

Spotlight on Amanda Carey

Our biggest issue ever!

ENDURANCE NEWS

JULY 2010 : #70

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**Hammer fuels
are kosher**

**Take your
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the next level!**

Race Day Boost

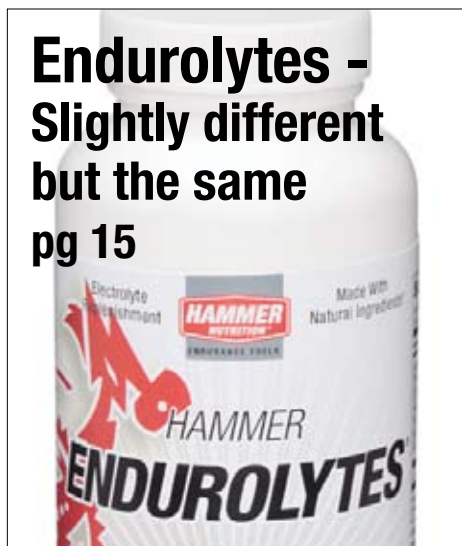
**Hammer and
USMS team up!**

**Climbing into the
history books**

Teen takes on Everest

The informed athlete's advantage since 1992

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Slightly different
but the same
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ON THE COVER

*Laura Labelle gets in the pool at the U.S. Masters Swimming meet in Atlanta, Georgia.
Read Laura's account of the event on page 31. Photo : Brian Wadley*

Hammer wins in Spokane

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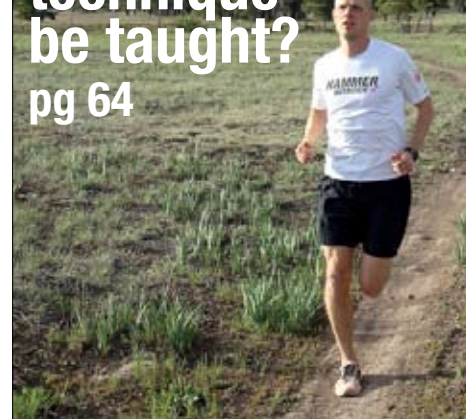
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ENDURANCE NEWS

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Our Mission

The objective of Endurance News is to provide you, the serious endurance athlete, with a valuable resource that you will find informative, educational, thought provoking, and helpful in your ongoing pursuit of optimum performance and health.

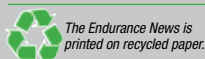
Endurance News features insightful articles on diet, nutrition, training, and other topics of interest for endurance athletes - written by our staff as well as professional and elite amateur athletes and other experts in the area of nutrition and exercise.

In reading this and future issues, please remember that the views expressed in this publication will always be biased in favor of a healthy diet, hard training that emphasizes quality over quantity, and prudent supplementation to improve health and performance. But above all, we at Endurance News believe that there are no short cuts and that success can only come from hard work.

Back issues available at www.hammernutrition.com

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I'm not a motor sports fan, but it's nice to see people excel in other sports while using your products.

I'm particularly interested in winter sports and am glad to see more coverage of them in your literature lately. My main sport is ski mountaineering with lift serviced skiing, general mountaineering, rock and ice climbing, and mountain biking close behind. I don't do competitions (used to do extreme skiing comps) but over the past 38 years I've put in many days of up to 20 hours/day with extended high levels of exertion. The "East Buttress" of Mt. Whitney (17hrs. car to car) is one example. I used to be wiped out for a couple of days after something like that, but with Hammer products, I can get up and go to work the next day like any other day.

I don't want to "show up" the guys who sent in the bit about snow shoveling, but . . . living in Mammoth Lakes, we receive from 30 to 50 feet of snow per year (at the ski area). I've been shoveling snow here for about 45 years. It's April 20th as I write this and we have about six inches for the day, 60 inches for the month, and 516 inches for the year!

- Kirk Shultz

If everyone in the world were a little fatter, we'd all be closer together . . . but seriously, **I can't tell you how much Hammer Nutrition has made a difference in my performance and training.** I promote you guys every chance I get. I have stickers on my bike, I wear my Hammer shirt probably too much, and tell everyone that they can be as handsome, fast, and charming as I am if they purchase Hammer products . . . that's probably something that if your sales team took one look at me they wouldn't appreciate. So to recap, I am ugly and fat and I love your products. Thanks for reading this. Sent from my Stealth Fighter.

- Kevin Mortensen

Do you have something that you'd like to say? Send your thoughts to letters@hammernutrition.com



Brian and Miles Frank enjoy a little quality time together.
Photo : Kadidja Sierra

Welcome to the 70th issue of Endurance News, our biggest ever! It's full of uniquely interesting articles that you will not find in other publications and tons of great contributions from you, our ever growing circle of new clients, hardcore loyalists, ambassadors, coaches, sponsored athletes, teams, and organizations - the Hammer family! More on that in a minute. The extraordinary things that athletes all over the world are doing with the assistance of Hammer products amazes me constantly. Keep those great stories and photos coming and maybe we'll break 100 pages in our next issue. Read on, as I have a lot of news of my own to share with you.

The number of pages in this publication is not the only thing that is growing. As so many of you are reporting to us, you are seeing Hammer all over the place - on TV, in retail outlets, on websites, and out on the streets. As we did in 2009, we continue to defy the economy and are achieving double digit growth across the board. I can only conclude that the reason for this unabated growth is that we are serving you well and providing products that you want. First, I'd like to thank you most sincerely for favoring Hammer with your support. We'd be nowhere without it and we won't forget that anytime soon. Second, we'll take this as a sign that we are going in the right direction and will continue to do everything we have been doing for the past 23 years, only bigger and better. I still personally monitor suggestions@hammernutrition.com and also read

all feedback submissions that we receive through our website and e-mail. If you like what we are doing, let us and everyone else know about it!

This issue, as the cover would suggest, marks our official entrance into the swimming arena with our sponsorship of U.S. Masters Swimming,

USMS, and it's high profile national and regional events. You will read about the recent Nationals in Atlanta and the formal announcement of our partnership, so I'll just add that we are excited about better serving the masters swimmers who already know and love Hammer, as well as introducing the products to those that do not. As with USA Triathlon, RAAM, and so many others, we look forward to a long association with USMS.

Also in this issue is Steve's blow-by-blow account of our 24-hour mountain bike race in Spokane, WA. We had a blast and the young men riding for us were outstanding in their performances. The part of this that I think is so cool is that all of these guys - Dustin, Jason, Matty, and Phil - work for us every day and they practice what we preach. They are great athletes and have trained very hard to achieve this result. Add proper fueling and a good support crew and you have a recipe for success in 24-hour racing.

New Packaging - As you can see from the jugs that continue to land on your doorstep and line the shelves in stores, our transition to large, resealable pouches for products like HEED, Perpetuem, Recoverite, Whey, and others has taken longer than I had hoped. I'll save you the technical details, but we are close and expect them to be in full production later this summer. Thank you all for your patience.

New Products - We are on the verge of introducing two new products and a new flavor of Perpetuem. The first product is a solid form of Perpetuem. It's kind

of like a giant Sweet Tart® wafer that measures about one inch in diameter and 3/4 of an inch thick. Each wafer will supply about 45 calories, so six of them would make a regular two scoop (260 calorie) serving of Perpetuem. Initial flavors will be Caffé Latte and Orange-Vanilla. This is not an effervescent that is meant to be dissolved in a water bottle; it is meant to be chewed and provides a real alternative to the "chews" and candy that so many athletes are confusing with real fuel. The next new product that will be surfacing soon, on the other hand, is an effervescent version of Endurolytes - each wafer will provide the equivalent electrolytic mineral profile of two capsules of Endurolytes and will dissolve in water in about two minutes. Many flavors will be offered.

