifiable, not only from an academic standpoint but also in application. I notice a significant difference when I use Hammer products.

As a lifelong athlete, member of the military service, and recent member of the 40+-club, I felt compelled to share my positive personal experience with Hammer.

Trust does not come easily these days, but Hammer is what it says it is. It delivers without fail and provides support whenever you need a plan or additional data. God Speed. Respectfully,

KEVIN / CLIENT

Tissue Rejuvenator a "game changer"

I recently have been using Recoverite along with Tissue Rejuvenator, after struggling for years with piriformis syndrome and ischogluteal bursitis while trying to continue to train and compete as a runner. I had tried everything chiropractor, cortisone injections, physical therapy.

Then I stumbled upon your products and ... they have been a game changer. I cannot believe what Tissue Rejuvenator has done for me. I am so used to managing through pain that I am very in tune with how my legs are doing.

This product has literally changed everything for me. I can't thank you enough. I am looking forward to my race season with a lot less anxiety about pain!

KRISTA ELWELL / CLIENT

Confirmed Hammer and 53x11 Coffee nut

As always, never a day goes by without using Hammer products! Even though my primary sports are triathlon and Nordic skiing, hiking remains my lifelong go-to favorite sport and in recent years, I've morphed that into mountain running. Every day is an adventure for me.

. . . I've only recently become a coffee drinker. We were traveling last week and I decided to throw in an unopened sample of 53x11 Coffee. WOW. WOW. WOW. WOW. I know you've said how good 53x11 Coffee is, but now I know it's for real! It was the best two cups of coffee I've had in my life!! Now I'm going to order both Big Ring and Downshift! Thanks Hammer Nutrition!!

MARY LOU LOWRIE / CLIENT



"Looking forward to hard hammering!"

Thank you! You all rock! I have been using Recoverite for a couple of years now with excellent results; I also use Perpetuem often. This year I am training for my first 70- and 100-milers.

Recently, I went for a 20-mile trail run in the mud and slush, coming at the tail end of my longest training week this cycle and longest distance month ever. I followed Hammer's recommendations for 2-3 hour+efforts and fueled with 2 servings of HEED (Melon is the most delicious liquid fuel I've ever tasted!), an Espresso Hammer Gel, and 2 ultra gels (Peanut Butter and Nocciola, yum), finishing with Recoverite.

I finished this week of hard training feeling great! I had high energy throughout the run, no bonk/sugar crash, and a strong sense of excitement for the training ahead! One day after that run, I feel better than I had during many training weeks at half the mileage and gain. Hammer's stuff is awesome! I am looking forward to many more weeks of hard hammering!

TONY DELUCA / CLIENT

Welcome to the family

I just wanted to let your company know that I love the product HEED. I am a stand-up paddle boarder and also have hypoglycemia. I have tried many products to help me get through long, hard paddling workouts without a drop in blood sugar or a spike followed by a drop. HEED does the trick.

I first found your product in the Outer Banks at a triathlon store while on vacation ,and I really liked it. Then I read a recommendation for it in a stand-up paddling performance book written by Suzy Cooney. I plan to try some of your other products since I have been so pleased with HEED. I also wanted to say thank you for the personal phone call I received, asking if I had any questions and was happy with my purchase. Very few companies take the time to give such customer service. Have a great day!

DANA GREGORY / CLIENT

SEND US YOUR LETTERS!

WE LOVE HEARING FROM OUR CLIENTS & ATHLETES:

Drop us a line and share a tip or tell us about your latest adventure. You can also stay in touch with us and other Hammerheads via social media. Send letters and comments to letters@hammernutrition.com



Endurolytes Fizz to the rescue!

"I am 75 years old and have severe cramping in my upper legs after riding my bike a few hours a night. Endurolytes Fizz helps me so much! I order a large amount because I panic if I am running low. Thank you for making this product – there is nothing else like it out there!"

BILL TAMISO / CLIENT



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@minnesotasurfcompany



Surfing stoked

Hammer Nutrition athlete Evan Lawrence shares his tips for staying properly stoked during a long day on the water. "Be properly hydrated and take 2-3 Endurolytes before you start. Pack a couple of Hammer Gels in your wetsuit. Then surf your brains out, and enjoy a Gel when needed."



@torche42



Underwater fueling

Jorge Ochoa knows that triathlon training comes a little easier with Hammer Nutrition by your side.



@titaniumtriathlete



On the comeback trail

Recovering from an injury is never easy, and it can be especially frustrating when all you want to do is ramp up for the season. Dina Neils is now on the comeback trail, enjoying longer runs in the beautiful outdoors.



@heather brooks15



Andes adventures

Heather Brooks recently sent news from Argentina. Her adventures included explorations of the Andes Mountains, kayaking, zip-lining, and hiking to Cerro Colorado, an extinct volcano.



@tracyfgreen



Fire in the belly

Tracy Greene, a competitive runner and a certified Pilates instructor, works on core strength daily. Her classes help athletes of all types and levels improve their overall fitness.





Skyrunning in Colorado

John Clinthorne enjoys the flora and fauna of the Rocky Mountains from all angles, as he runs up, through, and down its trails.





Great day to Hammer

Daniel Beresford will tell you that there is no better way to begin your day than by watching the sunrise during a morning cruise.

@michael.shelver



Super summit

Michael Shelver decided to skip the Super Bowl this year and climb for 8 hours to the summit of Mt. Hood, Oregon. Based on his view, we'd say he made a great choice.





Olympic scenery

Flying through the air in northern Washington with the Olympic Mountains as a backdrop might seem like a wild dream for most. For Ethan Mutoli, it's just another training day.

AMBER REECE-YOUNG'S FROSTBITE 10K RACE RECIPE



Less than one year post-baby, Amber Reece-Young is back on course and hammering strong, heading into the 2016 race season. **Photo:** pauljacksonphoto.com



PRERACE LUNCH (3.5 HOURS BEFORE): Tuna sub with veggies, water

BEFORE WARM-UP: Half a Hammer Bar

MILE 3: "Montana Huckleberry Hammer Gel fueled me through the biggest hill around the 4th mile"

AFTER THE RACE: Chocolate Recoverite to expedite my recovery

RESULTS

1st female, 4th overalll

"I had not competed in a road race in a while, so I was nervous standing on the start line, thinking about pace and time. The gun went off and as soon as I got a couple of strides in, the nervousness faded. The course was hilly but I felt good and kept a consistent pace, finishing 1st female and 4th overall. Thanks again for the best products on the market!" — Amber Reece-Young

#howihammer

PHOTOS, FEATS, AND WORD ON THE STREET



@k__pat

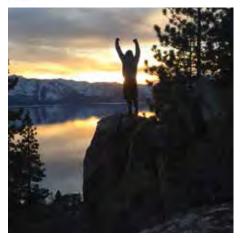


Taking the high road

Kristina Pattison is not your average competitive runner. An ultra-distance mountain runner, Kristina often opts for runs that are long, steep, and dangerous. But with trails like this one through Bryce Canyon, Utah, the effort is definitely well worth the reward.



@rynermode



The destination, not the journey

Arriving at this sweet spot overlooking Lake Tahoe makes Ryner Bihag feel like a winner at the finish of a long training run.



@dtatum6



Headed for the hills

Only a true Ironman looks forward to hill training, but David Tatum can't help smiling, knowing that being outside on the bike is a whole lot better than sitting indoors.

Overheard ...

"Steve at @hammernutrition is my hero, setting me up with before, during, and after nutrition products to make me successful!!"

"@hammernutrition Recoverite, oh how I've missed you. After two tough workouts today I needed it!" #hammertime #temporun #run

"Legs feel FRESH after a long treadmill session. Thank you Premium Insurance Caps and Endurance Amino." @hammernutrition

"Tried #peanut butter @hammernutrition #gel before training, #delicious!" #nutrition

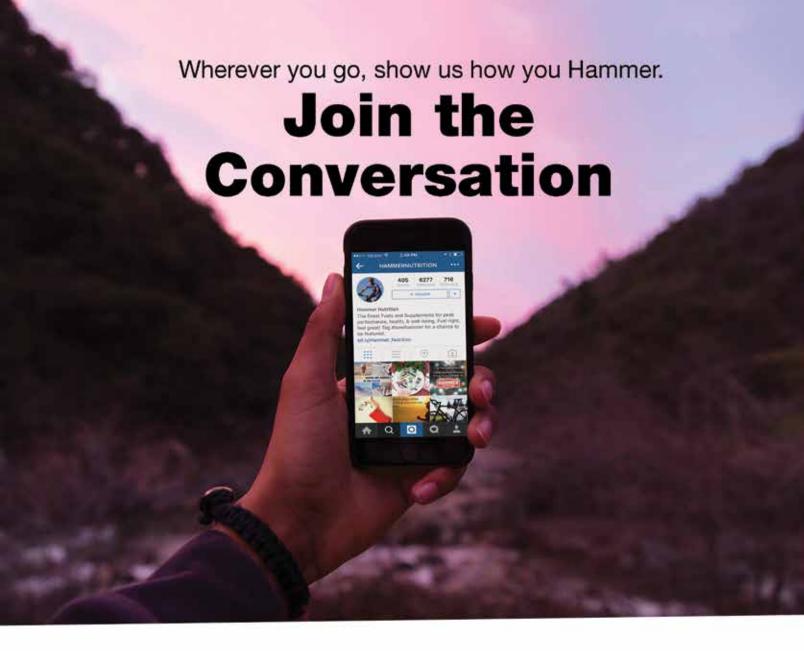
"@hammernutrition Used
Perpetuem for the first time on a
12-mile training hill run. Felt so
good, I did 15 miles. I am sold!"
#ultrarunning #run

"Stocked up on my

@hammernutrition products as
marathon training starts back up!"

#howihammer #marathontraining

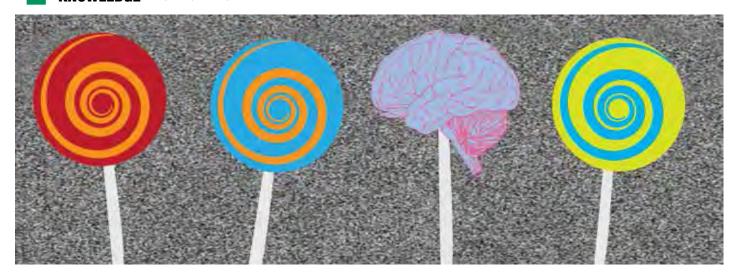
"Thanks to @hammernutrition for fueling me through a good ride at the Everglades 100 - The Battle on the Gravel. I used HEED, Sustained Energy, and Hammer Gel as my fuels on the 100K (62-mile) course. Hammer on!"



Inspiration • Community • Knowledge







Your Brain on Sugar

Research suggests sweet tooth can hurt your head, long before symptoms appear

BY VICKI HACKMAN

Sugar in the morning, sugar in the evening, sugar at supportine ... that 1958 pop tune could easily have served as the American dietary anthem in recent decades. Even as the medical establishment and media took a hard line against cholesterol and fats blaming them as the primary cause of cardiovascular disease — sugar got a pass. Our taste for the sweet stuff only continued to grow as food manufacturers cut the fat content in their products but increased the sugar.

It turns out that refined simple sugar (sucrose, dextrose, high fructose corn syrup, etc.) consumed in excess can lead to more than tooth decay, weight gain, and diabetes, however. Numerous studies show that excess sugar also boosts the risk of cardiovascular disease and certain cancers. Now researchers are taking a closer look at the effects of high sugar intake on the brain.

Sugar, insulin, and the brain

According to Dr. Robert Lustig, a pediatric endocrinologist at the University of California, and his colleagues at SugarScience.org, our bodies can metabolize a maximum of 6 teaspoons of added sugar per day. Trouble is, the average American consumes at least 15 teaspoons of added sugar per day (American Journal of Clinical Nutrition,

2011) — more than double the amount that the body can manage — and athletes who use sugar-based fuels consume far more than that! Regular intake of all that sugar puts a major stress on the pancreas and liver.

"When the pancreas, which produces insulin to process sugars, becomes overworked, it can fail to regulate blood sugar properly," says Lustig. Eventually the body becomes resistant to insulin causing blood glucose levels to rise leading to diabetes.

Insulin also plays an important role in brain signaling. But when the brain is regularly exposed to excess insulin, this signaling can become disrupted, leading to memory and thinking problems.

A recent analysis by Australian researchers strongly supports the link between excess sugar, insulin resistance, and dementia. In their review of 14 studies involving 2 million people, diabetes was associated with a 60% increased risk for dementia in men and women (U.S. News and World Report, Dec. 2015).

Even more worrisome, research suggests that sugar-related changes to the brain begin long before any obvious signs of cognitive decline. In a University of Arizona study published in 2013, higher fasting blood sugar levels were associated with lower gray matter volume in brain areas associated with AD in *cognitively* normal, non-diabetic adults.

Citing a study published in the New England Journal of Medicine in 2013, neurologist David Perlmutter, M.D., says "Alzheimer's is directly related to elevation of blood sugar. ... even mild elevation of blood sugar, 105 or 110, these levels were dramatically associated with the risk for becoming demented." Perlmutter believes 85-95 to be a healthy range for fasting blood sugar.

What to do

Athletes already have a leg up, since exercise is one of the best ways to prevent insulin resistance. But there's much more you can do. Reduce your intake of added dietary sugars by avoiding sugary sodas; choose whole fruit over fruit juices; and avoid processed and packaged foods, which often contain large amounts of hidden sugar. (Check the label!)

When it comes to endurance fuels, avoid those that contain added simple sugars (dextrose, fructose, glucose, sucrose), which cause blood sugar levels to spike and then crash. Instead opt for fuels made with a complex carbohydrate, such as the maltodextrin used in Hammer Nutrition's HEED, Hammer Gel, Perpetuem, and Recoverite.

STEADY ENERGY, NO CRASH





"HEED is my sports drink of choice. I've always hated the taste of sugary sports drinks. I love the light taste of *HEED* and how it doesn't negatively affect my stomach like other drinks."

-Emily Reed

HEED Sports Drink

- · Provides steady energy
- · Reduces cramps
- · Buffers lactic acid

FLAVORS

Melon, Strawberry, Mandarin Orange, Lemon Lime, Unflavored (32 Servings only)

MSRP

16 Servings - \$19.95

32 Servings - \$29.95

80 Servings - \$58.95

Emily Reed at the finish of the Legend 100 Free State Triathlon. Reed finished 2nd in her AG. Photo: Courtesy Emily Reed



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ATYPICAL HAMMER ATHLE

In each issue of Endurance News, we highlight some of the less conventional ways athletes use our products. From firefighting professionals to adventurers doing things the rest of us only dream about. Hammer Nutrition customers use our products far and wide. Hammer's "atypical athletes" prove that the importance of smart fueling and nutrition applies to far more than cycling and running!



Squash: agility, strategy, and endurance

Develop upper body and cardiovascular strength as well as hand-eye coordination on the court

BY DYLAN CUNNINGHAM

I got into squash when I was six or seven years old. I remember getting a racquet one Christmas and starting to play almost immediately. Since then, I've dreamed of being a professional squash player.

Last year my dream finally became a reality. After graduating from Franklin and Marshall College, I joined the Professional Squash Association in March, began training with some top players, and quickly rose in the rankings to 276 in the world.

I love the problem solving aspect of squash. Two opponents are sharing the same court with the same objective. Squash requires a lot of quick, dynamic movements so your heart rate is normally 170+ BPM. With the heart pumping this fast, figuring out where and when to attack your opponent can be extremely complex.

When people are curious as to what squash is they always seem to ask, "is that like racquetball?" While both are played on enclosed courts with a racquet and a ball, squash and racquetball are extremely different. In racquetball, to my best understanding, the ball is extremely bouncy and a good strategy is to hit the ball extremely hard. The ball in squash is much smaller and does not bounce nearly as much. This requires players to make more dynamic movements to pick the ball up. Moreover, the pace of the hitting starts slower

in order to work an opening for yourself. Players have to set each point up with control because there is a 17" tin on the front wall that you have to hit above. Otherwise you lose the point, which makes hitting winners more difficult in squash than in racquetball.

Much like my dedication to squash, my dedication to Hammer Nutrition is unwavering. Hammer's unparalleled customer service and education materials are what first captured my attention. I found the insightful articles about fueling and recovery paramount to my training; by fueling right and recovering properly, my body has adapted well to the increased training. Moreover, Hammer's dedication to product integrity and innovation align with my own core values — focus, enthusiasm, perseverance, and respect.

It's easy to encourage friends, training partners, and opponents to use this wonderful brand.

HOW A SQUASH PLAYER HAMMERS

- BEFORE A MATCH: Hammer Gel; water with Endurolytes Fizz
- BETWEEN GAMES: HEED or Hammer Gel and water with Endurolytes Fizz
- POST WORKOUTS/MATCHES: Recoverite



Above and Opposite: Dylan Cunningham during a match against world number 37, Greg Lobban

Photos: Andrea Dawson

GEAR ON THE GO

Take your training and racing essentials on the road!



- · Custom made in Italy
- · Made with heavy-weight nylon
- · Thick handles comfort grip
- · Large soft-sided compartments

The main, zippered compartment is large enough for all your race gear, nutrition, and supplements. Or, load it up for a few days of travel.