Customer Feedback - Some of you have been disappointed by a couple of recent decisions that were made. I'll apologize in advance and concede that my explanations may not placate you, but at least you'll know why it's being done. First off is the switch to non-packeted Premium Insurance Caps. I know that some of you really liked the convenience that the packets provided, but when we switched production of this product to our preferred local vendor, we gained a huge increase in ingredient quality and purity but lost the ability to do packets. For those of you who really want the packets, my staff will give you 30 free small ziploc baggies with each 210 count bottle ordered. Just ask for them when you call or put it in the notes as you checkout from the website. Certainly this is not as convenient as pre-packeted servings, but it is the best that we can do. The other unpopular decision for the few hardcore users was discontinuing the plain flavor of Hammer Gel. The sales volume was just so low that we couldn't manage it with the other flavors moving at 10x, 20x, 100x times faster. We have already discontinued and sold off our remaining pouches and now we are doing the same with the jugs. I'm very sorry for those of you who love this "flavor" or feel it's the only one you can use, but I really think that the vanilla is an extremely close match. If you have not tried our mild vanilla flavor yet, do give it a whirl.

Roots - We've heard from a few clients lately who were concerned that we might be losing sight of our roots because of some of the supplements that we've developed and the types of sports that

we have been highlighting in recent issues of this magazine. If one has only been familiar with Hammer for the past few years or less, that may very well be the impression. The truth, though, is that my roots are in a varied array of endurance sports and nutrition. I've been racing – both with and without a motor- my whole life, was born at home, grew up “granola” in So Cal, and have been taking handfuls of vitamins and supplements of all kinds since I was five.

When I started 23 years ago, our products were discounted as nothing more than snake oil. Doctors, nutritionists, and experts of all persuasions said that the main ingredient, CoQ10, in our first product, Race Caps, was bogus but now it is one of the most widely-used nutrients in the world - in the medical/health field as well as in athletics. When we first introduced pure energy - ATP (Adenosine Triphosphate) - in a tablet in 1989, this too was said to be a joke because everyone knew that ATP could not be absorbed orally. Now, research has shown otherwise and it is a patented product. By the way, why everyone does not use this product for races and high intensity workouts is still a mystery to me. The bottom line is that being on the cutting edge does not allow the comfort of decades of affirming research and government approval. We will continue to pursue cutting edge products that you will be able to benefit from now; let the others wait 10-20 years before these new nutrients and formulations become accepted by the mainstream. These are our roots.

When it comes to sports (whether they involve a motor or not), swimming, water polo, and road riding were originally just cross training for my MX endeavors. I stepped away from motor sports for a spell and got into road and mountain bike racing, but it couldn't replace my first love. Right now I am fixated on shifter kart racing - yes, go karts - 125cc, 6-speed, no suspension, and capable of generating over 2.5 g's on cornering and braking. Like most forms of motor sports, driving the karts well through a series of practices, qualifying, heat, and main events requires substantial endurance and overall fitness. It is a close second to motocross on my list of adrenaline sports addictions. Hopefully, those of you who prefer human-powered sports endeavors can appreciate and respect the challenge and satisfaction

that one enjoys from mastering machine to win a race the same way I appreciate, admire, and respect those of you who accomplish so much solely under your own power. I view neither as better than the other, just two different ways of expressing the competitive and physical aspects of being human.

Keeping It All in the Family - When we started in 1987, I was given all kinds of advice, but some of the most common was not to mix business and family. That's also the one piece of advice that I have completely failed to adhere to. Since I started the business with my father as my partner, intending to grow it into a business where my family would work as they grew and possibly even take over one day, that was clearly my plan all along. So, it should not come as a surprise, although I'm sure it will for many of you, that the athlete featured on the cover of this issue is my big sister, Laura Labelle. She is the newest addition to our team and will continue to provide swim-specific and culinary content, as well as race reports for Endurance News, and promote swimming and other events for Hammer in Southern California and beyond. Back at headquarters in Montana, my younger sister, Kadidja Sierra, wears many hats but among them she acts as part of the operations management team, is our personnel manager, oversees a handful of departments, and meticulously edits just about everything that we produce, including this magazine - notice the few errors that our publications contain these days! She will be celebrating her 5th anniversary working at Hammer on July 5th. Her husband, Thomas Sierra, is our purchasing and inventory manager and has done a most admirable job of tackling the challenge of stocking products through constant growth and seasonality. Mixing family and business has worked well for me and helped to make my business more fun, and that's really important.

Many of you know my mother, Alice, as an infrequent but long-time contributor to the Endurance List as an endurance swing dancer and

midwife. My middle daughter, Lena (aka Maddy and Madeline) will be working 25 hours a week this summer processing web orders and providing administrative support while my son, Miles, will be helping out in the warehouse and doing odd jobs like weeding vinyl when he is not working on his own business of selling Kendamas. My oldest daughter, Jessica, is continuing her education in Holistic Arts and will begin contributing articles on diet and wellness in upcoming issues. Sonia, my wife of 23 years and business partner since day one, provides that motherly touch for our offices and staff, lends her Feng Shui expertise for our offices, and remains my constant companion and consultant.

That's my immediate family. Then there is the rest of my staff, another type of family, but a group of people that we view with as much care and concern as our own. We have so many good people working for us that rise to my perfectionist aspirations every day with a smile. Anyone who has had the opportunity to meet them at the Highline or interacts with them by phone can sense the positive energy that they exude from working in an organization that really values them, because we really do. That makes business more fun.

Last, but certainly not least, we have our extended family - you, our clients. As silly as it may sound to be talking about relative strangers as "family", that's how I see it. That's why I've always included a welcome letter to each new client since the very beginning that says "welcome to our family." As a part of the Hammer family, we take joy in your successes and lament your challenges. It just makes business more meaningful and we have fun doing it! I know, I've repeated that a few times, but it's really true. Keep in touch, we'd love to hear from you.

Race hard, recover well, and have fun out there!

Brian Frank
Proprietor



Brian Frank drives to a top ten finish in the S4 class (30+ age group) at SKUSA Spring Nationals.



Steve Born. Photo : Vince Arnone

FROM THE SADDLE OF STEVE BORN

BY STEVE BORN

With this issue hitting mailboxes around the first part of July, I guess it'd be appropriate to say "Welcome to the 'Peak Season' edition of Endurance News!" Per usual, we believe that we've put together a magazine containing a number of articles that we hope you'll enjoy reading, encompassing the full gamut of "all things endurance." I'm once again in debt to our contributing authors, without whom the magazine wouldn't be complete.

Similar to issue #69, I've done something a little different with my column. On the facing page, and the following two pages, my column is broken up into pieces of information. I've touched on Boron, an often overlooked, but very important supplement; sugar and its role as an aging catalyst; and the reader response to some of our recent articles. There is so much packed into this issue that it was hard to pick some of the 'big' things to highlight!

In my column in EN#69, I wrote that "by the time this edition of EN hits mailboxes around the first part of May, we'll hopefully be into more consistently warmer, sunnier, and drier days." Unfortunately, at least for now, that hope remains unfulfilled . . . for the most part it's really been a long and not-so-great spring. I'm sure that many of you have had to deal with the same thing ("Hey, is summer ever going to get here?") so I'll just say that I know how you feel. At any rate, by the time this issue reaches you in early July, I've got to believe that things will have changed dramatically and that we'll truly be enjoying some wonderful summer weather. I'm sure looking forward to it.

Anyway, whatever the weather may be where you are, I hope you enjoy this issue of Endurance News!

Why we stand by what we print

As I start this column, I feel compelled to mention that some of the articles we've run, especially in recent issues, seem to have generated a bit of controversy amidst our readership. Dr. Bill Misner's article regarding the vegan diet "Is the Vegan Diet Destined to WADA Prohibited Status?" – EN#68 and Dr. William Davis's article "An Everyday Dietary Danger" (EN #69) appear to currently occupy the top of the list. Though you may not agree with at least some of the content in these articles, what's important to know is that they were written by highly respected nutritional scientists and that these articles, as is the case whenever we have space, came with references to back up the content within them.

In regards to Dr. Davis's article, it was part of a longer article "Reduce Blood Pressure—Naturally What Americans Can Learn from Traditional Cultures about Managing Hypertension" that was in the latest issue of the Life Extension Foundation (LEF) magazine. I received permission from the LEF to reprint Dr. Davis's portion of the article (not the entire article) and I included it in Endurance News because I found the information utterly fascinating. If you read the article you can tell that Dr. Davis is quite passionate about this topic and that there really isn't any "gray area" in regards to his point of view... his comments are bold and direct, to say the least.

Anyway, after reading this brief article and reviewing some of the many references, I felt enough of a conviction that reducing my intake of wheat-containing foods was worth a try in the hopes of improving the quality of my health. I am not allergic to wheat and I really have no idea if I have any kind of intolerance to it. However, I suspect that an ever-increasing number of people are unknowingly intolerant to many food substances such as wheat, dairy, and others, which is why I was compelled to include this article in Endurance News. Additionally, I felt that I had nothing to lose—and perhaps a lot to gain—by minimizing-or-eliminating wheat in my diet, whether or not I knew I had any sensitivity or intolerance to it. I have to say that I already feel better as a result of doing that. As an example, digestive issues, which have been a nuisance to me in the past (especially bloating), are definitely on the decline since I've been more cognizant about not eating wheat or wheat-containing foods. Additionally, just very recently I was informed of a phone call that one of our client service staff members fielded. This particular client didn't call to place an order but simply to thank us

FROM THE SADDLE OF STEVE BORN cont'd.

for running the article. He reviewed the information from the article, starting eliminating wheat products from his diet, and after a mere eight days he said his fibromyalgia symptoms had improved significantly. Now, he and I are but two people testifying to the benefits of minimizing-to-eliminating wheat from the diet but I think it helps give credence to this information being worth giving consideration to and applying. If you're not sure whether or not you have sensitivities to certain food sources, especially ones such as wheat that appear to have some negative health consequences associated with them, perhaps it's not a bad idea to considering minimizing, if not altogether eliminating them, from you diet. You certainly have nothing to lose and who knows, you may find yourself feeling a lot better.

By the way, the full-length article is now online and you can find it at:

- www.lef.org/magazine/mag2010/mar2010_Reduce-Blood-Pressure-Naturally_01.htm
- www.lef.org/magazine/mag2010/mar2010_Reduce-Blood-Pressure-Naturally_02.htm

In addition, I was able to find some more fascinating information on the topic of wheat at these links:

- www.greenmedinfo.com/page/dark-side-wheat-new-perspectives-celiac-disease-wheat-intolerance-sayer-ji
- www.greenmedinfo.com/content/opening-pandoras-bread-box-critical-role-wheat-lectin-human-disease

Additionally, although I don't always agree with everything Dr. Joseph Mercola writes about, I found his article "The Critical Role of Wheat in Human Disease" (articles.mercola.com/sites/

articles/archive/2010/01/16/The-Critical-Role-of-Wheat-in-Human-Disease.aspx) to be equally as fascinating, while also providing more convincing evidence (at least to me) regarding the concept of reducing-or-eliminating wheat from one's diet.

Lastly, there is an interesting article entitled "Winning Without Wheat" (www.mensjournal.com/winning-without-wheat) that discusses professional cycling team Garmin-Transitions' switch to a wheat-free diet. This dietary change was based on the recommendations of Dr. Allen Lim, the former exercise physiologist for Garmin-Transitions, and Jonathan Vaughters, the team's founder and CEO.

If you weren't satisfied or convinced with the information contained in Dr. Davis's article, perhaps these additional articles/resources will be helpful to you in providing enough suitable information regarding the topic of minimizing-or-eliminating wheat in one's diet.

BOTTOM LINE: In most-to-all things in life, and this includes nutritional science, not everyone is going to be in agreement. That's a given, wouldn't you say? That's certainly the case with at least some of the articles that are on our website and in Endurance News; not everyone agrees with the content/information provided. That doesn't deter us from pursuing one of our primary goals with Endurance News, which is to provide articles that we believe are valid, useful, and informative, even if some of them are a bit outside the realm of conventional wisdom. We keep no secrets about that and we make no excuses for the material we determine is worthy of including on our website or in Endurance News.

Now, whether or not you determine the information to be valid, even after reviewing the article(s) and the

references provided, is up to you. But, regardless of whether you agree or not, we believe that if we can provide interesting, useful, credible, and thought-provoking information—something that is different from the “same ol’, same ol’” that you can read in pretty much any sport-specific magazine—then we've done our job.

Just as an example, did you know that we're still receiving emails and phone calls from athletes who are skeptical about our pre-exercise fueling/eating recommendations, which are contained in the article “How to Properly Fuel Prior to Workouts & Races” (formerly known as “The Pre-Race Meal”)? And that article was written over ten years ago! To many, the information in that article is quite “out there” because it seems completely counterintuitive. Still, even after all these years, Brian, Dr. Bill, and I have yet to receive a less-than-positive report from any client who's applied the principles outlined in the article.

The point is that even if the information in some of our articles may not seem logical on the surface, if it's on our website or in Endurance News, we believe it's valid, well-researched, and important, and that you have nothing to lose by at least reading it with an open mind and giving consideration to adopting the principles and/or guidelines contained within the article. We realize that we're not going to please everyone and that some people may not embrace the information. If that's the case for you, that's your prerogative and that's absolutely fine. Again, we just hope you'll read the information with an open mind, knowing that we appreciate you and value your opinion, even if it's not 100% in line with the opinions/suggestions/recommendations that are contained in the articles we write for, or receive permission to reprint in, Endurance News.



Did you miss an issue?
The new digital format of our Endurance News and the Athlete Education Series makes it even easier to get the FREE knowledge you want! It aims to replicate the feel of reading our publication in print, so go online today and enjoy the read!

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HAMMER
NUTRITION

Sugar - The AGEing process catalyst

For a number of reasons, we at Hammer Nutrition recommend limiting-or-avoiding the intake of sugar. One reason that doesn't get discussed too often—but should because it's of the highest importance—is the role sugar plays in the AGEing process. And no, that's not a typo you're seeing. "AGE" stands for Advanced Glycation End products or AGEs.

AGEs are formed by a process called glycation, which is the attachment (cross-linking) of sugars onto bodily proteins or fats. This cross-linking negatively alters the biological and structural roles of these proteins and lipids, in essence forming non-functioning structures in the body that are highly susceptible to free radical damage, which can escalate throughout the entire body. As Dr. Bill Misner states, "The underlying toxic effect of undesirable cross-linking stems from the fact that the cross-linked molecule cannot assume the correct shape for proper functioning."

The glycation and cross-linking process begins with what is known as the Maillard reaction. If you've cooked any number of food substances and notice a browning effect, which happens via the chemical reaction that occurs when the protein and the carbohydrates in the food are exposed to heat, you've got a good illustration of what happens in the body. The final result of this process is Advanced Glycation End products (AGEs).