A roomy, hard-shelled bottom compartment is great for separating wet, muddy gear from clothing.



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World-Class Tri Training Tips



Above: Jennifer Reschke races in the rain at the Ramon Rocha 5K, finishing 2nd overall female. Photo: Benjamin Gajewski/North Street Studios

Below: Reschke sets a personal course record by 12 minutes and finishes 2nd in her age group at the Monticelloman Half Triathlon in Lake Monticello, VA



An Ironman Bronze All World triathlete shares 5 secrets for triathlon success.

BY JENNIFER RESCHKE

This year I am switching up my target distance, from full Ironman to the half-Ironman distance in triathlon. I've had a lot of successes in the past year at this distance without really having it as my focus in training, so I'm excited to see how things will go. As in the past, I will focus on these five key areas in my training and in race preparation.

- 1. Make hydration a habit I make sure I drink enough water during the day, in addition to drinking 26 oz. of HEED or water every hour that I am running or biking. For daily hydration, I try to aim for the recommended daily amount, about 0.5 oz. per pound of body weight. To do this, I carry a 32 oz. water bottle everywhere (sometimes even into restaurants!), and if I get tired of plain water I add a half scoop of Melon HEED or a sliced orange or sliced lime to my water.
- **2. Don't skimp on daily protein –** I need more than $100 \mathrm{\ grams}$ of protein to keep up with my workout intensity. Every day I make a protein smoothie with Hammer Whey. When I have a hard or long workout, I use 1 scoop of Whey and 1 scoop of Recoverite. I also eat a lot of eggs, grass-fed beef, and Hammer Bars at work. Recently I have been snacking on organic cottage cheese (13 grams of protein in 1/2 cup!), too.
- 3. Find a balanced training routine My weekly workouts since the beginning of the year include four runs, three swims, and three to four bike workouts. I also incorporate strength training three times a week. This is beneficial because it helps me slow down; as I strengthen my body, I am able to pay attention to how things are feeling. My coach also gives me one recovery run a week: I take my dog to a local rail-trail and we have fun running an easy pace together. It's a mental break for me and helps me stay in love with running.
- 4. Fuel right, training and racing I always practice my nutrition in training as if it were a race. It's taken me a while to dial in my electrolyte replenishment, caloric intake, and protein intake, but I have a combination now that really works for me. I depend on Hammer Gel, Perpetuem, and Endurolytes Extreme. I consistently practice timing my intake of them in training, so that when race day comes my fueling is just habit. My body knows what to expect.
- 5. Take recovery seriously With my increased training intensity and hours this year, I want to make sure I build in adequate recovery time. This includes a Recoverite/Whey smoothie with fruit, kefir, and either coconut oil or peanut butter immediately after a workout. I also make a point of scheduling appointments with my chiropractor and massage therapist every other week to help keep my body healthy and correctly aligned.

Whatever your personal target distance, following these tips should help you achieve your goals and new personal records.

FUEL FOR THOUGHT

WHAT'S IN YOUR RECOVERY DRINK?



Chocolate Milk

- One 8-oz. serving of whole chocolate milk contains about 26 grams of carbohydrates; nearly all of those carbs (24 grams) are in the form of sugars (sucrose, lactose, and high fructose corn syrup)*
- · One serving contains 8 grams of protein
- Over 80% of the protein in chocolate milk is in the form of casein. With a mediocre Biological Value rating of 77 (a measure of its bioavailability), casein is a poor protein for recovery.
- Whole chocolate milk contains nearly 8 grams of fat.

*Chocolate milk nutrition facts from nutritiondata.self.com



Hammer Recoverite

- One serving (2 scoops) contains 33 grams of carbohydrates, nearly all of it in the form of the healthy, complex carbohydrate maltodextrin and just 3 grams of sugar.
- · One serving contains 10 grams of protein
- Protein comes from pure, 100% whey protein isolate, considered ideal for recovery. Pure whey protein isolate has a BV rating of 154 and is rich in branched chain amino acids, used for muscle tissue repair
- · Contains no fat whatsoever

PLUS: Glutamine-fortified to help restore muscle glycogen and speed recovery

IT'S WHAT'S INSIDE THAT COUNTS!

You read labels at the grocery store, and you should do the same when it comes to sports nutrition. What you consume before, during, and after exercise is just as important as what's on the dinner table. Skip the simple sugars, excess sodium, and questionable additives found in other products. With Hammer Nutrition you can rest assured you are putting only the finest endurance fuels and supplements into your body. Fuel Right, Feel Great!®



REAL ENDURANCE FUELS SINCE 1987 - ORDER TODAY!

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SODIUM COULD BE SILENTLY WRECKING YOUR HEALTH



Study: Even when blood pressure reads normal, widespread damage may be occurring

BY VICKI HACKMAN

If you can't seem to shake the salt habit but feel safe because your blood pressure is normal, this news should give you pause. According to a recent scientific report, your daily dose of salty snacks, packaged convenience foods, and cured meats could be wrecking your health without causing any external warning signs.

The insidious effects of excess dietary sodium on the body's internal organs have been detailed in the paper "Dietary Sodium and Health: more than just blood pressure," published in the Journal of the American College of Cardiology. Authored by faculty members of the University of Delaware College of Health Sciences and physicians at Christiana Care Health Systems, the article points to evidence of adverse effects on multiple organs, including the blood vessels, heart, kidneys, and brain — even when blood pressure remains normal. The researchers cite more than 100 studies to support their conclusions:

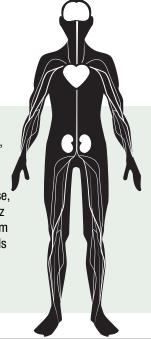
- Blood vessels: Potential effects include reduced function of endothelial cells (those that form the lining of the blood vessels), which are involved in coagulation, platelet adhesion, and immune function. According to the researchers, in studies of both animals and humans, high sodium intake reduced endothelial function and increased arterial stiffness independent of blood pressure. In addition, the researchers say "sodium's deleterious effects on endothelial function likely result from reactive oxygen species, such as superoxide, resulting in reduced nitric oxide bioavailability." (As discussed in past issues of Endurance News, nitric oxide dilates blood vessels and benefits endurance.)
- **Heart:** The researchers cite studies showing that high dietary sodium intake can lead to enlargement of the muscle tissue that makes up the heart's main pumping chamber (left ventricle), independent of blood pressure. In fact, among a group of people who had only

- mildly elevated blood pressure, those who excreted the most sodium showed greater enlargement.
- Kidneys: Although "there are a limited number of studies of subjects without kidney disease ... evidence suggests that high sodium is associated with reduced renal function." One animal study showed a decline in renal function with only a minimal increase in blood pressure.
- Brain/nervous system: Chronically elevated dietary sodium may sensitize sympathetic neurons and increase response to a variety of stimuli. Even without increased blood pressure, "chronically increased sympathetic outflow may have deleterious target organ effects," say the researchers.

LIMIT YOUR SODIUM INTAKE

The average American consumes more than 3,200 mg of sodium per day, far more than necessary. The American Heart Association (and Hammer Nutrition) recommends limiting daily dietary sodium intake to 2,300 mg. Here are some of the most effective ways to control sodium intake:

- Avoid processed foods. About 70% of dietary sodium comes from processed and prepared foods, including breads, cheeses, processed meats, and sauces. When you do buy packaged foods, check the label for sodium content.
- Don't add salt at the dinner table. If you must. use a low/no-sodium salt substitute, or enhance flavor with spices, herbs, vinegar, or lemon juice.
- When replenishing electrolytes during exercise, choose Endurolytes. Endurolytes capsules and Fizz contain a full spectrum of minerals, not just sodium and chloride. Endurolytes contains sodium in levels that will not overwhelm your body's natural ability to regulate this vital mineral.



FUEL FOR THOUGHT

WHAT'S IN YOUR SPORTS DRINK?



Gatorade Thirst Quencher (Lemon-Lime)

Ingredients:Water, Sugar, Dextrose, Citric Acid, Natural Flavor, Salt, Sodium Citrate, Monopotassium Phosphate, Gum Arabic, Glycerol Ester of Rosin, Yellow 5.

- 100% (34g of 34g total) of Gatorade® Thirst Quencher is comprised of short-chain (simple) sugars (sugar, dextrose).
- Contains added citric acid as well as citric acid from the sodium citrate component.
- Contains a very high 270 mg of salt per serving.
- Contains gum arabic and glycerol ester of rosin as emulsifiers.
- Contains Yellow 5, an artificial color/dye.

Colorade/h Thirst Quencher is a trademark of Gatomate/h, INC



Hammer HEED* (Lemon-Lime)

Ingredients: Maltodextrin, Xylitol, Natural Flavor, Calcium Chelate, Potassium Chelate, Magnesium Chelate, Salt, L-Carnosine, Stevia, Glycine, Tyrosine, Manganese Chelate, Chromium

- 7% (2g of 27g total) of HEED is comprised of short-chain (simple) sugars, none from added sugars.
- · Does not contain citric acid
- Contains a moderate 45mg of sodium per serving.
- Contains a full spectrum of electrolytic minerals: sodium, chloride, potassium, calcium, magnesium.
- Does not contain any emulsifiers.
- Contains no colors or dyes, artificial or otherwise.

IT'S WHAT'S INSIDE THAT COUNTS!

You read labels at the grocery store, and you should do the same when it comes to sports nutrition. What you consume before, during, and after exercise is just as important as what's on the dinner table. Skip the simple sugars, excess sodium, and questionable additives found in other products. With Hammer Nutrition you can rest assured you are putting only the finest endurance fuels and supplements into your body. Fuel Right, Feel Great!®



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Traditional Chinese Medicine for Athletes

Feel better, function better with this ancient, holistic system for health

BY SCOTT TURPIN

Most athletes work with a coach at some point. A trained practitioner of Traditional Chinese Medicine (TCM) can be a similarly valuable resource — someone trained to see you objectively as an athlete and help you to achieve your best.

For thousands of years, this traditional form of medicine has been used to maintain health, increase quality of life, and treat the injuries of warriors. I think you'll find it can serve you too!

What is TCM?

TCM views each of us individually as a network of complementary forces. The balance of push and pull within us is referred to as the Qi (chee) dynamic. Health is maintained through balanced Qi. This preventative medicine allows an athlete to continually optimize his or her health, rather than act only after catastrophic injury or disease occurs.

Pain and illness result when Qi becomes blocked or unbalanced for any reason. TCM uses three treatment modalities — Herbal Medicine, Acupuncture, and Chinese Medical Massage (TuiNa) — to correct these imbalances. leading to healing and optimal functioning of the entire person. Chinese Medicine also can be used together with Western medicine to treat injuries and other acute conditions, often aiding and accelerating recovery.

Herbal Medicine and Nutrition

We all know the age-old adage, "you are what you eat." The difficulty for most of us is not envisioning what we want to be, but how to achieve that through proper diet.

TCM's basic approach to nutrition is very much in keeping with Hammer Nutrition's: nutrition is the daily dietary discipline that creates the foundation for a healthy body. Eat regularly and modestly. Eat fresh foods, mostly vegetables



and fruits, and nothing processed. Avoid added sugar and salt. (Hammer products are free of added simple sugars and excess salt). Eat a modest amount of a variety of sustainably sourced meats. Minimize dairy and grains. In addition, I recommend Hammer's Digest Caps, which contains probiotics for healthy digestion and maximum nutrient absorption.

If you struggle with chronic issues, re-assessing your nutrition is a good place to start. In TCM, every food is classified as having a particular nature — hot, cold, warm, cool or neutral, and a particular flavor — sour, bitter, sweet, pungent or salty. Parsed out into its specific qualities and applied according to our individual constitution, food can become our greatest ally in health.

Here are just a few examples: If you struggle regularly with fatigue, lethargy, and lack of appetite, cook most of your food and eat it warm. Eat small, frequent meals to ease digestion. Choose modest amounts of fowl (especially in soups), naturally sweet foods, and warming spices like ginger and cinnamon. Avoid dairy, tofu, added sugar, and iced drinks.

If you find yourself regularly irritable or moody with tenderness in the rib cage or upper abdomen, occasional nausea, and (for women) PMS symptoms, eat more celery, beets, cabbage, kelp, leeks, mussels, nori, and modest amounts of grass-fed beef. Include basil, bay leaves, black pepper, and rosemary. Avoid alcohol, coffee, fatty foods, fried foods, excessively spicy foods, heavy red meat, sugar, and other sweets.

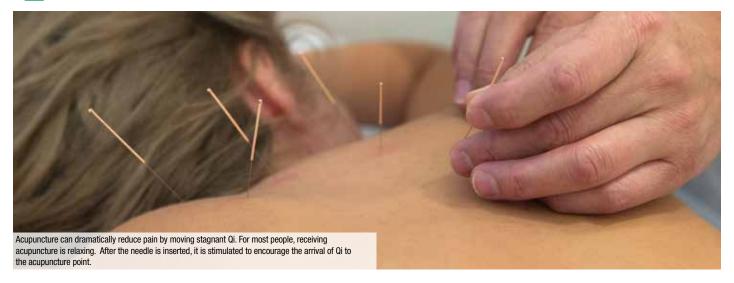
For more information on the properties of specific foods and recommendations for chronic imbalances, I highly recommend the book Healing with Whole Foods by Paul Pitchford, a comprehensive resource on TCM nutrition.

TCM also offers herbal therapy — powerful, natural medicine — to treat a multitude of health issues, including long-term imbalances that result from poor food choices. This prescription-strength therapy should be used under the supervision of your healthcare practitioner. Chinese herbal medicine is formulated specifically for each individual patient, according his or her constitution and imbalances. That is the strength of Chinese Medicine: to recognize patterns in individuals and treat them in their entirety.

Acupuncture and EMS

As I mentioned earlier, health is a product of healthy Qi flowing smoothly in regular cycles. When these cycles are blocked or disrupted, pain and disease occur; TCM practitioners often say, "where there is pain, there is stagnation." Acupuncture is a quick and effective way to regulate the Qi dynamic and bring the body back to a place of balance and ease. Using thin needles, an acupuncturist can dramatically reduce pain by moving stagnant Qi. (continued next page)

"This traditional form of medicine has been used to maintain health, increase quality of life, and treat the injuries of warriors."



"Martial arts medicine was an outgrowth of warfare. Treatment of battlefield injuries had to be simple and effective ... " - Tom Bisio

Electro muscular stimulation (EMS) units provide a similar treatment option for use at home. Be sure to check out Brian Frank's article, "EMS and Neuromuscular Inhibition (NI)" in Endurance News 93. With NI, muscles don't fire properly, leading to imbalances and movement dysfunction, ultimately resulting in pain and reduced performance.

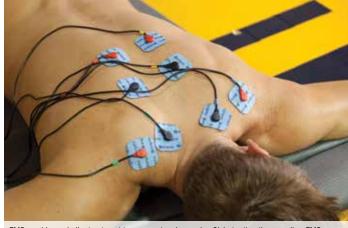
This is a great example of disrupted Qi, and EMS is a treatment option that uses the principles of Chinese Medicine. NI also highlights a fundamental perspective of acupuncture: You are more than just your injury. Your acupuncturist will treat your specific injury locally, but will also use seemingly unrelated points in other parts of the body, focusing on you as a balanced system, rather than a collection of assorted parts.

Chinese Sports Medicine

As athletes, many of us deal with discomfort. When that discomfort crosses into injury and pain, TuiNa and martial arts medicine us simple and effective treatment strategies to prevent minor injuries from becoming chronic problems. These modalities, collectively known as Chinese Sports Medicine, are the most accessible for use by nonpractitioners.

The book A Tooth from the Tiger's Mouth by Tom Bisio, a renowned expert in Chinese sports medicine, provides an excellent overview of these strategies. According to Bisio, "Martial arts medicine was an outgrowth of warfare. Treatment of battlefield injuries had to be simple and effective so that soldiers could return to combat as quickly as possible."

For treating minor injuries and pain, I find these items indispensable: Trauma Linament (die da jiu); San Huang



EMS provides a similar treatment to acupuncture by moving Qi, but rather than needles, EMS uses electric currents.

San (three yellow powder), also known as "herbal ice;" and of course Hammer Nutrition's Tissue Rejuvenator, which includes the herbs turmeric, boswellia, and devil's claw, as well as other plant-based compounds with antiinflammatory properties.

Bottom line: Our bodies are made to last a lifetime, but we need to care for them properly to enjoy our lives fully. As many athletes are discovering, Traditional Chinese Medicine can increase your quality of life, benefit athletic performance, and help speed recovery from injury.

Bio: Scott Turpin, M.S.Ac., Dipl.Ac., L.Ac., is a trained practitioner of Chinese Medicine and acupuncture, as well as an alpine athlete. (See his article in Endurance News 98.) "Alpine sports feed my soul. Feeding my body so that it can keep up was a challenge until I discovered Hammer Nutrition." Visit his website: www.scott-turpin.com.



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AID STATION

A ROUNDUP OF NUTRITION NEWS, TIPS, AND TIDBITS



Aging may worsen effects of high sodium diet, study finds

Research shows the older you are, the more susceptible you become to the devastating health effects of a highsalt diet.

An article, recently published in the American Journal of Physiology -- Regulatory, Integrative and Comparative Physiology, found that older rats were far less effective than their younger counterparts in excreting excess dietary sodium.