As one nutritional scientist writes, "While glycation is a normal consequence of aging, it is far from desirable." The reasons are numerous:

- AGEs contribute to the loss of flexibility and deterioration of connective tissue
- AGEs trigger chronic inflammation
- AGEs play a role in abnormal platelet clumping, a significant factor for increased risk of heart disease
- AGEs are linked to increased blood pressure
- AGEs are purported to be involved

in a damaging protein implicated in Alzheimer's disease, a protein known as beta-amyloid peptide

• AGEs are even implicated in a variety of conditions such as rheumatoid arthritis, ulcerative colitis, and irritable bowel syndrome

If that weren't enough, AGE's are believed to be responsible in the development of cataracts in the lens of the eye, a drop in kidney function, damage to the endothelial cell layer of blood vessels, and the sagging and wrinkling of the skin.

So what can you do to help minimize AGE-related health issues?

MOST IMPORTANT: Be cognizant of your sugar intake, keeping in mind that a number of common food items (such as ketchup) oftentimes contain hefty amounts of sugar. Reducing your intake of refined sugars and high glycemic index carbohydrates is definitely a step in the right direction. AGEs accumulate over time, and their formation and accumulation is greatly accelerated with high levels of circulating sugars in the body.

SECOND IN LINE OF IMPORTANCE: Manage your blood sugar. A number of nutrients are known to support healthy blood sugar levels, with perhaps the most well-known and most-used nutrient being chromium (Hammer Nutrition's Chromemate product is the perfect choice). Lipoic acid, ideally the "r" isomer form, which is found in Mito Caps, plays many important roles in the body, with helping to maintain optimal blood sugar levels being but one of them. The flavonoid, quercetin, found in both Premium Insurance Caps and Tissue Rejuvenator, is also known to help improve insulin sensitivity. All of the B vitamins, especially biotin, folic acid, B1 (thiamin), B6 (pyridoxine), and B12—all of which are in Premium Insurance Caps—are involved in maintaining healthy blood sugar levels. Lastly, one of the attributes of the multi-beneficial nutrient Coenzyme Q10 (CoQ10)—one of the main components in Race Caps Supreme—is its ability to assist in maintaining and improving blood sugar levels.

THE NEXT STEP: Make sure your

diet contains antioxidant-rich foods, especially whole fruits and raw vegetables, and that you augment your diet with a wide variety of antioxidants from supplements such as Premium Insurance Caps, Race Caps Supreme, Mito Caps, AO Booster, and Super Antioxidant. The rationale for this recommendation is that, although excess sugar consumption is arguably the primary culprit in the formation of AGEs, they are (in the words of Dr. Misner) "also made by processes or substances that oxidize easily and/or produce free radicals. Anything that creates unstable free radicals will increase AGEs. On the other hand, anything that neutralizes unstable free radicals will decrease or minimize the harmful effect of AGEs."

FINAL STEP: Help stop the formation of Advanced Glycation End products. For this purpose, there is arguably no better nutrient than carnosine. Carnosine is referred to as a dipeptide, composed of one molecule each of histidine and alanine, and studies have shown that it effectively inhibits the processes that trigger the formation of AGEs. Carnosine can most definitely be thought of as a "multi-purpose" nutrient, with the following attributes:

- It is an effective lactic acid buffer
- It has powerful antioxidant effects
- As mentioned earlier, it has anti-glycating effects

For these reasons, this amazing nutrient can be found in adequate amounts in the Hammer Nutrition fuels HEED, Sustained Energy, Perpetuem, and Recoverite. Carnosine supplements are also widely available.

The main take-home point, however, is that sugar plays a major role, perhaps THE major role, in the formation of AGEs, which, as you can see, have a number of negative health consequences. Reducing the amount of sugar you consume, taking nutrients that help maintain optimal blood sugar levels, consuming antioxidant-rich foods, supplementing with a wide range of antioxidants, and fueling with carnosine-fortified Hammer Nutrition fuels is an excellent strategy to help avoid the AGEing process.

Boron - The all-year-round supplement that shines right now!



Let's see . . . Brian talked about boron supplementation and our Boron product in his welcome letter in *Endurance News #62* and *Endurance News #67*. It would seem like boron's gotten enough ink in the past few months so why am I bringing it up now? Because this is really an amazing nutrient, one that has so many benefits attached to it, and

I think that this time of year—when training volume is at its peak—is when this product really shines. The reason? Because it's at this time of year when exercise-caused hormone depletion is arguable at its peak (which would make sense – the more hours you spend in training, the more likely you'll experience exercise-caused hormone depletion).

Boron supplement sufficiency associated with hormone regulation

While boron's role in sex hormone status is not completely understood, research shows that boron is required for the formation of these hormones, and that it affects/influences human steroid hormone levels, primarily testosterone and estradiol. That said, supplemental boron does not lead to overproduction of these anabolic hormones (as was once suggested by some bodybuilding-specific supplement manufacturers), but taking enough boron does result in adequate production and levels of these hormones, improving and maintaining optimal hormonal "status" in the body.

As a result, boron supplementation is believed to aid in:

- Optimizing recovery between workouts
- Normalizing libido
- Alleviating inflammatory arthritic symptoms
- Maintaining/improving prostate health
- Maintaining/improving postmenopausal symptoms dependent upon minerals and estrogen: testosterone hormone balance

Here's some of the science behind boron supplementation:

FEMALES (17 beta-estradiol and testosterone increases)

Boron supplementation markedly elevated the serum concentrations of 17 beta-estradiol and testosterone; the elevation seemed more marked when dietary magnesium was low. Nielson examined the effects of aluminum, magnesium, and boron on major mineral metabolism in postmenopausal women. It reports the effects of dietary boron on 12 women between the ages of 48 and 82 housed in a metabolic unit. A boron supplement of 3 mg/day markedly affected several indices of mineral metabolism of seven women consuming a low-magnesium diet and five women consuming a diet adequate in magnesium; the women had consumed a conventional diet supplying about 0.25 mg boron/day for 119 days. Boron supplementation markedly reduced the urinary excretion of calcium and magnesium; the depression seemed more marked when dietary magnesium was low. Boron supplementation depressed the urinary excretion of phosphorus by the low-magnesium, but not by the adequate-magnesium women. Boron supplementation markedly elevated the serum concentrations of 17 beta-estradiol and testosterone; the elevation seemed more marked when dietary magnesium was low.

MALES (estradiol & testosterone increases)

Two studies were reported that quantified the urinary boron

concentration of subjects consuming their habitual diet. In addition, the effect of supplementation on plasma lipoprotein cholesterol concentrations and susceptibility to oxidation and plasma steroid hormones were determined. Boron excretion, obtained on two different occasions from 18 healthy male subjects, was found to be in the range of 0.35 - 3.53 mg/day, with no significant difference between the two occasions. Supplementation with 10 mg boron per day for four weeks resulted in 84% of the supplemented dose being recovered in the urine. Plasma estradiol concentrations increased significantly as a result of supplementation (51.9 +/- 21.4 to 73.9 +/- 22.2 pmol/L; $p < 0.004$), and there was a trend for plasma testosterone levels to be increased.

In addition to that, boron plays a role in the following:

- Optimizing bone and joint health (read about how it greatly helped Hammer Nutrition athlete, John Devere, elsewhere in this issue . . . awesome testimonial!)
- Prevention/reduction of hypertension
- Prevention/reduction of arthritis
- Enhancing cognitive function
- Guarding against kidney stone formation
- Protecting against anemia

As you can see, this humble little trace mineral is involved in quite a few health-related areas, which is why supplementing with Hammer Nutrition's Boron all year long is not a bad idea. It's at this time, however, when I believe that the hormone-regulation/regeneration benefits of boron really shine. Adding a capsule of Boron to your post-workout supplement regimen, and taking it with your post-workout Recoverite, can make a major difference in your recovery, which is really crucial at this point in the season. Each bottle costs \$14.95 and contains 90 capsules, each capsule supplying 5 mg of boron plus 12 mg of the patented Enzyme Enhancement System. You only need to take one capsule daily, so you're looking at less than 17 cents a day... not bad for a mineral that can help you in so many ways!

"I would not race like I do without your product! Thanks so much!" - Antonio G.



PRODUCT SPOTLIGHT

Race Day Boost

BY STEVE BORN

results is worth reading about. Here's the deal:

Our muscles rely on three different energy systems, or metabolic pathways, to produce ATP, the molecule directly responsible for muscle function. We have the ATP-CP system, the lactic acid system, and the oxygen, or aerobic, system. Every muscle fiber has all three of these systems available, utilizing each depending on the length and intensity of exercise.

The first energy system is the ATP-

CP (adenosine triphosphate and creatine phosphate) system. ATP is the immediate source of energy for muscle contraction, breaking down to ADP (adenosine diphosphate) as it releases the energy to fire a muscle fiber contraction. This system releases energy very rapidly, but also depletes very rapidly, in just a few seconds of continued effort. It is the energy source used in brief, intense activities such as weightlifting or sprinting. Creatine phosphate, another high-energy compound naturally occurring in all muscle cells, also breaks down, releasing energy as it loses its phosphate group; but unlike ATP, it does not cause muscle contraction. Instead, the phosphate goes to an ADP, converting it back into ATP, thus replenishing the system. The sodium tribasic phosphate in Race Day Boost supplies phosphate groups used in the resynthesis of CP and ATP, thus improving the performance of this short-term energy system.

The second energy system is the lactic

acid system. A key feature of this system is its relationship with blood pH. Normal blood maintains a slightly alkaline pH of 7.3 to 7.4, optimal for the enzymes that produce energy via the lactic acid energy system. This system uses carbohydrates as fuel, primarily in the form of glycogen stored in the muscles. Our bodies break down muscle glycogen (a process known as glycogenolysis) into glucose, which then undergoes further breakdown via glycolysis. Glycolysis converts sugar to pyruvic acid, releasing energy and creating ATP. Glycolysis occurs with or without the presence of oxygen. At rest, glycolysis occurs at a slower rate sustained by the oxygen that you take in (aerobic glycolysis). As you begin to exercise, the rate of aerobic glycolysis increases. As intensity of exercise increases, aerobic glycolysis becomes inadequate to support energy production and the system switches to anaerobic glycolysis. Through a series of chemical reactions in muscle cells, the formation of lactic acid allows anaerobic glycolysis to continue. However, excess lactic acid accumulates during high intensity efforts, increasing the hydrogen ion concentration within the muscle cells and disrupting the ideal alkaline blood pH. This results in that all-too-familiar "burn" that we all hate. Race Day Boost's phosphate salt buffers blood acidity and helps maintain this acid-alkaline balance by neutralizing excess hydrogen ions within the muscle cell. Effectively buffering excess lactic acid allows the lactic acid system to provide energy for a longer time.

Phosphates also aid in improving the third energy system in the body, the oxygen/aerobic energy system. This system uses primarily carbohydrates and fats to produce ATP, but after 90-120 minutes of sustained exercise, this system starts to chew on protein, with about 5 - 15% of the energy coming

With the peak race season definitely upon us, now is the perfect time for this amazing product to be our "spotlight" product in Endurance News. If you've never used this product in preparation for your key races, you're definitely missing out on enjoying a huge advantage . . . don't wait any longer! Ever since we introduced Race Day Boost well over a decade ago, athletes have enjoyed the tremendous advantage that a four-day loading dose of this highly-effective product provides. Along with the hard work that you put into your training prior to your races, Race Day Boost is the best way to put the finishing touches on your race preparation, as we'll explain later on in the article.

How Race Day Boost works

It takes a bit of "science" to explain how sodium tribasic phosphate, the main nutrient in Race Day Boost, works. But it really is pretty cool information and understanding why this simple little substance can produce such remarkable

- continued on page 12

Take your performance to the next level!

How to use Race Day Boost

The majority of the studies of the main ingredient in Race Day Boost, sodium tribasic phosphate, showed remarkably positive, performance-enhancing results with administration of 1 gram (1000 mg) of the nutrient four times daily for four straight days. That is our dosage recommendation for most athletes.

However, it is theoretically possible that lighter weight athletes may be able to achieve the same benefits using less of this nutrient. With that in mind, here is an alternate loading dose protocol—based on a range of body weights—that you may want to test in your training:

Up to 125 lbs

- Day One: 1 teaspoon RDB or 2 RDB capsules one time/day
- Day Two: 1 teaspoon RDB or 2 RDB capsules two times/day
- Day Three: 1 teaspoon RDB or 2 RDB capsules two times/day
- Day Four: 1 teaspoon RDB or 2 RDB capsules three times/day

126-160 lbs

- Day One: 1 teaspoon RDB or 2 RDB capsules two times/day
- Day Two: 1 teaspoon RDB or 2 RDB capsules three times/day
- Day Three: 1 teaspoon RDB or 2 RDB capsules three times/day
- Day Four: 1 teaspoon RDB or 2 RDB capsules four times/day

161+ lbs

- Day One: 1 teaspoon RDB or 2 RDB capsules four times/day
- Day Two: 1 teaspoon RDB or 2 RDB capsules four times/day
- Day Three: 1 teaspoon RDB or 2 RDB capsules four times/day
- Day Four: 1 teaspoon RDB or 2 RDB capsules four times/day

It's important to note that these weight-adjusted doses are estimates only and that there is no research to back up these suggestions. Therefore, should you choose to give this alternate Race Day Boost loading dose protocol a try, it is absolutely necessary to test this, and any protocol for Race Day Boost, in training before using it in the four days prior to a race.



What athletes are saying about Race Day Boost

"I wanted to share my 2010 results of the Superseal International distance triathlon on April 11, 2010 with Steve, Brian, and the rest of the Hammer Team. I placed 1st in my age group 50 to 54 by over six minutes and was 45th overall.

I've been using the products for over a year now on a daily basis. I became an auto ship customer and keep an arsenal of products that I use in my training and race preparation for the triathlon season. I would have to say that the introduction of the Race Day Boost was key in my age group win. I felt comfortable racing and was able to set a fast pace without laboring and going totally anaerobic in the process.

I will most certainly continue to have the edge with Hammer Nutrition supplementation. Thank you for the quality products and service that you provide."

-Marc M.

"Good nutrition and fitness were on my side and I was able to take the overall win at the Spring Sprint Duathlon in San Diego on May 2, 2010." - Stephan Armes
Photo : Nathan Armes

from amino acids. The oxygen system can't produce ATP as rapidly as the other two systems, but it does produce greater quantities of ATP. It serves as the primary energy system of aerobic, or "conversational level," athletics. In other words, if you're breathing easily enough that you can talk while you're running or cycling, you're basically still in the aerobic mode. Even though it seems that you're always going anaerobic in a race, or at least going back and forth between all of the energy systems, once you settle into a rhythm during the race, your body relies mostly on the oxygen energy system. Phosphates form part of a compound found in red blood cells known as 2,3 diphosphoglycerate (2,3-DPG). This molecule helps release oxygen from hemoglobin into the muscle cells. An increase in 2,3-DPG will improve the availability of oxygen to working muscles for the process of creating ATP.