The findings suggest that as we age, our bodies become less equipped to fend off excess salt in our diets.

"Changes in the control of sodium and water balance is a major characteristic of the normal human aging process and includes a decrease in thirst, urinary concentrating ability and capacity to excrete water and electrolytes,' the researches from Georgetown University, St. Louis University, and Nova Southeastern University wrote.

The study highlights that physiological triggers such as increased thirst and aldosterone levels (a main blood pressure regulating hormone) were significantly less pronounced in the elderly rats.

The findings further indicate age severely diminishes the body's natural defensive mechanism against salt: flushing out sodium through urination.

"These changes in fluid and electrolyte regulation can put the elderly

at increased risk for disorders of hyponatremia (due to water retention) or hypernatremia (as a result of sodium retention), which can cause central nervous system dysfunction and also negatively impact medication effectiveness, resulting in adverse clinical events and surgical outcomes as well as other physiological functions," the researchers added.

HAMMER QUICK TIP

The American Heart Association (and Hammer Nutrition) recommends limiting your daily dietary sodium intake to 2,300 mg maximum. Don't add salt at the dinner table and avoid salty foods, such as processed meats and cheeses. Also be sure to check the labels of packaged breads and cereals, which often are hidden sources of sodium. When replenishing electrolytes during exercise, choose Endurolytes. Endurolytes capsules and Fizz contain a full spectrum of minerals, not just salt. Endurolytes contains sodium in levels that will not overwhelm your body's natural ability to regulate this vital mineral.

Sugar sweetened sodas contribute to bronchitis

A new study has established a connection between the intake of sodas sweetened with high-fructose corn syrup (HFCS) and chronic bronchitis.

Bronchitis is the inflammation of the lining of the bronchial tubes that carry air to and from your lungs. Symptoms include cough, mucus production, shortness of breath, and chest discomfort.

Acute bronchitis is very common and often accompanies a cold or other respiratory infection. Chronic bronchitis, however, is much more serious because the inflammation and symptoms are constant. Chronic bronchitis is usually connected to smoking, but this study shows that

sweetened sodas may be another very real cause.

This study, published in the October issue of Nutrition Journal, included 2,801 adults aged 20-55 who selfreported existing chronic bronchitis or a history of the condition. The researchers adjusted for age, sex, raceethnicity, body mass index, smoking, exposure to smoking, diabetes, total fruit and beverages consumption, and other factors.

Researchers discovered a "statistically significant correlation between intake of non-diet soft drinks and greater prevalence and odds of chronic bronchitis." In fact, drinking HFCSsweetened soda five or more times a week was associated with nearly twice the likelihood of developing chronic bronchitis.



HAMMER QUICK TIP

Colas and fruit drinks aren't the only beverages that are loaded with sugar! Check the label of your sports drink: If it contains sucrose, dextrose, fructose or any of those other "-ose" ingredients, it contains sugar, often in extremely high amounts. For optimal health and athletic performance, avoid sugary beverages of all kinds — including sports drinks. **HEED** and other Hammer Nutrition fuels include no added simple sugars. The complex carbohydrate maltodextrin in Hammer fuels provides rapid, sustained energy without the flash-and-crash of simple sugar-based fuels ... and without their associated health problems.

Omega-3 intake linked to reduced inflammation

Inflammation is something we all want to avoid, not just for the discomfort it causes, but more importantly because of its negative health consequences.

According to Duo Li of Zhejiang University in Hangzhou, China, "inflammation plays a significant role in a number of widespread and destructive chronic diseases, including autoimmune diseases such as rheumatoid arthritis and non-autoimmune chronic diseases including obesity and insulin resistance, cardiovascular disease, and several neurodegenerative diseases such as Alzheimer's disease."

The good news is that a recent review of 18 randomized controlled trials by Duo Li and other researchers showed a significant association between marine-derived omega-3 supplementation and reductions of several markers of inflammation such as prostaglandin E2, thromboxane B2, and leukotriene B4. This adds to the ever-growing body of research linking omega-3 fatty acids from fish oils to reductions in inflammation, which may translate into a healthier cardiovascular system.

Previous research has shown that the omega-3 fatty acids in fish oil have a positive influence on brain function and mood, including the alleviation of anxiety, insomnia, depression, and more. Fish oil also is beneficial for the eyes, skin and bones. Omega-3 fatty acids also play an important role in metabolism regulation and weight



management (to burn fat you have to eat fat ... the right kind of fat). Last, but not least, higher intakes of omega-3 fatty acids may help protect against breast, colon, and prostate cancers (all three of these cancers have been correlated with low omega-3 intake).

Nutritionists recommend a diet that contains a 1:3 ratio of omega-3 to omega-6 fatty acids, but the average American consumes a 1:20 ratio of omega-3s to omega-6s. Excessive amounts of omega-6 fatty acids have been linked to inflammation and the numerous diseases associated with it.

- Steve Born

HAMMER QUICK TIP

There's an easy way to ensure that your diet includes a sufficient amount of beneficial omega-3 fatty acids. **EndurOmega**, Hammer's high-quality omega-3 supplement, is rich in DHA and EPA, two highly researched omega-3 fatty acids that provide a wide range of benefits for athletic performance and overall health. EndurOmega also contains DPA, an intermediate fatty acid that increases blood concentrations of both DHA and EPA, and provides its own unique benefits for heart, skeletal, muscle, and kidney health. EndurOmega is derived from distilled and deodorized Atlantic menhaden fish (no fishy odor or taste!). It's also tested by third-party, independent labs for potency and purity.



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Challenges are what make life interesting, overcoming them is what makes life meaningful.

- Ralph Waldo Emerson

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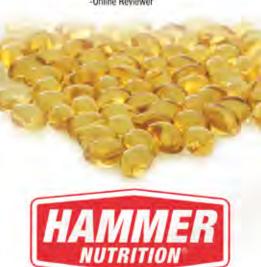
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You need your local shop, your shop needs to sell nutrition

Quality nutrition links retailers and athletes

BY LOREN MASON-GERE

When I walked out of the shop, I wasn't pushing the bike I went there to buy – and I couldn't have been happier.

When I showed up at the bike shop the day of that purchase, buying a road bike had never crossed my mind. I knew what I wanted to do, but had no idea which bike would help me do it.

Had they sold me what I asked for, my life would have taken a different path. Luckily, the staff took the time to ask questions and educate me. Thanks to them, I made a purchase that would lead me from mild enthusiasm to a life-changing passion. I am forever indebted to that shop for their service.

In today's world of Internet discounts and chain blow-out stores, this memory reminds me of the essential role local shops play in our communities – and why Hammer structures our policies to support local shops.

While the lure of cheap goods and fast shipping is strong, those options inherently eliminate the human interactions that allow our sports to flourish. Looking back it's clear: Any blowout site would have sold me the bike I "wanted," but none could have shown me what that truly was.

As my riding developed, my rides got longer but met a sharp ceiling. Sugary "energy foods" upset my stomach, and efforts over three hours left me lightheaded and weak. With my heavy legs barely turning the pedals I would slog home to spend the rest of the day recovering. Accepting the fact that long rides were not for me, my life as a rider stagnated.

The path toward proper nutrition

Things changed when a friend challenged me to participate in a local 50 mile mountain bike race. I was woefully unprepared, and suffered accordingly. With cramped hamstrings and my knees caked with blood, I pushed my bike up a hill into an aid station. Someone handed me a cup of HEED and it changed my life. Coming back from the dead I pressed on to cross the finish line exhausted and satisfied — a champion of my own race.

In retrospect it's a wonder that I was so blind to basic physiological needs. The fact is, I needed education, and no one was there to provide it.

Though my shop taught me everything about my bike, the lessons stopped there. Had someone taken the time to teach me how to care for my body as well, I would have experienced greater success and satisfaction. My investment in the sport and that shop would have increased accordingly.

Fueling right, finding success

Shortly after that race I moved away. I found a new favorite shop, and this one sold Hammer Nutrition. When they explained the difference between simple sugars and Hammer's complex carbs, my previous fueling debacles made perfect sense.

Hammer's 5 Secret's of Success book helped me identify an entire fueling system and put it to work. I consistently used the same trustworthy fuels day in and day out and saw my performance reach new heights. By helping me fuel right, Hammer earned more than my repeated nutrition buys and subsequent bike purchases – it earned my loyalty and trust.

When I started working in a bike shop myself, my favorite part was helping the "newbies." I loved watching their evolution. The pounds came off, the enthusiasm soared, and their zest for life and passion for the sport grew. In addition to discussing proper equipment and fit, I always discussed fueling. When it came to selecting a brand, the decision was easy. Beyond my personal experience with the products, I knew Hammer Nutrition monitored and patrolled its Manufacturer's Advertised Price (MAP) policy.

While the local supermarket sold the competitors' bars for less than I could buy them, I was guaranteed to earn a profit on Hammer. Furthermore, the 100% customer satisfaction guarantee made it easy for me to sell. If customers didn't like something, they simply brought it back.

Hammer made it easy to stock and sell nutrition, and selling nutrition built us loyal customers. They advanced quickly, and returned often.

If I didn't have Hammer to sell, I would have given the stuff away – and it would have been a wise investment. As new customers experienced success, they became loyal fans and friends whom no Internet discounter could touch. Our shop rides grew. New riders learned from the veterans of the sport. The community flourished.

Support your shop, it will support you

For these scenarios to play out, athletes have to support local businesses. But shops also have to do their part. New converts drift away if they are not educated and supported. Gear selection alone is an incomplete measure – they must learn how to properly fuel.

Remove nutritional barriers to success, and involvement deepens. The result is increased store visits, additional investment, and strengthened relationships. Relationships keep customers off the Internet and in our local shops — local shops that we all need. When done right, selling nutrition is not just good will — it's good business.

Doing nutrition right means selling high quality, healthy fuels athletes can rely on. Too many shops clutter their shelves with new brands that are repackaging the same sugar-laden products.

Over the past 30 years these companies have come and gone while Hammer has stayed true to its mission. We support athletic performance with natural, complex carbohydrate-based fuels. Our products support healthy individuals, while our policies support healthy businesses, as we know our sports – and our country – demand both.

At the end of the day, the relationship between shops and individuals matters. We must support our shops, and shops must raise new riders. Doing so demands properly addressing the role of nutrition.

Loren Mason-Gere is a Hammer Nutrition dealer service rep. He's been an avid cyclist for 15 years and has raced since 2007.

Tell Us about Your Local Shop!

If your local shop is supporting you, we want to hear about it. If your retailer isn't prepared to help you address nutrition, tell them Hammer can help. Our retail partnerships, nutritional consultations, and Fueling Expert program ensure they have the tools to meet all of their customers' needs.

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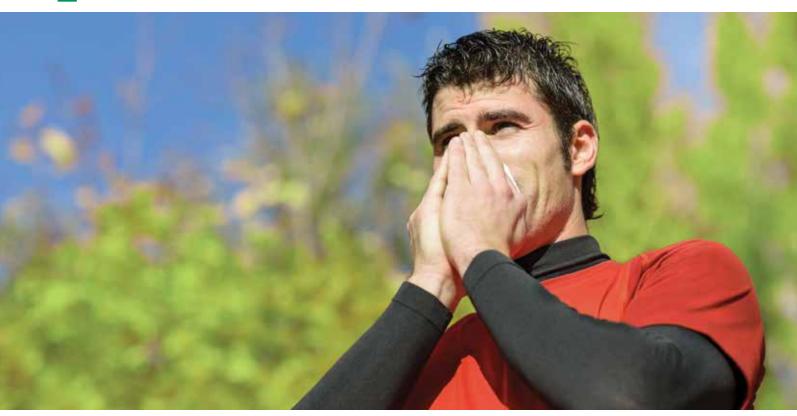
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Stay 5 steps ahead of spring allergies!

Follow these tips to help you steer clear of sniffling and sneezing

BY ENDURANCE NEWS STAFF

"Spring is in the air!" Most people rejoice when they hear that phrase because it means longer days, warmer weather, and greener scenery.

But for the nearly 50 million Americans who suffer with airborne allergies — primarily the pollen from trees, weeds, and grasses — spring can be downright miserable, especially if you enjoy exercising outdoors. If you are one of the many who sneezes, sniffles, or coughs as pollen counts rise, take these steps to minimize your reaction:

- 1. Shut out the pollen. Keep pollen out of your home by keeping windows closed as much as possible. This includes nighttime, when you might be tempted to open a bedroom window.
- 2. Exercise later. Most plants are heaviest in pollen in the early morning hours of 5 a.m. to 9 a.m., says Miguel Wolbert, M.D., an allergist in Evansville, Indiana. On days when very high pollen counts are expected, consider switching your morning ride to the afternoon.

- 3. Be proactive. Take a preventative dose of Clear Day and Nasol before you head out, rather than waiting for symptoms to arise.
- 4. Keep pets clean. If your dog or cat spends much time outdoors, bathe them regularly to remove the pollen that's likely to be on their fur.
- 5. Hit the shower. When you return from your run or ride, change your clothes and shower immediately to keep pollen from following you indoors.

Relieve allergy symptoms safely and naturally

When allergic reactions do occur, reach for a safe, effective solution. Instead of trading the misery of allergies for the drowsiness, blood pressure spikes, insomnia, and other side effects associated with prescription allergy medications, put Clear Day and Nasol to work for you.

Clear Day contains four natural "antiallergy all-star" compounds - olive

leaf extract, quercetin, bromelain, and resveratrol — that combat allergies on several fronts. The plant compounds in Clear Day have antihistamine, anti-inflammatory, antioxidant, antibacterial, and antiviral properties.

Nasol's natural formula includes a proprietary micro-dose amount of capsaicin, the compound that makes peppers hot. This convenient nasal spray safely and effectively clears nasal passages of dirt, dust, and pollen all major causes of sinus congestion. Nasol also soothes and moisturizes nasal passages and sinus cavities.

Together, Clear Day and Nasol are guaranteed to relieve your toughest allergies to airborne substances quickly, safely, and naturally without the dangerous side effects of pharmaceuticals. You can rely on them not just during allergy season, but anytime allergy symptoms arise, year-round. With allergy symptoms out of the way, you'll be able to enjoy training, racing, and life, again perhaps more than you have in years.

ALLERGY AND SINUS RELLES





"Seasonal allergies and asthma really hamper my running. So thrilled to have Nasol and Clear Day! Who'd have thought? Hammer did!"

Laurie D.



Clear Day

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Hammer-sponsored professional triathlete Reilly Smith (left) conducts cycling class at CryBabyHouse. Photo: Courtesy CryBabyHouse

EMS: Rapid recovery

CryBaby House pushes athletes to the limit; EMS keeps them coming back for more

BY REILLY SMITH

I became familiar with Electromuscular Stimulation (EMS) as a collegiate baseball pitcher at the University of Illinois. Working with the team's training staff, I frequently used EMS to combat the chronic pain and muscle damage associated with throwing baseballs seemingly all day, every day. After I left college, I put off getting an EMS for my personal use, but I missed the benefits.

Last year, I opened CryBabyHouse, an endurance-training center for cycling, yoga, and strength work in Los Angeles (Venice, California). Every day we are faced with a range of client needs and goals. Some clients are new to endurance sports, or to fitness in general. Others are athletes training to make Olympic teams, or couples training for the rigors of having their first child.

Because EMS provides a powerful edge for training, maintenance, and recovery, I knew it was time to introduce the technology to our clients.

The most valuable attribute we try to instill in all of our client-athletes is awareness — knowing when to push and when to pull back, when to listen to their body, and when to respectfully ignore it. EMS plays an important part in learning those curves.

Two of our favorite Compex EMS modes are Recovery Plus and Active Recovery. After tough workouts, we often bring clients into our lounge and hook them up to the Recovery Plus mode. When they ask how Compex will be beneficial, we tell them it helps clear lactic acid without working the muscles, quickly returning them to workout-ready form. When athletes come in feeling overworked, or they say they need a recovery day, we hook them up to a light Active Recovery program to stimulate their sore muscles.

Every time, they report diminished soreness. These are just two examples of ways that our clients benefit from EMS (maybe because we're a little hard on people), but the list of other possible

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uses is long, ranging from strengthbuilding and cardio to recovering from an injury or simply relaxation.

We're now beginning to use the Explosive Strength program to prep athletes for short, high-power reps on the bike as part of their off-season strength phase. We like to be flexible with our use of EMS programs to meet our athletes' changing seasonal needs.

This year many of our clients will be purchasing Compex EMS units for their personal use at home, and I know they will see an improvement in their athletic performance as a result.

Reilly Smith is a Hammer-sponsored professional triathlete and owner of the CryBabyHouse.



FREE CONSULTATION WITH EVERY EMS PURCHASE

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- Electrode pads* (\$29.95 value)
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*Compex Edge model excluded



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Antioxidants: Heart health ally

Study highlights cardiovascular benefits of antioxidants

BY STEVE BORN

Protecting ourselves from cardiovascular disease is undoubtedly a priority for all of us, and a new study provides a major key to help us accomplish this goal.

Presented in the journal *Nutrients*, recent research shows that higher antioxidant intake — both from diet and supplements — is associated with a decreased risk of many factors associated with cardiovascular disease.

The researchers in this study calculated the total antioxidant capacity (TAC, a measure of antioxidants present in the diet) of over 4,000 male and female participants in the National Health and Nutrition Examination Survey (NHANES) over a six year period.

Their findings showed that increased TAC from diet and supplements was associated with:

- Significantly lower triglycerides
- Improved ratio of triglycerides to high-density lipoprotein (HDL, the "good" cholesterol)
- An increase in HDL cholesterol
- Better insulin function
- Lower levels of C-reactive protein

The researchers also noted that participants with a higher TAC from supplements had lower body mass index (BMI).

The take-home message of this study is that the consumption of an antioxidantrich diet is of paramount importance for optimizing cardiovascular health.

Because researchers reported even better results with participants who obtained antioxidants from both diet and supplements, it also highlights the fact that antioxidant supplements play an extremely important role in protecting against cardiovascular disease.

To augment your healthy diet, giving you maximum antioxidant support, we recommend daily supplementation with the following antioxidant-loaded Hammer Nutrition supplements: Premium Insurance Caps, Race Caps Supreme, Mito Caps, Super Antioxidant, and AO Booster.

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Enhance endurance, accelerate recovery, and supercharge your immunity with the "A" Team

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- Increases fat metabolism

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Daily Essentials Kit

(Race Caps Supreme, Premium Insurance Caps, Mito Caps)

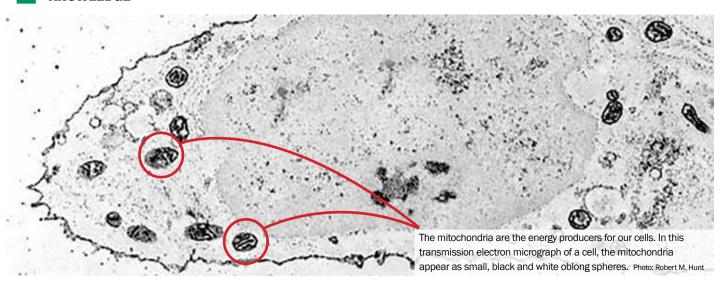
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Four reasons Mito Caps are a must for cell health

Mitochondria are invisible, but they have a profound effect on performance and health

BY STEVE BORN

The health of your mitochondria — your cells' energy-producing "furnaces" — is arguably one of the most important keys to achieving your best potential athletic performance. Even those athletes who understand the importance of proper fueling often fail to realize the key role of mitochondria in athletic performance and overall health. As the mitochondria age, deteriorate, and/or become dysfunctional, athletic performance declines and the risk for age-related diseases, such as cancer, increases.

That's why I consider Mito Caps an essential daily supplement for athletes and non-athletes alike. The Mito Caps formula powerfully addresses the vitally important issue of mitochondrial health. Here's what you can expect from regular use of this critical supplement:

Greater energy and endurance as a result of improved cell energy metabolism - Two nutrients in the Mito Caps formula — acetyl l-carnitine (ALC) and r-alpha lipoic acid (R-ALA) — are responsible for this benefit.

- ALC, like all forms of l-carnitine, is the nutrient the body requires for efficient utilization of fatty acids for fuel.
 Additionally, ALC appears to reduce the depletion of ATP by forming acetyl-CoA, which one nutritional expert states "[is] the most important intermediary in the generation of energy from amino acids, fats, and carbohydrates."
- R-ALA is an essential cofactor for several multi-enzyme complexes (primarily the dehydrogenase complexes) that catalyze (increase the speed of a chemical reaction) critical energy metabolism reactions inside the mitochondria.
- Improved use of fatty acids as fuel The ALC in Mito Caps is the key nutrient your body needs to utilize "fats for fuel." Mito Caps also contains ascorbyl palmitate, the fat-soluble form of vitamin C, which

enhances the bioavailability of carnitine, resulting in greater fat utilization capabilities. Ascorbyl palmitate also has antioxidant properties.

Brain protection, enhanced cognitive function
Only the ALC form of l-carnitine is able to
cross the blood-brain barrier, where it provides
antioxidant support for the brain and protects its cells from
toxic chemicals. ALC also provides acetyl groups, which
may be used in the formation of the neurotransmitter
acetylcholine, which is involved in cognitive function. DMAE
(dimethylaminoethynol), a nutrient found in fish, stimulates
the production of choline, which in turn allows the brain to
optimize production of acetylcholine.

Superior recovery and immunity - Nearly every nutrient in the Mito Caps formula — ALC, R-ALA, ascorbyl palmitate, vitamin E, DMAE, PABA (Para Amino Benzoic Acid) — has powerful antioxidant properties. R-ALA is particularly impressive, as it is believed to be the only nutrient that functions as both a water- and fat-soluble antioxidant, with the ability to quench several different types of free radicals. Additionally, R-ALA enhances glutathione levels in the body. Glutathione is one of the primary antioxidants produced directly by the body, and it plays a key role in immune system health. R-ALA also has the ability to revitalize and extend the "lifespan" and potency of nutrients such as CoQ10, vitamin C, and vitamin E.

No question about it, the unique Mito Caps formula helps mitochondria work more efficiently and stay healthier. As Bill Misner, Ph.D., summarizes, "The longer you can stimulate the lifespan or health of the mitochondria, the longer you will live and the better you will perform in endurance events. The athlete who has the most healthy/efficient mitochondria is the athlete who performs at their best."



Supercharge your cells' powerplant

The mitochondria are the power plants of your cells' and Mito Caps gives them the nutrition they need to stay stoked

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Dean Karnazes:

Ultramarathon Man

BY BRIAN FRANK AND VICKI HACKMAN

egendary. Iconic. Unbelievable. Such adjectives would be considered hyperbole if used to describe any other runner. But for Dean Karnazes the description is entirely fitting. Named by Time magazine in 2007 as one of the Top 100 Most Influential People in the World, Karnazes has run 350 continuous miles, foregoing sleep for three nights. He's run across the Sahara Desert in 120-degree temperatures, and he's run a marathon to the South Pole in negative 40 degrees. On 10 different occasions he's run a 200-mile relay race solo, racing alongside teams of 12. His long list of competitive achievements includes winning the world's toughest footrace, the Badwater Ultramarathon; running 135 miles nonstop across Death Valley during the middle of summer; and competing on all seven continents of the planet, twice over.

A best-selling author, speaker, and philanthropist, Dean is the winner of an ESPN ESPY and a three-time recipient of Competitor magazine's Endurance Athlete of the Year award. Yet despite his many accomplishments, awards, and distinctions, he remains most proud of his ongoing contributions to programs aimed at getting children and youth outdoors and active. He has raised millions of dollars for charity and was awarded the prestigious Community Leadership Award by the President's Council on Physical Fitness & Sports.

We are extremely proud to say that Dean Karnazes is also a Hammer believer and a friend! Recently he shared some of his personal journey as an athlete with us ...



Check out Run! and other books by Dean Karnazes at his website: ultramarathonman.com

Right: Professional athlete, best-selling author, and speaker Dean Karnazes dreams big, runs long, fuels right.

Photo: Corey Rich

We've heard the story of how you got into ultrarunning after a 30th birthday celebration, when you reflected that you were happiest and most challenged when you competed as a runner back in school. What was your lifestyle like in your 20s before this awakening?

I wasn't a lazy sloth in my 20s, but I had no cardiovascular fitness whatsoever. Windsurfing was my main sport and I completed professionally for a stretch, traveling often to Hawaii, Mexico, Australia, and the Caribbean. I drank way too much and partied more than I should have as a professional athlete, but somehow I got away with it.

We've also heard the equally infamous story of you ordering pizza to be delivered during your long runs back in the day. Tell us more about that and your early fueling habits.

I'll never live that story down. To be honest, at the time I didn't think twice about it. I was out on a long run in the middle of nowhere without a support crew, but I did happen to have a credit card and a cell phone. So I did the obvious - I ordered pizza delivery. In hindsight, it was a pretty outrageous act, but at the time it made perfect sense.

My early fueling habits were pretty atrocious. Basically, I equated a calorie with a calorie and figured I was burning tons of them, so I could eat whatever I wanted for replenishment (i.e., junk food). Thankfully I have an iron gut; otherwise I probably wouldn't have survived. Still, the way I fueled was far from optimal. I wish I knew then what I know now.

What does your diet look like today? Do you feel your diet has been a factor in your amazing athletic accomplishments, and if so, in what ways?

Let's just say I've cleaned things up considerably. People can change, and I've done a 180-degree shift in the way I eat. My diet now can best be described as a hybrid between Paleo, Raw, Pescaterian and Mediterranean.

I choose primarily organic and locally sourced foods and do much of my own cooking. I'm also quite a geek when it comes to spices and herbs, and I've got a collection that fills half our kitchen.

I now avoid refined sources of sugar. Most of my carbs come from whole fruit (I eat the skin, seeds, and sometimes even the

core) and plenty of fresh vegetables. And because I don't eat bread, pasta, cereal, or any processed grains, there is naturally little gluten in my diet.

What do you eat before a race?

I like to go light. I typically have a cup of simple Greek-style yogurt (i.e., unsweetened, full-fat) with some berries or a banana sliced inside and perhaps some cashews. I don't like a lot of food in my gut when racing.

How did you become acquainted with **Hammer products?**

It was back in 2008 when I was doing this six-day, 250-kilometer self-supported race across the Sahara Desert. One of the competitors I was racing against, South African Ryan Sandes, was using Perpetuem and his performance was remarkable. Rvan introduced me to Hammer Nutrition and I've been a believer ever since.

Perpetuem has been a go-to since the Sahara race. I also use HEED, Hammer Gels, Hammer Bars, Endurolytes Fizz, EndurOmega, and a few of the other supplements. It's great quality stuff that I can trust.

What do your training weeks look like?

My training varies wildly because of my travel schedule, anywhere from 60 to 250 miles per week. I like to run marathons as training runs and do so every weekend I can, sometimes running one on Saturday and then another on Sunday. I try to remain in a constant state of training. I never sit down. I've got a pull-up and dip bar in my office, a sit-up mat, and TRX suspension straps. Throughout the day I cycle through sets of pull-ups, push-ups, dips, sit-up, and a TRX routine that's an ass-kicker. Life is training, and training is life.

You had remarkably few injuries over the last decade or so. To what do you attribute your durability?

Knock on wood (i.e., the side of my head), I've never suffered a running related injury. I take a very holistic, 360-degree approach toward injury prevention and physical excellence. This involves rigorous cross training, minimizing sitting time (I have a standing office), optimal diet and nutrition, adequate sleep, and healthy family and interpersonal relationships. I believe this approach is the key.

Of course, I'm also blessed with good biomechanics. That's nothing I've trained for; it's heredity. They say the best thing you can do as a long-distance runner is choose your parents well. Guess I did a good job [laughter]. I'm 100% Greek and my dad always insists we're from the same village in the hills of Greece as Pheidippides, the original marathoner. I always remind him we grew up in LA. "What village in the hillside of Greece are you possibly referring to?" [more laughter]

What is your most memorable run, and why?

The answer might surprise you. While I've had the great privilege of running and racing on all seven continents of the planet, twice now, in some of the most remote and exotic locations on earth from a marathon in Namibia to running a across the Atacama Desert — my most cherished accomplishment is running a 10K race with my daughter. Alexandria. on her 10th birthday. Nothing will ever surpass that experience.

Your achievements have given you a platform to help others as a speaker and role model. What do you feel most inspired to convey to your audiences?

A quote from my first book, Ultramarathon Man: Confessions of an All-Night Runner, sums things up nicely: "Run when you can, walk when you have to, crawl if you must; just never give up." Words to live by.

What are your goals for the year ahead athletically and/or as a public figure?

I am planning to embark on a global expedition in 2017 to run a marathon in every country of the world in a oneyear time span. There are 203 countries and I'm working with the U.S. State Department and the U.N. to get the necessary passports and permits to do this. As you can imagine, the planning, logistics, and sponsorship negotiations are every bit as difficult as the running itself. But I'm not giving up until it's done. I'm inviting the local country people to run with me when I visit.

It might be naive of me, but I think the world could use something like this right now. Let's stop fighting with each other and start running together. I always tell people to dream big. Run World, as it is being called, is my big dream. Now I need to put in the hard work and sweat to make that dream come true.



Reaping benefits of racing recovery

Step up to longer distances, better performance by recovering right

BY MARIO MENDOZA

Twice in 2015 I stepped up to racing a new ultra distance and was able to compete successfully at shorter distances within a few weeks. First it was at the 50-mile Trail USA National Championships in New York. Two weeks after winning that race, I ran my fastest half marathon on trails, breaking Max King's course record on the dirty half marathon course (from the Half Marathon Trail Champs in 2011). I also finished 19th at the World Long Distance Championships a few weeks after that and was the third scorer to secure the silver medal for the U.S. Team.

The next time I stepped up distance was at the UROC 100K. After my runner-up finish in the 62-mile race with 11,000 feet of climbing and 95-degree heat, I won the USATF Marathon Trail National Championships.

So what was the key to my performance in those races of various distances? Proper recovery.

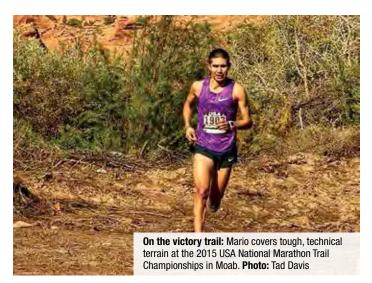
Proactive recovery

Most runners rush to get back into training, thinking that as soon as their leg muscles recover they are ready to train hard again. But if you rush your training, without recovering fully, you will begin to feel burned out or become injured.

Instead, I try to take time to recover properly before I return to full training for the next race. By taking proactive steps during the first few days after a race, you will bounce back stronger and reap the full rewards of your training. Here are some of the ways to be proactive:

• Nutrition and sleep. To speed recovery, I make sure to get quality calories. Immediately after a workout or race, I use Recoverite to provide the necessary nutrients. Later, I eat a healthy meal. Keeping your stomach happy without overindulging will keep your body in recovery mode and keep your metabolism active. It's also essential to get a full night of sound sleep, as the best cellular muscle repair happens during sleep.





• Epsom salt baths and hot/cold contrast baths.

Anything that helps move blood through your muscles without making them tight is very good. Too much ice and cold on your muscles without warming them back up can make them tight. But if you alternate between hot and cold you promote blood flow and loosen up any knots.

• Cross train at low intensities. Low intensity training will keep your heart rate down and promote blood flow and muscle repair. I like hopping on the ElliptiGO® but swimming, biking, or even hiking can work the same way. Flushing out lactic acid without doing further damage should be the focus.

My rule of thumb is if my body feels better as I warm-up then keep going. If muscles start tightening up then STOP and wait a few more days.

• Get a massage. This one is more for muscle repair. Don't get a massage if your muscles are still tender, however. Wait until you can press into your muscles without feeling pain and until you can roll out on the foam-roller and it feels good. This is usually around 4-5 days after a race. Then the massage will actually feel good and be beneficial.

Resuming training

Think about how strong your body feels after a hard training block and some tapering. Now try mimicking the same thing after a race, but instead of going through the full taper again, ramp up training slowly, starting with an easy to medium workout, until your body and mind tell you its time for full intensity.

I might do a light uphill tempo after a race because the slower pace gives my legs a break but still keeps my cardio sharp. You could set the treadmill at 12% and go at 8-minute pace for 30 minutes instead of trying to do a flat fast tempo and further deplete the muscles you are trying to rebuild.

I see so many people finish a race and immediately start planning their next workout. Calm down and relax! Understand that racing is the ultimate training. Acknowledge that you just worked out your body very hard, and if you rest appropriately, you will reap the benefits. Have faith in the process!

Mario Mendoza, National Trail Champ and Two-Time Trail Runner of the Year

Mario Mendoza — USA National 10K, Marathon, and 50 Mile Trail Champion — grew up playing soccer and running around the family's California ranch. Mario joined the high school cross-country team, placed 5th in state competition, then went on to compete at the college level. "After a few years I grew to love being out in the mountains," he says, "and that's when training really got going . . .

"There is something so pure about a foot race. You cannot fake endurance and mental toughness. From 10Ks to 100Ks or 100 milers, every distance requires its own strategies. Mixing it up keeps things fun. I'm inspired to see myself and my competitors push physical limits and develop character, whether it's for a short 10K or a long ultra race."

Mario's path as a runner has not always been easy. As a college sophomore, his performance began to decline for unknown reasons. He didn't make the track team and wasn't expected to make the next cross-country team. "I almost quit running, but realized it was something I really loved to do. I transferred to a different school, where I was blessed to find Coach Randy Rau, who believed in me and helped me find out what was going on."

It turned out that Mendoza was anemic. Six months later, he was healthy and setting new personal and school records as the top runner for St. Mary's College. "I learned that you must believe in yourself. I knew I was better than what

I was performing; something else had to be going on. When I started to press to find out what it was, the doors started to open."

How Mario Hammers

For training and races, Mario fuels with Hammer Bars, supplemented by Hammer Gel, taking small amounts every 15-20 minutes. "I personally enjoy solid food the most, and Hammer Bars are moist and easy to digest." After a long run or race, he quickly refuels with Recoverite, to "start the recovery process and get the nutrients my body needs to rebuild."

To learn more about Mario visit his website, mendozarunner.com





Getting Ready for Your First Marathon

Follow these tips to feel great and finish strong!