Bottom line: Sodium tribasic phosphate improves all of the body's three energy systems, making it a superb ergogenic aid. It is one of the most tested substances ever, with overwhelmingly positive results from those many years of testing. Studies on sodium phosphate date back to 1990 [Lenfant 1990, Lunne 1990], with Dr. Richard Kreider's study in 1992 arguably being the hallmark study on this substance. In Kreider's study, subjects loaded with sodium phosphate for four days (1 gram, 4 times daily). During a 40K time trial, mean power output increased by 17% and oxygen uptake by 17%, netting an 8% improvement in performance time! The amount of sodium tribasic phosphate used in Race Day Boost exactly matches the dose used in all studies done with

this nutrient.

Sodium bicarbonate or sodium phosphate – Which is better?

Loading with sodium bicarbonate (baking soda) has been shown to successfully enhance performance for high intensity, anaerobic type events lasting from 1-7 minutes. The downside is the huge amount one has to take to achieve this benefit. Most loading dose protocols with baking soda have used a single dose of 300 mg/kg of body weight prior to a short-duration, high intensity event. So, for a 180-lb athlete (about 82 kg), that's a dose of nearly 25,000 mg (25 grams), an amount that would make most people sick, to say the least.

As you can see, baking soda has some strict limitations in regards to how beneficial it really is and it has some real issues in regards to how much you have to use to (hopefully) obtain the benefits. Sodium tribasic phosphate, the main ingredient in Race Day Boost, is quite unique and substantially more beneficial than sodium bicarbonate because it provides substrates for all three of the body's energy-producing pathways, not just the short-term, which is what sodium bicarbonate does. Plus, your body doesn't require the massive dose that is necessary with sodium bicarbonate.

The safety of sodium phosphate

The primary nutrient in Race Day Boost—sodium tribasic phosphate—has been used/is used for a number of purposes, including in the preparations of certain foods. The LD50 of orally dosed sodium phosphate for rats (the amount

of an agent that is sufficient to kill 50 percent of the rats) is 8,290 mg/kg, which is an exceptionally high number and indicates that sodium phosphate is remarkably safe. Translated for a 75 kg/165 lb athlete, that would mean a dose of nearly 622 grams (622,000 mg), an astronomically high amount, one that no one would even conceive of trying to take. Interestingly, and by comparison, the LD50 for rats consuming acetic acid (vinegar is a dilute aqueous solution of acetic acid) is 3310 mg/kg, and the LD50 for rats for sodium chloride (table salt) is 3000 mg/kg.

Sodium Phosphate enjoys FDA "GRAS" (Generally Recognized As Safe) status as an emulsifying agent, a dietary supplement, a sequestrant (a food additive whose role is to improve the quality and stability of the food products), and for miscellaneous use.

Tips to get the most out of Race Day Boost

1) When to Use While Tapering – As everyone knows (or should know), the four days prior to a race—the time when you'll be using Race Day Boost—is NOT the time for high-intensity or long-duration training. Still, some athletes like to (as an example) get out for a 30-60 minute easy spin on the bike a couple of days prior to a race. The question is, "If I do one or more of the loading doses prior to a workout, keeping in mind that these are shorter, lower-intensity workouts, will that negatively affect the benefits received from the product?" The answer is yes, at least some of the effects/ benefits will be somewhat diminished if you use the product prior

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HAMMER RACE DAY BOOST

to a workout.

Therefore, if you do any workouts prior to a race (and definitely keep them to a minimum and make sure they're short and easy – DO NOT TRAIN!) it's best to do the majority-to-all of the loading doses of Race Day Boost afterwards. In other words, if you do one or two of the four loading doses prior to a workout, you're going to deplete at least some of what you loaded with during the workout. So, as much as possible, do as many of the doses after your workout so you don't "use up" any of the sodium phosphate in Race Day Boost that you've taken prior to a workout.

2) Diet Modifications – If you do the traditional loading dose protocol for Race Day Boost you'll be consuming a teaspoon of the powdered version four times daily for four days, or two capsules of the encapsulated form four times daily for four days. Each teaspoon or every two capsules contains 1000 mg of the sodium phosphate compound, 193 mg of which is comprised of sodium. Four servings daily will give you 772 mg of sodium per day. Over the course of four days, that's an additional 3088 mg of sodium that you'll be consuming. Therefore, if any diet modifications are to be made, lowering your sodium/salt intake to accommodate the additional amounts you'll be receiving from a four-day load of Race Day Boost makes perfect sense and is recommended. The main thing is to not do what far too many athletes do and increase your salt intake in the days leading up to your race. Doing that ("sodium loading") will not provide any benefits and will most likely create performance-inhibiting problems come race day.

3) Mixing Race Day Boost Powder Ahead of Time for Consumption Later – This is not recommended due to the glutamine component in the powdered version of the product. Glutamine is not a very stable nutrient once mixed in solution; a portion of it degrades into ammonia. As a result, Race Day Boost (and Recoverite and Hammer Whey as well, as they also contain glutamine) should be consumed as soon as possible after mixing.

4) Using Race Day Boost to Enhance Alkalinity in the Diet - Dr. Bill Misner states, "I do not recommend using Race Day Boost as a daily alkaline-enhancing supplement; diet is the correct answer. The pH of body fluids, including urine, saliva, and blood, varies with function

and is tightly regulated [via] systems to keep the acidbase homeostasis. The pH of blood is known to be slightly basic, and at a value of 7.4. pH, is vital in maintaining the functioning of cells. For example, enzymes are heavily affected by changes in pH, and have an optimum pH at which they operate. Outside a small range they can denature and cease to catalyze vital reactions."

"Most plant food contains weak organic acids and salts; however, when they enter a medium of acidified water or acidified dilute salt brines and become heated, they create a buffering action to maintain their original pH. Natural, raw vegetables and fruit juices are alkaline-producing. (Fruit juices become more acid-producing when processed, especially when sweetened). A diet containing 60-75% vegetables and fruits will raise pH to higher alkaline values. Exercise, especially endurance exercise, lowers pH to acidic levels."

"Athletes should alter their diets to a high pH food menu, plan longer recovery time, and only use RDB loading dose protocol prior to events."

Summary

Race Day Boost is amazing for so many reasons, primarily its lactic acid-buffering effects (less of that oh-so-unpleasant "burning" feeling is something that every endurance athlete craves). It's an occasional-use supplement, used in the four days preceding a race, and it's great for all endurance athletes, but especially those involved in road cycling, triathlons, half-to-full marathons, and mountain bike racing . . . the type of races where you feel as though you're going aerobic and anaerobic at the same time. With all of the rock-solid research backing up the main component of Race Day Boost (sodium tribasic phosphate), we're convinced it's one of the most potent, yet remarkably safe, ergogenic substances available.

Whether in the original powder form or the ultra-convenient encapsulated version, Race Day Boost does exactly what the name implies: it gives you a noticeable boost on race day, one that simply would not be available without it. With the peak season definitely here, now is the time to test Race Day Boost in your training. Then, come race day, get ready to throw down an amazing effort (your opponents won't know what hit them!). **HN**

Come ride in Montana!

By the time you read this we'll be gearing up for the 9th annual Highline Hammer. It's hard to believe that we've been putting on this event for nine years, but it's true, and it seems like every year it gets better and better. The riding is superb (pretty darn hard at times, but great riding nonetheless), but the best part for me is catching up with Highline veterans and meeting new attendees. Good riding, good friends, and good food . . . what more could you ask for?