BY JANNINE MYERS

Preparing for your first marathon can be exciting but a bit overwhelming. With so many plans and tips available online, as well as advice from friends and acquaintances, it's easy to feel confused. To help simplify things, here's a simple but practical approach to prepare for a successful and enjoyable first marathon:

1. Training: Make time for recovery

- Follow a plan that incorporates several recovery weeks. Recovery weeks are important not only for physical rest and healing, but also for fostering a mindset that embraces positive thoughts about continued training.
- •Join a running club; running clubs offer the support and camaraderie of fellow members, and most provide the opportunity to run with similar-paced colleagues.

2. Fueling: Less is best

Understanding marathon fueling can be tricky, but the research done by Hammer has eliminated the guesswork. Download the free book 5 Secrets of Success for Endurance Fueling at hammernutrition.com for more details:

•Fluids: 20-25 ounces/hour

- Electrolytes: 100-600 mg sodium chloride/hour (2 Endurolytes or 1-2 Endurolytes Extreme or 1-2 Endurolytes Fizz/hour, or slightly more in extreme conditions)
- Calories: 150-180 calories/hour (per serving: Hammer Gel 90 calories / HEED 100 calories / Perpetuem 270 calories / Perpetuem Solids 100 calories in 3 tablets)

3. Prerace: Stay on course

- Don't eat new foods the day before or the morning of the race, and avoid high-fiber foods, as well as a heavy meal the night before. Finish your prerace meal (300-400 calories) at least 3 hours before the race.
- •Do not change race-day shoes, apparel, accessories, or fuels; everything should be well tested before the race. Lay out



everything the night before; shoes, apparel, bib, safety pins, timing chip, accessories, warm-ups, fuels, and drop bag.

• If you're traveling to a different time zone, try to arrive a few days early to allow time to acclimate. You may also want to wear your running shoes on the flight; some runners have arrived at a marathon destination only to find their luggage missing.

4. Beating race-day nerves

Feeling nervous on race day is quite normal, but here are a few ways you can alleviate the anxiety:

- Use your race nerves to get pumped and motivated! Normal levels of stress are beneficial; your body is releasing adrenaline and endorphins that will get you ready to race.
- · Take comfort in the crowd support. Those friendly, cheering

faces may be just what you need to finish those last few miles.

- Remind yourself that you have a foundation of training upon which to draw strength and confidence.
- Know yourself: If being around other people is calming to you, then immerse yourself in the crowd and be social before the race. If being alone is what you need, find a secluded spot to meditate, take deep breaths, or practice visualization.

These tried and true tips have worked for me, and I know they will work for you, too. Hammer strong!

Hammer sponsored Jannine Myers is an RRCA-certified women's running coach, now living in Okinawa, Japan. Read her blog at www. runwithwoot.com for more tips on training, nutrition, and more.

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BY ENDURANCE NEWS STAFF

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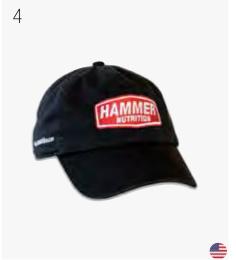
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Inside Endurolytes

Say goodbye to cramping! These 3 no-compromise products replenish completely

BY ENDURANCE NEWS STAFF

If endurance fuels, such as Hammer Gel and HEED, are your body's gasoline, then electrolytes are what keep the octane high. Cramping is your body's final warning that you're on empty, electrolyte-wise. When you've reached that point, the performance of many bodily systems has been severely compromised for some time.

Electrolytic minerals are critical for the smooth functioning of many important body systems — muscular, nervous, digestive, and cardiac. Without adequate levels of them, your athletic performance suffers.

Endurolytes supplies exactly what your body needs. A wellbalanced, full-spectrum, rapidly assimilated electrolyte source, Endurolytes keep cramping at bay while ensuring that all body systems are firing on all cylinders. Here's what's inside Endurolytes, and why it is the best electrolyte replenishment product available:

- Calcium Needed for normal heart rhythm, healthy nerve transmission, and strong muscle contractions. During exercise, calcium-dependent enzymes produce energy from fatty amino acid conversion.
- Magnesium Required for many of the enzymatic reactions involved in converting fuel to muscle energy
- Potassium Needed for optimal concentration of sodium
- **Sodium -** When depleted after many hours of exercise, abnormal heartbeat and muscle twitching may occur. Because the average athlete already has a vast store of sodium, we recommend a moderate amount of sodium for replenishment.
- •Chloride Critical for maintaining a proper balance and consistency of body fluids and electrolytes
- Manganese Endurolytes includes trace amounts to help convert fatty acids and protein into energy
- Ginger root Traditionally used to aid digestion and combat nausea; in Endurolytes capsules

Endurolytes Fizz effervescent electrolyte tablets, has all of the above minerals, plus these beneficial nutrients:

- Vitamin B6 (pyridioxine HCL) Required for the metabolism of carbohydrates, fats, and protein, as well as for maintaining sodium-potassium balance
- L-Tyrosine Helps support normal thyroid and adrenal function, which can be lowered by endurance exercise.

What you won't find in Endurolytes Fizz are toxic chemicals, like polyethylene glycol (found in most other effervescent electrolyte products), artificial flavors, or artificial sweeteners.

Which Endurolytes to Use When

Endurolytes is available in three unique formulations, allowing you to forget about cramping and meet your electrolytic needs with precision in all types of conditions:

Endurolytes - Our original formula in capsule form is perfect for athletes who consume a healthy, low-sodium diet.

Endurolytes Extreme - Bolstered with 300 mg of sodium chloride and 75 mg of potassium per capsule plus all of the minerals and ginger root present in original Endurolytes. Endurolytes Extreme is ideal for training and racing in extreme conditions, such as unusually hot weather and/or humidity; early season training before you have developed a high level of fitness; and athletes who consume a high-sodium diet, which may predispose them to cramping or excessive sweating.

Endurolytes Fizz - Full-spectrum electrolyte support in convenient, rapidly dissolving tablets. Perfect for those who have difficulty swallowing capsules, as well as athletes who enjoy a lightly flavored, effervescent drink. With Fizz, you can hydrate and replenish electrolytes at the same time.

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BY RACHEL PELC, HAMMER NUTRITIONIST

Hammer Nutrition products are designed to help endurance athletes achieve their best possible performance. But that doesn't mean that only athletes will benefit from them. Made with only the healthiest, natural ingredients and no artificial flavors or colors, added sugars, or excess sodium, Hammer products are ideal for the entire family. Check out these easy ways to keep everyone in your family healthy with Hammer.



Mom and Dad

Whether you're working full-time, busy playing chauffeur in the family mini-van, and/or managing a household in

your spare time, you can rely on Hammer Nutrition fuels and supplements to ensure that you are obtaining all of the nutrition needed for good health.

Instead of turning to fast food or packaged convenience foods, reach for Hammer Bars or Vegan and Whey Recovery Bars. Hammer Soy, Whey, and Vegan Protein powders and even Perpetuem endurance fuel also can be a quick and healthy alternative when there isn't time for a healthy snack. And if you do find yourself eating too much boxed or convenience foods, rescue your diet with supplements from our line of Daily Essentials (Premium Insurance Caps, Mito Caps, Race Caps Supreme, and EndurOmega).



Teen

If there were a manual for this age group it would be a best seller, and the novel would include a chapter or two on the importance of solid nutrition to a growing teen's body.

If your teen participates in sports, solid nutrition is even more important. Give your teen a boost by giving them rock solid energy that is easy to digest and made from real, wholesome ingredients. Hammer Gel contains only a trace of added sugar, so it won't cause extreme sugar highs and crashes.

Also consider the energy drinks your teen consumes; many contain extraordinary amounts of caffeine, sugar, and other harmful ingredients. HEED sports drink is a highly effective, healthy alternative. HEED can supply your teen with consistent, long-lasting energy and electrolytes. Unlike other sports drinks, HEED is gluten-free, contains no added simple sugars, and provides all of the calories required during exercise.

If you have little ones, you certainly know the struggles associated with picky eating. Hammer offers several foods that can ensure that your young children get the nutrition they need for good health. Hammer fuels, bars, and proteins are natural and safe, even

for kids. You can add Hammer Vegan, Whey, or Soy Proteins to fruit smoothies or "milkshakes." Or give your kids a Hammer Bar in one of the five delicious flavors. They will never suspect it is actually good for them!

Most energy bars are nothing more than glorified candy bars loaded with refined sugar, saturated fat, artificial sweeteners, and other undesirable ingredients. Organic Hammer Bars not only taste great, but they're also made with 100% wholesome, non-GMO ingredients.

For a healthier juice-drink alternative without the excess sugars and artificial flavors, offer them HEED. Better yet, encourage your kids to drink an adequate amount of water by putting an Endurolytes Fizz tablet in their water glass. Let them watch the bubbles rise, knowing they won't be putting unhealthy or artificial ingredients into their systems. Fizz comes in a variety of flavors including Grape, Grapefruit, Lemon-Lime, and Mango.

Rachel Pelc is a member of the American Dietetic Association and a trained and licensed nutritionist with a degree in Community Health from Carroll College. Before joining Hammer Nutrition, Rachel worked as a personal trainer, health coach, and nutrition counselor. Call 800.336.1977 to request a free, personal consultation with Rachel.

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Detour on the John Muir Trail

The best-laid plans can go awry when nature intervenes

BY WALT AND LORI CURTIS

My wife Lori and I have a newfound appreciation for Hammer Nutrition products. Late last summer, we embarked upon a bucket list journey to hike the 221-mile John Muir Trial (JMT) in California. We planned to start in Yosemite in early August and hike south to Mount Whitney, finishing in early September. Our extensive preparation involved updating our gear to ultralightweight status; training; and planning transportation, meals, routes, resupply stops, contingencies, and more. We planned to hike an average of 10 miles a day, while integrating Hammer Nutrition fueling products according to the advice of Hammer fueling expert Steve Born.

On August 6 we flew to California, and on August 9 we embarked upon our journey. But things did not go entirely as planned ...

Days 1-11: Challenge and beauty – These first days were magnificent. Each day brought new terrain and ended with a new, tent-based home. We found the JMT to be as challenging as it is breathtakingly beautiful: We hiked through wide grassy valleys with clear flowing creeks, across fields of colossal granite boulders, and through forests of ever-changing tree and shrub species. We cooled our feet and heads in streams and camped each night beneath the stars to the sound of tumbling water. Days were extremely hot, yet the nights were cold enough that we had to wear thermal underwear, socks, and hats in our sleeping bags. The experience was transformative.

Our daily fare included breakfast, a morning snack of Hammer Bars, lunch with a shot of Perpetuem, an afternoon snack, and Recoverite at the end of the hike, followed by dinner. When we arrived at each campsite in the evening, we filtered 6-plus liters of water (2 for each personal water bladder, 2 for "kitchen" bladder, and another few ounces to rinse Perpetuem from our Hammer water bottle and refill it with Recoverite. This fueling strategy worked perfectly. On several days we were quite sure we would not have made the last several hundred feet of elevation without our Perpetuem. And Recoverite helped us enjoy a good night's rest and start strong the next morning.

Day 12: Resupply and a change of course - As planned, we hiked to the Muir Trail Ranch, the halfway point of the JMT. At this extraordinary respite, in the middle of nowhere, we picked up our second resupply bucket (clean clothes, more food) and had access to hot and cold running water, a place to wash clothing, tent cabin, rustic lounge, sumptuous meals prepared by the camp cooks, and the *piece de resistance* — an enclosed natural hot spring and place to wash up with soap, shampoo, scrub brush, and fresh towels!

That evening at the ranch, smoke from the "Rough Fire" began to settle upon us. We met several hikers who had been ahead of us on the trail but now returned to the ranch to exit due to the smoke. By the end of our glorious dinner, the smoke was so thick that it irritated our eyes and lungs. We later learned that forest rangers were turning away JMT hikers at Evolution Valley (our next morning's destination) and asking them to exit the trail via the Piute Pass Trail. This is what we would have to do, but we still hoped we might re-enter the JMT at some point and finish by ascending Mount Whitney.

Days 13-15: Finding our way out – By the next morning, a steady stream of hikers was exiting the trail using the Piute Pass Trail, which was about 20 miles long from the Muir Trail Ranch. It took us 2½ days to make the exit, all the while followed by thick, suffocating smoke. The first day was the





most grueling, with 9 hours of extreme high-step rock hiking, constant elevation gain, and little access to water. We were extra thankful for our Hammer products that day, as they carried us to our camp in Hutchinson Meadow. On Day 14 we made it to Loch Leven Lake at 10,662 feet for one more night of smoke camping, leaving only 5 miles to hike out the next morning. We managed to get a ride to Bishop from a wonderful guy who was going our way. By then, smoke and 105-degree heat had filled the valley and blanketed Bishop.

After learning from the Forest Service that we would not be able to re-enter the John Muir Trail, we booked a room at a nearby hotel and repeatedly floated our hard-worked bodies in the cool pool and hot sauna. We had wonderful experiences on

the first half of the trail, and we learned a great deal about through-hiking. Neither of us had ever been so challenged, so elated, or so dirty! And neither of us had ever had the opportunity to test drive Hammer Nutrition products against such challenges. Hammer products truly are amazing, and they really do work!

Walt Curtis is the Web and IT Manager at Hammer Nutrition. His wife Lori Curtis is the Science & Education Director for the Whitefish Lake Institute. Together they enjoy hiking, backpacking, Nordic skiing and kayaking, and are looking forward to many more through hikes, particularly the second half of the JMT.



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- Walt Curtis



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FROM THE KITCHEN OF LAURA LABELLE



FRESH, LOCAL, AND GREEN!

Seize the season! Dig up green leafies at your local farmer's market



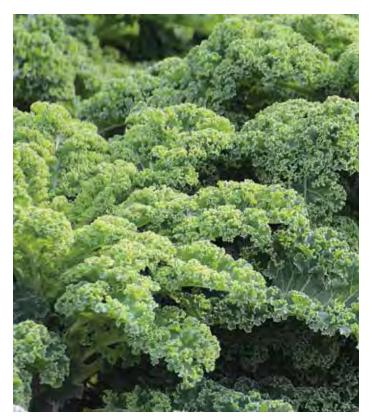
Laura Labelle, who studied at Ecole De Cordon Bleu in Paris, is an acclaimed California-based chef. She opened the popular Cafe Luna, was in-house chef for Mix This music studio, and operated her own catering company.

Spring has sprung, and field greens are everywhere! My organic vegetable deliveries have been full of mustard, beet, and dandelion greens; baby spinach; bok choi; collards; kale; arugula and much more.

Green leafy vegetables are an important addition to your diet because they are rich in iron, calcium, vitamins C and K, and are an excellent source of fiber, carotenoids, and folate. They are also great for "leaning out," as most have only 10-20 calories per 1/2-cup serving.

While we tend to see more of these leafy goodies in spring, they are grown and are available throughout the United States most of the year. When shopping for greens, try to choose those with "life" — standing upright and dark or bright green in color. If they are wilted, yellowed, or have anemic coloring, they aren't as fresh. I always buy organic produce when possible; if organic produce isn't available, I make sure to wash it carefully with an organic cleanser to remove any pesticide residue. To wash greens, fill the sink with cold water. Plunge the greens into the water, then shake and turn them so the dirt falls to the bottom. Remove, then gently shake them over the sink. Pat them with dishtowels, or spin them dry in a lettuce spinner. Store them in a mesh bag inside a refrigerator produce drawer. I also like to stick the bottoms of stems in a glass of water (like flowers) in my fridge.

There are many ways to prepare leafy greens. Some people prefer to cook the stronger-flavored types, such as collards, dandelion, and kale, rather than use them in salads (although nearly every salad in California now includes kale!). When I use these greens in salads, I slice them into thin ribbons and mix them with sweet or spicy ingredients. Greens also are delicious in slaws, or lightly sautéed or steamed. I love to substitute lightly wilted greens for a carb (like bread, potato, or rice) under or alongside fish, poultry, or meat. Food is fun! Don't be afraid to experiment by substituting different greens in the following recipes or your own favorites.





Kale and Soft-**Boiled Eggs**

Healthy greens and protein, no carbs: ideal for breakfast, lunch, or a light supper.

Serves 2

Ingredients

1 small onion, cubed 1 bunch of kale (center stems removed, leaves ribbon-sliced into 1/4-inch strips)

1 teaspoon of your favorite cooking oil (I like ghee or avocado oil)

2 teaspoons balsamic vinegar

4 large, free-range eggs

Himalayan salt and pepper Garlic powder (optional)

4 large, free-range eggs

Preparation

In a medium-size sauté pan, heat the ghee or oil, then "sweat" the onion until it begins to soften. Add the kale; stir, then cover the pan with a lid for about 4 minutes to lightly steam. Add the vinegar and stir. Season with salt and pepper to taste, along with the optional garlic powder. Keep the kale covered/warm until the eggs are ready.

Soft boil the eggs: In a separate pot, bring water to a boil. Using a slotted spoon, gently lower the whole eggs onto the water, taking care to not crack or break the shells. Set your timer for 6 minutes, then promptly remove the eggs. Put them under cold water to stop cooking. Enjoy eggs on top of the greens.

Sautéed Dandelion Greens

Dandelion is loaded with vitamin A and is an excellent source of vitamin C. This is a great side dish to accompany any fish, poultry, or meat; or serve with rice.