As is always the case, the Highline Hammer fills up quickly and, sad to say, this year's edition has been completely full for awhile now. However, the dates for the 2011 Highline Hammer have been set for July 20-24th, and considering how quickly this awesome event fills up, it's never too early to plan for the 2011 edition. More information on the 2011 Highline Hammer will be posted on the Hammer Nutrition website (look under the "EVENTS" link) as soon as it becomes available.



Paige Youngman and Brian Frank ride at the 2009 Highline Hammer. Photo : Angela Nock

From the archives of
Bill Misner, Ph.D.

ASK DR. BILL



Human cells perform specific functions within mineral-pumping mechanisms. Sodium and calcium are meant to be on the outside while potassium and magnesium are meant to be on the inside of the cells. Sodium is excreted faster than any other lost electrolyte, faster than fluid-rate lost. When sodium levels get too low, hormones are excreted to keep existing sodium circulating within the system. If sodium gets too diluted from over-drinking or losses (via sweat or urine), hyponatremia may result.

Hyponatremia is a medical emergency. It is caused from having a too-low sodium blood serum electrolyte profile, which results from either too much fluid-to-sodium intake or from losing sodium faster than fluids passed in evaporative sweat rate. Too much sodium taken during an endurance event—be it from salt tablets, salty foods, or a high-sodium electrolyte product—may help resolve hyponatremic symptoms. However, it may also turn off the natural physiological hormonal response which mediates electrolyte blood serum balance. In my view, this suggests a rationale for a low-sodium electrolyte product such as Endurolytes, which does not elevate blood serum electrolyte content enough to turn off the hormonal mechanisms generated by our physiology.

STEVE'S COMMENT: Electrolyte replenishment is a complex subject, no doubt about it, and especially so when compared to the other aspects of fueling – fluid intake and calorie consumption. Dr. Misner explains the rationale behind the Endurolytes formula and its low-to-moderate sodium amounts in the detailed article "The Endurolytes Rationale" which can be found in the Advanced Knowledge portion of the KNOWLEDGE section on the Hammer Nutrition website.

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You may have noticed that Endurolytes capsules are significantly smaller in size than what they used to be. No, the mineral content hasn't changed at all; the amounts of sodium, chloride, calcium, magnesium, potassium, vitamin B-6, manganese, and L-tyrosine remain exactly the same.

The reason for the smaller capsules is due to a lower volume of filler agents in each capsule. For many, many years we used the same manufacturer to produce Endurolytes for us. Awhile ago, however, we switched to a different manufacturer. This manufacturer—who, by the way, is a local company and produces the overwhelming majority of our encapsulated products—found that the original product contained a fairly high volume of fillers. As a result, this required the use of larger “OO” size capsules. By reducing the amount of fillers in the product, they were able to use smaller “O” capsules, without having to change the active ingredient formula in the slightest.

The obvious benefits of these smaller capsules are:

- You can fit more of them in a quick coin pill holder or plastic capsule dispenser
- They'll be easier to swallow during exercise

As far as Endurolytes Powder is concerned, you may have noticed that it now has a less-salty taste, which has

been reported, almost unanimously, as a very positive change. Funny thing is, we honestly don't know why the change in taste is so noticeably different, especially since the formula is exactly the same. As with the encapsulated version of Endurolytes, the powdered version is now being manufactured by a local facility, and their Certificate of Analysis shows that what's stated on the label is precisely what's in the container (and again, the formula hasn't changed at all).

The only possibility that we can think of for the less-salty taste has to do with the glycine component. Glycine is an amino acid that has a naturally sweet taste to it, and its inclusion in Endurolytes Powder, from the beginning, was to buffer the extremely salty/bitter taste

of the mineral content.

It is entirely possible that the glycine our manufacturer is using may have an even more noticeably sweet taste to it, which

would explain the less-salty taste of the product.

Again, what's important to know is that the formula has not changed at all. In fact, with it now tasting less salty, most athletes find it preferable to older Endurolytes Powder. **HN**



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Nutrition and Nitric Oxide

Performance friend or foe?

BY BILL MISNER, Ph.D.

Endurance performance is highly dependent upon our blood's circulatory capacity to deliver copious amounts of oxygen, calories, fluids, and electrolytes to supply working muscles. Pro-endurance athletes, "Cheaters" are typically caught using illicit substances known to increase red blood cells, masking agents, or in rare cases blood doping. This is not a new science; it has been around for a long time. In my first Boston Marathon 1984, one of the pre-race convention speakers said the specific questions some participants were asking indicated they were either using or considering use of banned substances designed to improve performance blood flow efficacy. Performance-enhancing, harmful-to-health substances are forbidden by WADA, yet for some the desire to win at any cost trumps the ethics of fair play.

In issue #68 Endurance News, the article, "Is the Vegan Diet Destined to WADA-Prohibited Status?" provoked several critical comments. It is not illegal to eat whole foods, nor is it expected that WADA will ever prohibit diet because a few elite athletes attributed their performance gains to food choices [1]. The intent of this article is to advise food choices that support both health and performance gains. Much of what we chose to eat either supports or inhibits performance.

What Athletes Eat

Between 1995-2010, the computer-generated diet analysis of 70 diets from subjects was performed to determine the amount of carbohydrates, proteins, and fats from food alone. There is a wide variation between individual food yield of fats, carbohydrates, and proteins, but the widest margin is found in our

daily intake of fat. Udo Erasmus wrote in, "Fats that Heal, Fats that Kill," that the optimal daily fat required we eat is 2-9 grams Omega-3 and 9-18 grams Omega-6. We only need only 27-grams of these two fats, which our body cannot make, to meet the maximal required daily dose. Yet, the diet analysis performed on endurance athletes showed 55-117 grams fat per day! If we need only 27 grams fat per day, why are we consuming over double that amount? Scientists recently provided a report on CBS News that eating junk food changes brain chemistry in the same way that chronic cocaine use alters addictive brain functions [2]. Psychologist Doug Lyle estimates that the recovery curves for drug addiction can range from as little as 8 weeks to as much as 17 years to recover from addiction [3]. This same diet analysis applied to the pre-race meal served for ultramarathoners at the 1997 Hell's Canyon 50K trail run. This single meal contained an average 84 grams of fat per plate served (from oils, dairy, & meats). Interestingly, this common single meal fat content approximated the average total daily fat intake previously noted in the 70 individual diets analyzed.

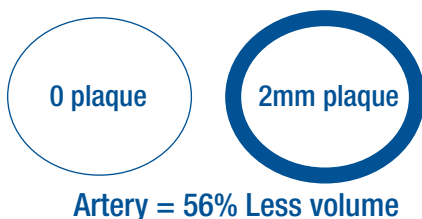
Fats Inhibit Performance

There is a well-established relationship between serum cholesterol and onset of coronary artery disease. You may argue, "I do not have coronary heart disease, I am a lean, fit endurance athlete!" However, lean and fit on the outside does not mean that plaque formations are not accumulating gradually on the interior vascular channels through which blood flows, potentially influencing performance. Clogging vascular wall surfaces with tiny plaque deposits reduces blood flow volume, inhibits waste removal, restricts nutrient

delivery, limits oxygen exchange, and reduces optimal performance. In the sedentary population, cardiovascular performance declines progressively with age. However, much of this decline is due to physical inactivity and increased body weight (fat).

Maximal oxygen consumption values decline in non-athletes at 10% per decade after age 25. However, if body composition is maintained by physical activity and a healthy low-fat diet, the decline in VO₂max due to aging is only 4-5% per decade. This decline can be less, as little as 1-2% per decade in those whose training focus on the field is also observed at mealtimes. How accurate is the equation: Training + NO₂ Nutrition (low fat) = Performance Gains? It is mathematically possible that a 2-millimeter loss in blood vessel diameter (thin layer of plaque added on vascular walls) will dramatically inhibit performance. For example, if a healthy coronary artery 10-mm is reduced to 8-mm, this represents -56% total flow volume loss in coronary artery diameter that will inhibit performance.