Serves 8

Ingredients

3 pounds dandelion greens (tough lower stems discarded, leaves cut crosswise into 2-inch pieces)

1/2-cup extra-virgin olive oil (or ghee, coconut oil, or avocado oil)

5 large garlic cloves, smashed 1/4 to 1/2 teaspoon dried hot red-pepper flakes

1/2 teaspoon fine sea salt

Preparation

Thoroughly clean the greens to remove any sand or dirt, then drain. In a large stock pot, bring about 8 quarts of water to a boil. Blanch the greens by dropping them into the boiling water; cook 6-8 minutes. In a colander, rinse greens under cold water, then drain. Pat dry to remove excess water.

In a heavy skillet, heat cooking oil. Add chili flakes and garlic, stir for about 45 seconds, and then add greens. Sauté for about 4 minutes; add salt to taste.

Bok Choi Slaw

This easy salad is equally good with shredded cabbage or kohlrabi. Try it as a taco topping, too.

Serves 6

Ingredients

- 1 large head bok choi (or 2-3 baby bok choi)
- 1 bunch cilantro
- 1 bunch green onions
- 2 large carrots
- 1/4 cup seasoned rice vinegar
- 1/2 cup extra virgin olive oil

Preparation

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



Arugula Pesto

Pesto, traditionally thought of as a basil puree with nuts and cheese, can be made with nearly any green or type of nuts. Try this also with dandelion and walnuts.

Makes about 1 cup

Ingredients

4 oz. chopped arugula 3 cloves garlic 1/2 cup of pine nuts (I sometimes use walnuts) 2 tablespoons white miso 1/2 cup olive oil

Preparation

Blend all ingredients in a food processor or blender. Enjoy a small amount as a sauce or spread on sandwiches, cooked vegetables, poultry, or fish.

Support Your Local Farmer

Lucky for us, fresh, locally grown produce has become more widely available over the past decade. Of course nothing can be fresher than the produce you grow in your own garden ... but not everyone has the time or space to grow their own vegetables.

That's the beauty of farmer's markets and Community Supported Agriculture (CSAs, also known as subscription farms). On any given Saturday from April through November, in most areas of the country, you can visit a farmer's market and purchase a cornucopia of freshly harvested produce. Depending on the season, your shopping basket might include tender leafy greens, tiny fingerling potatoes, juicy heirloom tomatoes, or an assortment of winter squash varieties. Most also have locally produced meats

Whatever the season, you can bet that your take-home

harvest will be fresher, tastier, and more nutritious than what you could buy at the supermarket. You're likely to find more unusual, gourmet varieties—ones not grown on a large commercial scale because they do not ship well. You'll also be able to talk directly to the grower, who can tell you how the crop was grown. Often, they are happy to share cooking tips and recipes, too.

CSAs offer similar benefits, but members purchase shares from one local grower and in return receive a bag of seasonal produce each week throughout the season. By supporting your local farmers — including CSAs and other organic vegetable growers, orchards, free-range egg producers, hormone-free/grass-fed meat producers, etc. — you support your economy, too.

To find a farmer's market, grower, or CSA near you, visit www.localharvest.org_ - Vicki Hackman



A bumper sticker from MOFGA, the Maine Organic Farmers and **Gardeners Association**

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Shake it Up!

Kickstart your day with one of these delicious, Hammer-athlete approved smoothies

BY ENDURANCE NEWS STAFF

Start your day off strong or finish a workout with a delicious, power-packed smoothie! From green smoothies fortified with protein to thick and tasty fruit and yogurt blends, the possibilities are endless. We asked Hammer athletes to share a few of their favorites. For more great smoothie recipes, check out our free downloadable cookbook, *In the Kitchen with Hammer Nutrition*, available on the hammernutrition.com website. Preparation involves simply adding the ingredients to a blender, then giving them a whirl. Couldn't be easier!

Siobhan's Wake-Up Call

I usually drink some of this for breakfast before a workout, and then have the rest as my mid-morning snack. Soy Protein makes it a bit sweeter than the Whey does, but both are good. I prefer to use Soy with kale, which is more bitter than the spinach. Dates add chewiness and a note of sweetness.

— Siobhan Andrews Maize

- 1 cup frozen blueberries
- 1 banana
- 1/4 avocado
- 1 hefty handful of spinach or kale
- 1 scoop of Hammer Whey or Soy Protein
- 2 cups unsweetened almond milk
- 1 Tablespoon flaxseed
- 1-2 dates (optional)

Dusty's Spicy Spinach Shake

I don't use precise measurements when I make this — just a handful of this and a scoop or a shake of that ... [Ed. note: Cinnamon is an antioxidant with anti-inflammatory properties. Research shows that it may also increase insulin sensitivity.]

Dusty Dustyn

- Hammer Whey Protein
- Wheat germ
- Sesame seeds
- Chia seeds
- Spinach
- Frozen berries (blueberries, strawberries, or raspberries)
- Yogurt
- Cinnamon
- Olive oil
- Water



Tonya's Post-Workout Fruit Cocktail

After my long weekend runs, I reward myself with this naturally delicious blend of carbohydrates and protein.

— Tonya Keyes-Christianson

1 5.3-oz. container of of vanilla Greek yogurt

1/2 cup blueberries

1/2 cup strawberries

1/2 banana

1/4 cup chopped pineapple

1 scoop Vanilla Hammer Soy protein

Mike's Chocolate Peanut Butter Chai Protein Drink

Blend everything except for the chai. Pour contents into a tall glass, filling to about three-quarters full. Add chai tea, then stir. Wait 3-5 minutes (if you can stand it!). The chai will set up and thicken the drink.

- Mike Morgan, Rim Racing

1 scoop Chocolate Hammer Vegan Protein

½ avocado (makes it nice and creamy)

1-2 large handfuls of spinach

8 oz. almond milk

2 Tablespoons natural peanut butter

1-2 Tablespoons stevia (optional)

Chai tea

Christie's Gingersnap

This is easy to make, tastes like a gingersnap cookie, and is a great source of protein along with iron, calcium, and potassium (thanks to the blackstrap molasses). This recipe is based on one I found online for a smoothie using blackstrap molasses. I added my Hammer Soy Protein powder.

Christie Jones

6 oz. soy milk

6 oz. chai tea (I make mine from a sugar-free mix)

1 scoop Vanilla Hammer Soy Protein

- 1 tablespoon blackstrap molasses
- 1 tablespoon powdered ginger
- 1/4 teaspoon cinnamon
- 1 cup ice
- 1 ripe banana (optional)

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BY ENDURANCE NEWS STAFF

Freshly roasted, great tasting coffee sounds like a simple request, but the truth is, relatively few Americans have actually experienced really fresh coffee. Whether ground or in whole bean form, most of the coffee sold in supermarkets, coffee chains, and even coffee specialty shops is far beyond its prime — at least several months old, and possibly more than a year old.

Coffee connoisseurs know the window of freshness stays open just weeks, not months, after the beans have been roasted.

Why freshness matters

Compounds in the coffee beans give the beverage its characteristic aroma, rich and complex flavor, and powerful health benefits. Almost immediately after the beans have been roasted, coffee's volatile compounds begin to oxidize. Over time, the beans steadily lose flavor, eventually becoming rancid. You know the signs: weak aroma and a bitter, metallic or "off" flavor, reminiscent of two-day-old brew.

To help ensure freshness, many people buy whole beans and then grind them just before brewing. Unfortunately, that extra step can't turn back the clock for coffee packaged months earlier. Even if the beans aren't yet rancid, you can be sure their flavor is a pale ghost of the freshly-roasted original. Here's how to be sure you are drinking coffee at its hest:

1. Start with the freshest beans available - The award-winning artisanal roaster of 53x11 Coffee roasts its beans to order in micro-batches. It does not roast bulk quantities of beans to fill wholesale orders. 53x11 Coffee is packaged in small individual bags and shipped directly to homes within 1-2 weeks of roasting.

- **2. Packaging matters –** Look for an "escape" valve! Some coffee bags (like 53x11's) have a valve that allows carbon dioxide to escape, while keeping oxygen out. That valve is an excellent indicator of freshness since coffee beans emit carbon for only 2 weeks after they are roasted. Coffee in vacuumpacked containers generally is not fresh: The tight packaging usually is a sign that the beans are stale.
- 3. Buy small quantities more often Order from a micro-supplier who roasts to order and can guarantee consistency.
- 4. Store in a cool, dark, dry place A cool pantry or basement shelf is ideal if the conditions are dry. After you've opened the bag, store it in a resealable plastic bag, and then inside a canister with a tight-fitting lid. Never refrigerate or freeze your coffee, as it can introduce moisture and other flavors, which will spoil the coffee.
- **5.** Use pure, fresh water The impurities, chemicals, and minerals in water can absolutely change the flavor of your coffee, and not for the better. Use filtered water and clean your coffee pot regularly.

With four delicious organic blends, all micro-roasted and delivered to your door within weeks of roasting, organic 53x11 Coffee is clearly the winner in the race for flavor!



The **BEST** beans make the **BEST** coffee













MSRP \$13.95 - 12 oz. bag The Big Ring, The Chain Breaker, The Early Break, The Down Shift.

*No wholesale orders here. Our beans are roasted in micro-batches to order, and shipped witin 1-2 weeks of roasting.



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Finding digestive **SOLUTIONS**

Powering through illness; Hammer athlete recovers, wins

BY TERRY DEHAMER

I've been endurance bicycle racing since 2003. In 2005, I was diagnosed with celiac disease, which made proper nutrition and fueling a challenge.

After speaking with fellow riders about the products they used, someone introduced me to Hammer Nutrition.

Hammer Gel and HEED were the first products I tried; later I added Hammer supplements. I frequently called to consult with the client representatives, who helped me dial in products to manage whatever issue I was having. Gradually, I also started following Hammer fueling methods, such as not eating 3 hours before training or racing.

Persevering through crisis

Then, in November 2014 my colon stopped working altogether. I was tested for a variety of disorders and cancers. I felt full almost all of the time, and consuming adequate calories became nearly impossible. I woke up every morning very sick. If I had to ride or race, there was no way I could possibly eat prior to the event.

The only thing I could tolerate was Hammer Gel. I went through a TON of Hammer Gel!

To compensate for all of the food nutrients that I was missing, I relied on my supplements, including daily Race

Caps Supreme. I continued to race, supplementing with Race Caps, Anti-Fatigue Caps, and Endurance Amino before and during the race. I also rode with a bottle of HEED and a bottle of water, refilled as necessary, consumed Hammer Gel hourly, and took Perpetuem Solids as needed.

Yet I was a mess physically. I was losing my hair and my blood sugar level would randomly drop. My colon worked only when I took medication. Still I managed to have my best racing/riding season ever, setting personal records and meeting all of my racing goals.

Better without dairy

On August 23, I met with a nutritionist at the Cleveland Clinic who diagnosed me with a severe dairy/casein allergy. I went on a five-day almond milk, Vegan Protein, fruit, and vegetable smoothie diet.

My nutritionist was familiar with Hammer Nutrition products and wholeheartedly supported my use of them. In fact, she suggested that my snacks could be Hammer Gel and fruit.

Without dairy foods, getting enough calcium in my diet became a challenge. My legs tended to cramp more easily, so I now take Endurolytes more frequently.

Left: Terry DeHamer (right) competes in the 207.5-mile Calvins Challenge in Springfield, Ohio, where she placed 2nd AG. Riding with her is Fast Eddie Perun, her training and racing partner.

DAIRY-FREE RECOVERY

Recoverite is the ultimate recovery fuel, formulated to provide the ideal combination of complex carbohydrates and protein to restore muscle glycogen and reduce postexercise muscle soreness.

Those who suffer from a severe dairy or soy allergy can make a replacement recovery drink, using HEED and Vegan Protein. Per serving, it supplies a similar amount of calories, carbs, and protein as Recoverite:

- 1 slightly heaping scoop of **HEED**
- 1/2 scoop Hammer Vegan Protein

Total carbohydrates = 32.5 grams; total protein = 10 grams; total calories = 170

Flavor suggestions:

- Lemon-Lime HEED + Vanilla Vegan Protein
- Strawberry HEED + Strawberry Vegan Protein
- Unflavored HEED + Chocolate Vegan Protein

Since Recoverite contains a dairy ingredient, I had to find a suitable substitute. Hammer Nutrition's Steve Born provided me with a "recipe" for an alternative dairy-free recovery drink (above), which works very well.

Today, I am 100% healthy and glutenand dairy-free. I attribute my excellent racing season, despite my medical crisis, to my Hammer fueling program and God's grace. I ride to glorify God and Hammer products certainly have helped make that possible.

Terry Dehamer of Unionport, Ohio, is an outpatient mental health counselor and owner of a Christian counseling center. She rides to relieve stress and races to raise money for charitable causes.

NOT JUST FLAVORS,



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"Hammer Gel tastes great and doesn't cause any Gl issues like other brands I've tried.

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I plan to explore bike touring in 2016. Do you have any suggestions or tips for how to prepare, and use Hammer fuels and supplements during multi-day rides?

To store and carry powder fuels like Perpetuem, consider using a large resealable freezer bag. Freezer bags are more durable than most resealable bags, and you can carry a sizable amount of "bulk" powder in them. Toss the scoop in there, too.

When preparing Perpetuem, many athletes like to make a multi-hour bottle of fuel. This saves time because you won't have to stop every hour to mix up more. Plus, because there are 4-5 hours of fuel in one bottle, you won't have to drink a large volume of flavored liquid, hour after hour. Instead, you get to drink and enjoy water from a separate bottle to cover your hydration needs while also cleansing your palate. Click on the "How to use Perpetuem" link at hammernutrition.com for more information.

Another tip is to use the plastic capsule dispensers to carry the various supplements that you'll be taking during a long workout session. Use a permanent ink marker to list what's in each dispenser ("EL" for Endurolytes, "EA" for Endurance Amino, etc).

BY ENDURANCE NEWS STAFF

Can I use Hammer Vegan Protein at bedtime instead of Hammer Whey to help raise human growth hormone (hGH) levels?

We do not recommend it for two reasons. First, it is the amino acid glutamine that is responsible for the dramatic increase in human growth hormone (hGH) levels. While both the pea and brown rice proteins in Hammer Vegan Protein contain glutamine, the amounts are not enough to positively influence hGH release. Whey Protein, however, contains 6 grams of glutamine per serving, an amount that is "adequate to cross the blood brain barrier and raise nocturnal release of hGH," says Bill Misner, Ph.D. "Glutamine (2,000 mg) has been observed to raise serum hGH 430% above sedentary values [and] 85% of hGH is released during sleep."

Second, in order to effectively elevate hGH levels, minimal-to-no carbohydrates should be consumed because carbohydrates blunt natural hGH release. Unflavored Hammer Whey contains no carbohydrates, and all flavored versions of Hammer Whey contain less than 1 gram of carbohydrates per scoop. On the other hand, all flavors of Hammer Vegan Protein contain 5 grams of carbohydrates per scoop. That may not sound like a very wide gap, but it's enough to make a difference when the goal is maximizing hGH release.

To safely raise hGH levels without risk to your endocrine system, we recommend mixing 1 scoop of Hammer Whey in 4-6 ounces of water only — not juice or milk as those carbs will hinder the process. This may safely raise hGH levels while you sleep by as much as 430% compared to the usual



nightly spike. That's enough to have a noticeably beneficial effect on anabolic, muscle building/maintenance activity in the body.

If you wish to use Hammer Vegan Protein prior to bed and raise hGH levels, we suggest adding 2-6 grams of glutamine powder to the mix before adding water. Glutamine is virtually tasteless and should mix fairly easily. While Hammer Vegan Protein does not contain adequate glutamine to raise hGH on its own, it is a good source of the amino acids glycine, arginine, and ornithine, which also are involved in hGH release.

I read a recent Hammer article on sugars and was wondering why you don't consider maltodextrin a sugar? It seems to reflect as such, but I'm still trying to get my head around this stuff.

One- or two-chain carbohydrates are classified as "sugar" while longer-chain carbohydrates (maltodextrin, glucose polymers) are classified as complex carbohydrates. In essence, maltodextrin can be thought of as a "complex sugar." We need to supply the body with carbohydrates during exercise, and the complex carbohydrate maltodextrin provides a significant advantage over simple sugars. For more information, please read the articles "Caloric Intake: Proper Amounts During Endurance Exercise" and "Simple Sugars and Complex Carbohydrates, an Incompatible Combination," both available on the Hammer Nutrition website.

Please note that we do not advocate consuming maltodextrin except during exercise and immediately after it. Because maltodextrin is a high glycemic index carbohydrate (rating 100, the same as glucose), consuming it regularly in the diet will have the same negative health effects that are attributed to simple sugars.

That said, maltodextrin is not used to the extent that simple sugars are in processed and/or sweetened foods. Simple sugars are consumed in far higher amounts than maltodextrin is in the average diet.

My wife used Hammer Gel and HEED to fuel her last marathon. Do you have other recommendations for her next marathon?

We also recommend supplementing with Anti-Fatigue Caps and Endurance Amino to protect lean muscle tissue from breakdown and decrease the perception of fatigue. Also consider trying Hammer Ultra Gels, which contain a small amount of protein and healthy fats, for events that go beyond 2-3 hours. See "How to Fuel for a Marathon" under the Advanced Knowledge section at hammernutrition.com.



GELS

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Peanut Butter

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- Smooth, sustained energy







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Hammer Brand Ambassador Brian Seegert (left) and training partners Rachel Monaco-Wilcox and Tim Luft gather for a Sunday morning run in the park Photos: Courtesy Brian Seegert

PAYING IT FORWARD

Overcoming fueling challenges, an athlete extends a hand to others

BY BRIAN SEEGERT

When I read the article in *Endurance News* about being a Hammer Brand Ambassador, I knew I was one of them! I've been telling others about Hammer since I learned about the products in 2009. My friends who train with me call me Hammer Brian, Brian Hammer, and even Hammer Man. My motivation for sharing what I know is simple: I want others to have a good experience with their training and learn from my pre-Hammer challenges!

I'm a long-time runner and triathlete, and I really enjoy trail running. With the guidance and support of some great mentors, I ran my first 50K trail race in 2004. Unfortunately, before I found Hammer, I had major problems with my stomach on those long runs, and my issues became more severe with increased distance. I was throwing up during or after most 50-mile races and often felt lousy for the rest of the day after longer events. I tried many fueling products with no success. Eventually I considered giving up ultras and marathons entirely.

Thankfully, in a goodie bag, I found a copy of Hammer Nutrition's The Endurance Athlete's Guide to Success and it opened my eyes. Simple sugars and a lack of electrolytes could be causing my problems. I had immediate success using Perpetuem, Endurolytes, and Hammer Gel, and I've been onboard ever since.

I started incorporating other Hammer products like Tissue Rejuvenator, Recoverite, Whey Protein, Endurance Amino, Anti-Fatigue Caps, Race Day Boost, and the Daily Essentials. To further expand on my success with Hammer products I purchased a Compex EMS unit, based on the recommendation of my training partner, Tim, who is also a Hammer Ambassador.

Sharing Success

I enjoy sharing my experiences and knowledge of Hammer products with those new to the sport as well as experienced athletes and everyone in between. A few years ago I was pacing a friend — a very experienced runner — at a 100mile ultra. She was bonking about 75 miles in. I convinced her to try a few Endurolytes, and after some initial walking, she was able to run consistently again. It was an amazing transformation and a proud Hammer moment for me!

More recently, I helped my friend Rachel, who was training for her very first race — a road half marathon. She had been running for only about 9 months and was eager to learn about nutrition. I suggested she check out Hammer's website. Four months later she completed her first trail marathon where she won her age group, fueled by Hammer! Rachel plans to run her first 50K trail race this fall, and I have no doubt what she will be using for nutrition.

People have asked me if I work for Hammer Nutrition; I tell them, "no, I just really like using their products." I am fortunate to have found Hammer, just as I am fortunate to have found such great mentors and friends along the way. Thank you, everyone at Hammer, for keeping me running for so many years! See you on the trails!





Hammer Nutrition Race Rescue Stories

Hammer athletes lend a helping hand to athletes who haven't learned the secrets of proper fueling . . .

"Hammer Ambassadors do more than spread the word about proper fueling with quality products. They mentor, coach, advise and inspire athletes of all levels. Brian Seegert's informative (never pushy!) sharing of knowledge, experience, and Hammer samples along with my training runs helped me pull off an age group win at my first marathon, the North Face Endurance Challenge. Thanks to Hammer Nutrition and to my ambassador-friend, Brian." -RACHEL MONACO-WILCOX / CLIEN

Friends don't let friends fuel wrong



Hammer Referral Program: **SHARE THE LOVE**

- 1. You tell a friend about Hammer Nutrition.
- 2. They get 15% off their first order when they mention your name/client number.
- 3. You get 25% of the value of their first order credited to your account!



For complete details visit: bit.ly/hammerlove



ADVENTURE RACING PADDLE SPORTS RUNNING TRIATHLON

WE SUPPORT: YOUR SPORT

Spring brings an ultra exciting mix of events, including Hammer-sponsored runs, mountain bike races, centuries, fondos, and triathlons. It's going to be a banner year for Hammer Nutrition's event support program ... look for us at these and many other events in the coming months:

CYCLING SWIMMING MOTOCROSS

BRAZOS BEND 50 ULTRA RUN

NEEDVILLE, TEXAS

The Brazos Bend course is the fastest trail in Texas trail running, 99.9% flat with only one 10-foot hill. Crushed rock and soft trail for 50 miles, 50K, 25K, or 10K.

www.trailracingovertexas.com/brazos-bend-50/

APRIL 16

BEACH BLAST TRIATHLON AND DUATHLON

MEXICO BEACH, FLORIDA

No better way to celebrate endurance sports and lifestyle! Races take place on the beautiful Gulf Coast and its magical beaches.

www.beachblasttriathlon.com/

APRIL 23

THE WILD HORSE

SALT LAKE CITY, UTAH

New gravel grinder/dirt fondo. Zero miles of pavement. Wide open. Challenging. Explore a land only 45 minutes west of Salt Lake City, where hundreds of wild horses roam. It won't be easy.

www.ridewildhorse.com/

APRIL 30



Shalini Kovach hammers to a 10th place AG finish at the 2015 Kettle Moraine 100. Photo: Focal Flame Photography

KETTLE MORAINE 100

LAGRANGE, WISCONSIN

Run 100 miles on the Ice Age National Scenic Trail in Wisconsin's Kettle Moraine State Forest. No deep canyons, no mountain passes, no thin air — just 100 miles of beauty and challenge.

www.kettle100.com/

GRAN FONDO NATIONAL CHAMPIONSHIP SERIES

ACROSS THE NATION

For riders of all abilities. Eight events, each with three distance options — 100, 60, and 30 miles. Placements determined by timing only on highlighted sections. Awards, prizes, fun!

TOUR OF GEORGIA GRAN FONDO

CLAYTON, GEORGIA, MAY 14

HIGHLANDS GRAN FONDO

BUTLER, NEW JERSEY, JUNE 5

For others, visit: www.gfncs.com



BREATHLESS AGONY RIDE / REDLANDS, CALIFORNIA

Are you ready to test yourself on the Toughest Century in Southern California? www.cyclingpros.com/onyx.htm

MAY 7

VEGAS VALLEY VOYAGE / LAS VEGAS, NEVADA

This self-supported multi-stage foot race traverses some of the Mojave Desert's most stunning backcountry wilderness. Run approximately 150 miles in 6 stages over 6 days.

v3ultra.com/

MAY 13

OWYHEE RIVER CHALLENGE / PARMA, IDAHO

An endurance equestrian event; entry fee includes dirt roads, trails, sand, sagebrush, and maybe a bonus rattlesnake! Cows, gates and rocks completely free of charge.

zap6000.wix.com/owyheeendurance

MAY 13-15

BECKWOURTH 8 HOUR MTB RACE / BECKWOURTH, CALIFORNIA

This 10-mile course has everything an MTB racer wants: forests, pastures, single track, double track and a few small dirt roads, plus about 1,100 ft of climbing per lap. Fast course!

www.northlanderevents.com/free-beckwourth-8-hr/4588446024

MAY 13

TROIKA TRIATHLON / SPOKANE. WASHINGTON

This historic triathlon (Olympic, Long Course, and Aquathlon) begins and ends in Medical Lake's Waterfront Park.

troikatriathlon.com/

MAY 21

ST. LOUIS TRIATHLON / MARYLAND HEIGHTS. MISSOURI

One of the flattest, fastest tris in the Midwest, ideal for both veterans and those new to the multisport experience. Held at the scenic Creve Coeur Park. stlouistriathlon.com/

MAY 22

24 HOURS IN THE ENCHANTED FOREST / MCGAFFEY, NEW MEXICO

New Mexico's premiere 24-hour mountain bike race! Epic singletrack; course winds through meadows, pines, and aspens.

ziarides.com/event-register/24-hours-in-the-enchanted-forest/

JUNE 18





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The delicious way to minimize soreness and repair lean muscle tissue; available in 3 tasty flavors and packed with protein.

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Teams News and Updates

Hammer teams start strong in 2016

BY ENDURANCE NEWS STAFF

Team Rwanda sweeps podium

The Seventh Annual Tour of Rwanda ended with Team Rwanda sweeping the GC podium. Bosco Nsengimana, Team Karisimbi, finished 1st with 19-year-old Joseph Aleluya, Team Akagera, finishing 2nd, and Camera Hakuzimana, Team Muhabura, finishing 3rd.

Hammer Nutrition was important to our win. Due to the lack of access to race nutrition in Rwanda, Team Rwanda generally survives on bananas and homemade rice cakes during its



5-6-hour training rides. But in a multi-day stage race with the difficulty level of Tour of Rwanda, they need more. During the long stages, we would start our riders with a bottle of Perpetuem a few hours prior to the race and during the first 50kms. When the feed zone opened and they came back to the cars, they would receive a bottle of HEED to use for the remainder of the race.

For our team, which was used to surviving on bananas and rice cakes, Perpetuem and HEED provided much-needed fuel, and their mild flavor and digestibility made the transition easy. Our results prove it! - JOCK BOYER / TECHNICAL DIRECTOR





Spotlight: Alto Velo Racing Club

Based in the Silicon Valley of California, Alto Velo Racing Club supports and encourages bike racing across all categories. The club also supports the Alto Velo Racing Team, which is open to all members who want to upgrade their category. Each year the club promotes the Pescadero Coastal Classic, one of the toughest and most beautiful races on the Northern California racing calendar. The club was founded in late 1992, and was voted the USCF Best First Year Club in 1993. Alto Velo currently has more than 200 members.

George Miranda, team ambassador and 2015 Northern California Masters 55+ Track Sprint Champion, provided an early season update:

HN: How has Alto Velo prepared for the 2016 season?

GM: The Alto Velo Racing Club, aka Sun Power Racing, includes a weight-training program from November through February along with stretching, foam rolling, and massage for injury prevention as well as recovery. Most of us continue this throughout the season. Masters racers lose muscle mass much quicker than senior riders, so maintaining a weekly lifting program year-round is a must. Indoor Peloton workouts and core strengthening exercises also build strength and fitness, and help prevent injuries.

Our November through January rides are all about long, slow miles with lots of climbing to build base conditioning. By mid-January we begin to incorporate sprinting, attacking/breaking away, and bridging to breaks. In February we start to put speed and intensity into our rides. Many will do structured and un-structured intervals to simulate race intensity. Fast (racer level) group rides become a component of our weekly training, too.

HN: What are your 2016 goals?

GM: Our Elite Alto Velo Race Team (AVRT) has 17 designated team races with a roughly even mix of road races and criteriums, where we hope to achieve wins, podium places, and well-executed team tactics. The criteriums include prestigious Northern classics such as Santa Cruz, Sea Otter, Cat's Hill, Burlingame, San Rafael, and Giro di San Francisco.

Our Masters racers will compete nationally on the track at the Indianapolis Velodrome. Mountain Bike and Cyclocross racers will be dueling on the dirt at Sea Otter and many other venues in Northern California throughout the year.

As of early March, we've achieved 18 top five places with seven of them Master's racers. Cyclocross National Championships have already taken place and our very own Karen Brems won her division. Rainer Bodingbauer topped the podium for Central Coast Road Series Masters 35+ and yours truly won the Copper Town Square Circuit Race Master's 55+.

HN: What Hammer products are/will you be using and how do your team members use them?

GM: On the bike, fuel and energy are critical. Fortunately, Hammer Gel, HEED, and especially Perpetuem take care of us. Several of our athletes suffer from cramping, so Endurolytes in various forms is their weapon of choice. After back-to-back workouts, our racers help keep soreness and fatigue at bay with Hammer Whey or Vegan Protein, Hammer Recovery Bars, and our secret weapon, Recoverite.

Expanded Hammer Podium Series

Introduced in 2015, the Hammer Podium Series provides recognition and rewards to the top three to five finishers of all categories at select bicycle races with an emphasis on Northern California. The prize series will include 30 Northern California enents in 2016.

New in 2016 are larger podiums and more awards, a points series 15 deep, plus a team competition. "Not only are we wishing to add more fanfare to our event partnerships with fun podiums and awards, but we are also trying to make the sport more inclusive," said Hunter Ziesing of Hammer Nutrition and a member of Hammer Nutrition/53x11 National Masters team.

Ziesing was the founder of the Hammer Echelon Gran Fondo series that brought fanfare and frivolity to its events, including road closures, police escorts, and helicopters. Ziesing vision's for the Hammer Podium Series is to help grow ridership and bring in more spectators.

For more info on the Hammer Podium Series, please visit https://www. facebook.com/HammerPodium/.



Hammer Nutrition/53x11 National Masters team member Dan Shore tops the podium at the Cantua Creek Road Race. Masters 55+ Photo: Courtesy Hunter Ziesing





Arctic isolation

Hammer athlete tests endurance against the harshest of elements

BY CHRIS LATTA

t is 3 a.m., and my shivering is becoming more violent as I wake. What had started as a minor nuisance in the night, has shifted to something much more agonizing. I made it five hours without waking, a small victory after a week on the ice. The throbbing in my toes signals it is time to repeat the -40 degree Fahrenheit ritual of heating water bottles to revive my digits. This has become a nightly routine: sleep, wake, heat, and then try to sleep again. I peer out from my tent to a spectacle most will never see. The stars are so bright and close you could pluck them from the sky. The Milky Way so defined, you might think you are looking at a NASA satellite image. It's in moments like this that the cold fades away and the warmth of a long day revives you. You remember what it means to seek these far away places. It's deep in our soul, the longing to find the unspoiled wilderness, the places that remind us how small we really are and how lucky we are to find them. In the cold of night, the only respite is sunrise, which glows on the horizon signaling another day.







In February 2015, Dave Goodyear, Michael Neiger, and I (all members of the Michigan Backcountry Search and Rescue team) skied and sledged unsupported through the Hudson Bay lowlands to the James Bay of Northern Canada in the Arctic Ocean watershed. Our 16-day expedition retraced the historic Cree fur traders' route down the Abitibi and Moose Rivers to the port of Moose Factory Island, Ontario, an area that is still home to the native Cree tribe. The cultural history of these northern reaches is matched only by its awesome beauty and the simplicity of life.

You live for the sunrise in the North. The long nights of February are perplexing. The sun sets just after 4 p.m. and doesn't reappear on the horizon until half past 8 a.m. each day. When it does return, the joy is followed by the dreaded realization that it is time to leave the warmth of the sleeping bag.

If you think getting up early for work is rough, try it at -40 F. After forcing myself from the cocoon of my sleeping bag and into frosty boots and goose down, the

morning chores begin: heating water, making breakfast, knocking frost off everything, then cramming your whole life into a sled. The complete routine takes about an hour.

Nothing remains unfrozen here. Even ramen noodles freeze, and it's a challange having to rely on heat to make anything edible. Every meal is calculated to ensure a daily intake of 7,000-10,000 calories; a separate calculation determines how much fuel will be needed to cook it.

This is the daily reality of an unsupported arctic expedition. As I ski, I haul everything - food, shelter, stove, and fuel — in a 100-pound custom-built sled, 8 hours a day, for up to two weeks on end. Dragging heavy things in frigidly cold places has become a passion. Odd? Yes. But an absoultely amazing way to see the world.

The months before the expedition were filled with preparation, including dragging tractor tires up sand dunes and spin classes. My two-a-day workout regime

began at 5 a.m. and culminated with evening training.

Retrofitting gear was left to the weekends. There's a lot of great gear out there, but the gear needed to explore the outer extremities of the Earth is rather specialized. It is excruciatingly hard to take a pair of scissors to a brand new pair of \$500 boots. It is equally difficult hacking into a new softshell suit from a sponsor. Despite these moments of trepidation, the end product and comfort it brings are well worth nervous hours at a sewing machine.

As for every other athletic endeavor, fueling is part of the preparation. I fueled my expedition with Hammer Bars — so many Hammer Bars — as well as Recoverite, and Hammer Gel. When exposed to the arctic temperatures, Huckleberry and Nocciola Hammer Gel become an amazing taffy-like substance. I highly recommend you try it!

Chris Latta is an explorer, student, gear ambassador, sprinter, and industrial designer living along the shores of Grand Haven, Michigan.



SHOW TIME

Hammer Canada

BY RYAN CORREY

Canada Hammer retailers are ramping up for spring, stocking their shelves in anticipation of eager athletes ready to break free of the pain cave. Spring training season and a milder than normal winter have helped boost retail sales! We'd like to think that some of this growth also is due to our attendance at the spring bike shows in Edmonton, Toronto, and Calgary — a first for us.

Our small team of four must budget our time strategically. So instead of doing another cross-country fueling tour in the Hammer "Big Rig" (we crossed Canada four times over the last two years), we decided to concentrate our energy on the bikes shows this time. Doing so would allow us to engage with a similar number of athletes, but in the span of seven very intensive days.

When not in our Hammer booth, we observed how other sports nutrition companies present themselves. We gleaned a couple of very clear takeaways:

Seize the moment – Bigger brands stayed away from the newer shows in Calgary and Edmonton, due to a smaller (but growing) attendance. Great! As the only nutrition provider at these two events, our team was able to capitalize, and the quality of the conversations we had was tremendous.

Substance over style - Despite the "flashier" competition in Toronto, it was very clear that no one came close to providing our level of fueling knowledge and care. The other booths were either managed by marketing companies or by larger companies that didn't focus as much on nutrition. Since we were stationed at the back of the building, I wondered if people would even find us. But the level of care we offered was the difference between someone reaching for a bar sample and a potential new customer reaching for my business card.

"I realized very quickly that the company wasn't just about selling their product, it was educating consumers on what they truly require to fuel properly, and not throwing a fix-itall pill at them," wrote new athlete ambassador, Kyle Nesbitt. Kyle helped at our Toronto booth on the busiest afternoon.

Be sure to read the rest of Kyle's inspired post at hammernutrition.ca/why-i-hammer







Future Hammer team member, Avaya Pall

groove with Hammer Bars

Ambassador Smoothies

Combine ingredients in a blender, puree, and enjoy!





Lesley Maisey's Orange Revitalizer

1 serving Orange-Vanilla Recoverite 4 cubes of ice

1/3 - 1/2 cup skim milk

3 Tablespoons (heaping) Greek yogurt

Half a fresh orange (or 5-6 slices of a medium to large navel orange)



Kyle Nesbitt's Coconut Shredder

1 scoop Chocolate Hammer Vegan Protein

1 Tablespoon almond butter 1 cup unsweetened almond milk 1/4 cup shredded coconut



Spring McClurg's Morning Protein Smoothie

Half of a frozen banana (peeled and frozen the night before)

1/4 –1/2 cup of your favourite frozen berries

 $1-1 \frac{1}{2}$ cups water

1 Tablespoon of your favourite nut butter

1 serving Vanilla Hammer Whey protein





800 ml Shaker Cup - Perfect for mixing multi-hour Perpetuem and protein shakes on the go



24 oz. Big Mouth bottle -Delivering 50% more water flow than competing bottles

GEARING UP FOR A WINNING SEASON

Hammer Europe

BY BUDDY VAN VUGT

Mark van Dongen, of the Netherlands, has his eyes on the grueling Stoneman Miriquidi ride (162km, 4,400 meters elev., and over nine summits in one day) June 11 in Germany and the Czech Republic. Mark also will be riding Paris-Roubaix, 170K on French roads with 21 strips of cobblestones, "but this is only training for the Stoneman," he says. His training includes long rides on the local XC track in Dorst and daily commutes to work on his mountain bike, as well. Mark's fueling recipe features Hammer Gel, Perpetuem, and Endurolytes, topped off with Recoverite after every ride. 💷

Above: Mark van Dongen hammers the XC track in Dorst, Netherlands, in preparation for the upcoming Stoneman Miriquidi race in June.

Photo: Margret Tielemans of Fotografie (www.margrettielemans.nl)



Luc Smits, 12-hour MTB World Champion, shows off his new cycling gear. Luc plans to defend his title in 2016 in Weilheim, Germany.



Luc's brother, Yves Smit, prepares for the 1,100km Race Across Germany.



Kamil Lesniak powers through a gym workout at the beginning of the 2016 trail running season.



Florentin Gooris leads the relay of the Pontoise Trio Trail Run in Belgium.



Gediminas Grinius digs deep for a 3rd place finish on the Hong Kong 100km Trail Run.



Sanne Swolfs fuels up before diving into training at a camp Benidorm, Spain. "This-is-how-we-do it ... many hours in the pool and on the bike." #HowiHammer

All photos courtesy of Hammer Europe unless otherwise stated

UPCOMING HAMMER EUROPE SPONSORED EVENTS

MAY

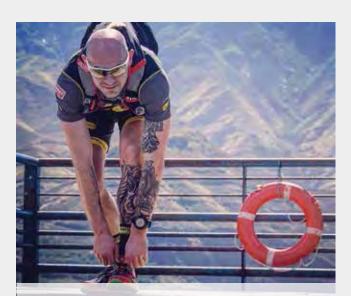
Bilzen 111 Triathlon - Bilze, Belgium Ultra Trail Lamer (trail running) - Winkel, Germany

JUNE

24 Hours MTB - Alfsee, Germany Heavy 24 MTB Rennen - Chemnitz, Germany Circuit Cycling MTB + Cycling - Hockenheim, Germany

JULY

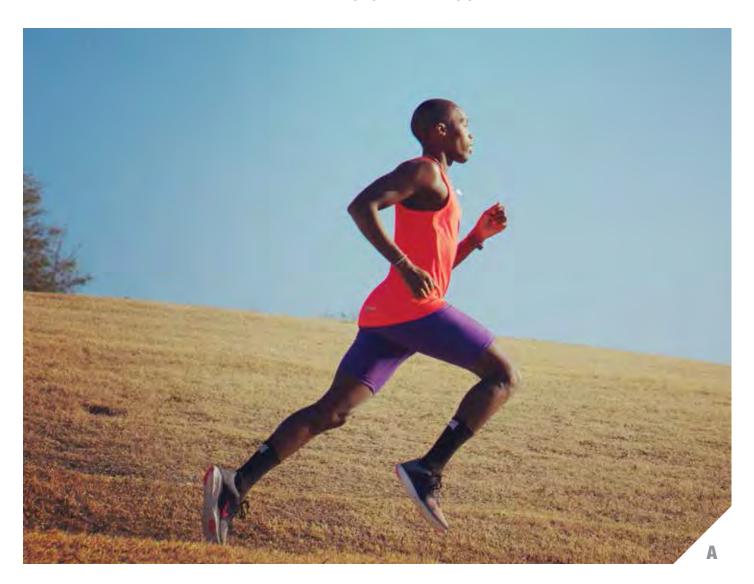
Geraadsberg Triathlon - Geraadsbergen, Belgium Hamburg ITU (triathlon) - Hamburg, Germany Challenge Roth Triathlon - Roth, Germany Nisraman Triathlon - Nisramont, Belgium Rad am Ring (cycling, MTB) - Nurburgring, Germany Walser Challenge (trail running) - Walser, Austria

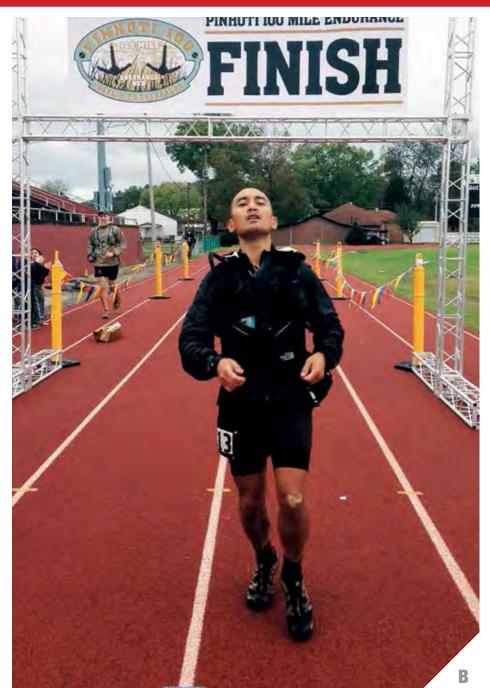


Gediminas Grinius laces up before the Hong Kong 100km Trail Fun Run. Photo: Lloyd Belcher Visuals

FROM **OUR ATHLETES**

Our athletes are the heart and soul of Hammer Nutrition. They include elite pros who have been competing for decades as well as amateurs training for their very first race. We love to celebrate your achievements, large and small, whatever your sport. The athletes we feature on these pages are just a small sample of the thousands of Hammer clients who are "fueling right, and feeling great." Cheers to all!







A Kelvin Busienei

Carrollton prediction 5k / 1st OA

"There's nothing like Recoverite. During high intensity workouts recovery is everything. Thanks to Recoverite for always keeping me on top of my game."

Photo: Timothy Metcalf Photography

B Nick Bautista

Pinhoti 100 Mile Endurance Run / 1st OA

"Hammer Gel helped me keep a consistent level of calories in my system for the entire 100 miles. I took Endurolytes Extreme every hour, as well as every half hour as needed. The added ginger in the Endurolytes worked extremely well to prevent my usual stomach distress. Endurance Aminos helped prevent muscle soreness and breakdown."

Photo: Jeff Seymour

C Margaret Thompson

Allen Clark Hill Climb / 1st AG

"Hammer Products have played a roll in my racing and training since 1997. For this race I used Hammer Gel 5 minutes before start of the race, along with Endurolytes. This event was very short and intense, so starting out correctly was crucial as there was no time to correct any mistakes."

Photo: Kimberly Myers-Celecki

D Mindy Przeor

The Captain America 10K / 4th female

"Hammer products played a huge role in this weekend. Before and during the events each day I used Hammer Gels. After the 10K I made sure to take my daily supplements and included Xobaline and Tissue Rejuvenator along with Recoverite so I'd be ready to go again the next morning."

Photo: Kris Przeor

E Brad Daniels

Buffalo Headwaters

Mountain Bike Challenge

"I fueled with Perpetuem and followed the guidelines in 'Supplementing for Epic Events' to get me through 44 miles of singletrack in the Ozark Mountains of Northwest Arkansas, which included 6,000 feet of elevation gain. After the event I used Recoverite."

Photo: Cindi Daniels





A Vic Allen

Kauai Hoe Wa'a two-man race / 1st OA

"My partner and I finished 1st in our category and 1st overall; 20 minutes ahead of all other competitors. Mahalo Hammer Nutrition for the products and knowlege to support me. Conditions are not a factor when you have your fuel and recovery figured out."

Photo: Annie Mceveety Allen

B Amber Reece-Young

Winter Splash Trail Race / 1st female

"I ate a Hammer Bar before the race and used Peanut Butter and Huckleberry Hammer Gel to fuel me during the race. A Chocolate Recoverite kick started my post-race recovery."

Photo: Kathy Pressley & Matthew Hollifield

C Kelly Agnew

Across The Years 48-Hour race / 1st OA

Sponsored athlete Kelly Agnew finishes with another 1st after a 48-hour race.

Photo: Jo Agnew







A Amy Rappaport

Ironman World Championships

"It was a great week on the Big Island. What an honor to qualify at Lake Placid and finish my 100th Triathlon in Kona."

Photo: Garrett D'Alessandro

B Tonya Keyes

Coldwater Rumble / 1st female

"The first race of 2016! The morning was about 41 degrees F, just enough to burn the lungs on the ascent of the first big climb. I was constantly rolling ankles from the rough, loose rocky terrain. But, if you do get a chance to take your eyes off of your steps for a brief second to look around, you realize what a gorgeous course this is."

Photo: Kathy Pressley & Matthew Hollifield

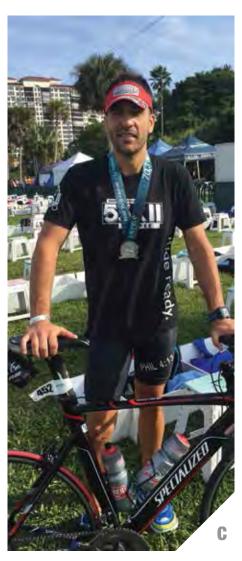
C Jason Millsaps

HITS Naples, Florida - Half Distance

"I use Mito Caps, Endrolytes, Race Caps Supreme, Anti-Fatigue Caps, Endurolytes Fizz, HEED, Recoverite, Hammer Bars, and Hammer Gel in my training and racing. Because I live and train in such a warm state, HEED and Endrolytes are essential."

Photo: Courtesy Jason Millsaps





ZANDY MANGOLD'S

4DESERTS, ATACAMA CROSSING

RACE RECIPE



Zandy Mangold running to a 2nd place overall finish in the 4Deserts, Atacama Crossing, a self-supported, 155 mile stage race, through the Atacama Desert in Chile. Photo: Crystal Images



BEFORE: Race Caps Supreme prior to big workouts or races **DURING:** Hammer Gel and

Sustained Energy

AFTER: Recoverite, AO Booster,

and Xobaline

DAILY: Mito Caps and Tissue

Rejuvenator

RESULTS

"I stared down at my shreddedbeyond-recognition Hokas, checked the tape job on my sprained ankle, savored a Nocciola Hammer Gel, and willed my body along the rocky terrain to a 2nd place overall finish."

-Zandy Mangold

A Travis McWhorter

Pre-Season Training

"HEED has carried me through two 80-mile training weeks, giving me the sustained energy required to complete them. Tissue Rejuvenator has aided my recovery and Endurolytes Extreme has kept my electrolytes balanced." Photo: Travis McWhorter

B Chelsey Sands

Patagonia Triathlon / 2nd female

"I used Hammer Gel and HEED prior to the swim and on the bike. The run course offered Hammer-sponsored HEED and I also used Hammer Gel on the run. Immediately after the race, I had a Chocolate Recoverite shake!"

Photo: Courtesy Chelsey Sands

C Natalie Larson

San Diego 50 Endurance Run / 3rd Female

"I was the 3rd place woman, 7th overall, at the San Diego 50 mile race. I had the 6th fastest female time on the course, 7:55:59."

Photo: Louka Dlagnekov







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- Benefits digestion

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800.336.1977 / www.hammernutrition.com



A Coul Hill

Mason Lake Road Race #1

"I used HEED, Perpetuem, and Apple-Oatmeal Hammer Bars to keep me strong and well fueled. Taking Recoverite and Hammer Whey was the first step I took to get ready to Hammer on again!" Photo: Courtesy Coul Hill

B Michael Josi

Tour of Sufferlandria

"In February I rode the Tour Of Sufferlandria, a mythical 9-day indoor turbo-trainer tour based on cycling training videos. My 5-year-old daughter Abigail wanted to ride with me but my investigation did not turn up any trainers for kids. So we decided to build our own! To keep us powered, we used Strawberry-Vanilla and Caffé Latte Perpetuem. We both recover with Strawberry Recoverite."

Photo: Courtesy Michael Josi

C Jason Beck

Las Vegas Hot Chocolate 15K / 1st AG

"I used Hammer Gel during the run along with Anti- Fatigue Caps prior to starting to ensure fresh legs for the duration of the run. I used Recoverite right afterward to ensure a quick recovery."

Photo: Juliet Ugarte Hopkins





A Joanna Bilancieri

Cross Training

"Cross training at its finest! Who needs a gym when you've got a wall to climb? I'm pretty sure every single muscle in my body got an incredible workout climbing here in Hawaii! I used Hammer Gels and Endurolytes for the climb, Tissue Rejuvenator and Anti-Fatigue Caps for the rescue!"

Photo: Molly Mamarel

B Charlie Coe

Lighthouse Winter Running Series / 1st AG Hammer sponsored athlete Charlie Coe and daughter Alyssa brave the cold at the Lighthouse Winter Running Series (RINY 5K Franklin WI). Hammer on!

Photo: Courtesy Charlie Coe

C Hammer Nutrition Super Masters

California Trainin'

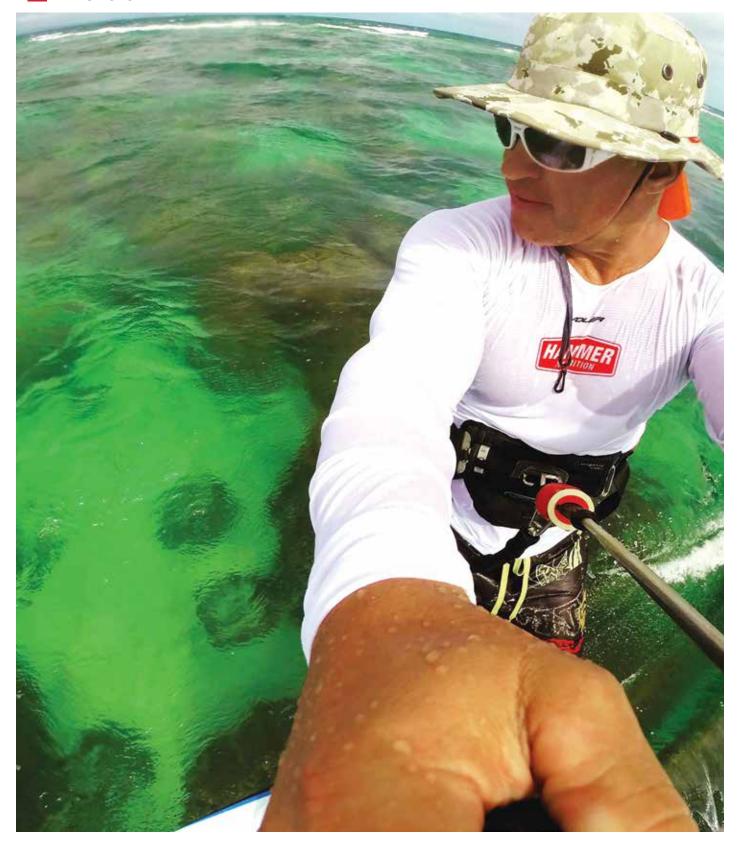
The Hammer Nutrition Super Masters team heads out for an early spring trainig ride.

Photo: Courtesy Mike Freeman









Hammer Nutrition athlete Thomas Maximus takes a break from stand-up paddling and outrigger competition to rekindle another passion, kitesurfing. "I booked a last-minute trip to the Philippines, then flew to Boracay, where this photo was taken," he says. "Of course I packed a large bag of Hammer essentials to help me stay hydrated and fueled for long sessions in the Southeast Asian sun."

Photo: Thomas Maximus

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