Blood Volume Loss in Artery Diameter



Scientists applied a blood pressure cuff to the upper arm slightly above systolic blood pressure for five minutes. Then they released the cuff and observed that the arteries in the forearm dilated and refilled remarkably. What causes this? Nitric oxide is produced following anoxia, which stimulates “vasoactivity” or vasodilation in blood vessels for an increased blood flow return. Exercise training will increase the efficacy of the NO-pathway by its physically expanding, contracting, and stretching vascular epithelial walls. Following a warm up before exercise, movement is attained with less effort. “Self-Test” is exercise at a race pace for five minutes, then rest for two minutes and repeat exercise at the same pace. Note how much easier it is the second trial! This is partly due to the effects of nitric oxide/NO released from epithelial cells in the lining of blood vessels to working muscles. The

artery vasodilator NO acts to increase intracellular release of a substance called EDRF and thus the activation of the cGMP signal cascade. EDRF is the free radical diatomic gas, nitric oxide, NO. NO is formed by the action of NO synthase, (NOS) on the amino acid, Arginine (below):

Arginine → Citrulline + NO

Whole plant food sources rich in L-arginine are beans, grains, wheat bran, rice, papaya, alfalfa, garlic, soy, peas, asparagus, broccoli, cabbage, carrots, cauliflower, corn, eggplant, leeks, onion, pumpkin, radish, parsnip, potato, spinach, tomato, wakame, and onions. Also L-citrulline is responsibly reported to exert significant relaxation by supplementing the release of NO due to its effect on recycling to L-arginine, which gets further augmented after lipopolysaccharide treatment. Whole plant food sources of the non-essential amino acid, L-citrulline, are found in watermelon, garlic, onions, and in a dietary supplement, Anti-Fatigue Caps. Blood Fats Inhibit Blood Flow Vogel [6] reported that the higher the fasting LDL-cholesterol is before exercise, the lower the NO flow-mediated activity. Having low fasting total cholesterol levels sets a circulatory environment conducive to performance gains. LDL-cholesterol is named "Bad Cholesterol" because, when oxidized, it makes vessel walls "sticky with plaques" thereby increasing progressive risk of atherogenic disease.

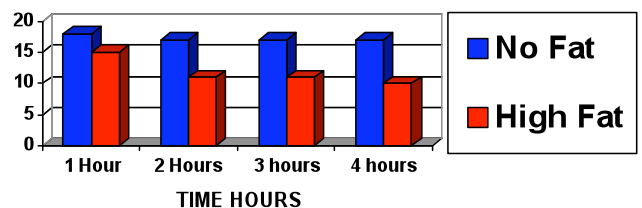
The following increase LDL-cholesterol:

- Coffee
- Butter
- Oils
- Trans-Fatty Acids
- Margarine
- Hypothyroidism
- Stress
- Female Menopause
- Fructose
- Sucrose
- Anabolic-Androgenic Steroids
- Alcohol (ethanol)

Researchers measured a single high fat-meal of 50 grams of fat and observed

that it negatively inhibited NO-vasodilatation on blood flow [5]. They utilized a sophisticated ultrasound device to measure the effect of fat or carbohydrate calories on epithelial cell nitric oxide cascade on artery diameter increase. They gave subjects either a no-fat meal consisting of Frosted Flakes breakfast cereal, skim milk, and orange juice or a high fat (50 grams of fat) meal consisting of an Egg McMuffin-Sausage meal with hash browns. The chart below shows the inhibitory effect from consuming a high fat meal versus a no-fat meal intake on blood flow volume up to 4-hours after eating.

ARTERY FLOW DIAMETER AFTER MEAL



Conclusion

One report appears to support cholesterol-lowering benefits associated with consuming a high-pH, antioxidant-rich, high-fiber whole plant food menu . While a single meal may not be fatal, the repeated effects from fat on inhibited blood flow may have consequences. Over a 10-year period an average 55-117 grams of fat per day may raise individual LDL-cholesterol levels significantly. If your diet raises blood lipids for 11,000 days, predicted plaques may accumulate on blood vessel walls. We need to challenge our thinking on what we eat for both the consequences upon performance immediately and upon cardiovascular heart health later. Reducing intake of these high-fat, addictive foods accomplishes a beneficial effect on the circulatory capacity for delivery of copious amounts of oxygen, calories, fluids, and electrolytes to supply working muscles.

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- [Disclosure] – AAMA Board Certified Alternative Medicine Practitioner {2004}, Past Director of Research & Product Development Hammer Nutrition (Emeritus) - {1995-2006}, Certificate - Plant Based Nutrition - Cornell University {2010}.
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NATE'S CORNER

BY NATE LLERANDI

Tapering really works

Steve's Note: *As is usually the case for each issue of Endurance News, I dig back into all of the "Tip of the Week" emails from Nate to the Endurance List to find a relevant article for this particular time of year. Considering that I've kept every one of them dating back to 2000, I have plenty of choices available. I liked this particular one because, even though it's a couple of years old, I feel that the information is still 100% spot on, and because I believe the information that Nate's provided is something we all can benefit from.*

Tapering is the art of cutting back on training so you can perform better in your most important races, simply put. While there are many theories out there about how best to taper, how long a taper should last and so forth, there really is no exact science behind tapering. So, what's an athlete to do?

First, realize that tapering is as much a mental game as a physical one. You need to stay confident that as you pull back on your volume and shorten your overall intensity, you are not detraining yourself or forcing yourself to be out of shape. Quite the contrary, tapering is what allows you to unleash a "where did that come from?" performance. You need to accept and mentally embrace that cutting back on volume—somewhat drastically—is categorically the right thing to do. If you fret about the cutback in volume, then you run the risk of dooming your taper to failure. How can you hit the start line of a race with all these doubts and worries about the taper process and then expect to ensure success? The answer is, "You can't."

Second, while there are many theories out there, there does seem to be some agreement on what techniques tend to work the best. To briefly encapsulate, tapering can look something like this:

- Week 1: 75-80% of normal volume
- Week 2: 50-70% of normal volume
- Week 3: 30-50% of normal volume
- Week 4: 30-50% of normal volume

Beyond 4 weeks, you can extend a taper. If you have multiple races in a row for which you want to peak, you taper with your first race in mind and then work to prolong the taper to carry you through the remaining races. The reason it works this way is that some studies show athletes were able to increase their performance and avoid losing any fitness after cutting their weekly volume by a staggering 90%. What's more, is that these athletes were tested after 8 weeks of subsisting on only 10% of normal training volumes and at the end of those 8 weeks still out-performed the group that maintained normal training volumes. And, the tapered athletes registered significant time improvements at the end of those 8 weeks.

It appears the key to a successful taper is not volume, but rather intensity. You must maintain the intensity of your hard workouts. You cut back on how much hard work you do with each session and you even increase the amount of rest between hard repeats, but you continue to work hard on your hard days. And, toward the end

of the taper, you actually increase the number of hard days. Detraining occurs when you cut back on intensity and allow the body to slip into the mode where it starts to get lazy and shut itself down. By keeping your overall intensity high, you avoid this pitfall. The body stays sharp and ready to go.

By cutting back on volume, you avoid depleting your muscle glycogen stores. So, your body spends less time repairing itself and refilling those glycogen stores. They get topped off, there is less inherent fatigue in your muscles and, thus, you are able to go faster for longer. And, don't be surprised if three things occur:

1. At an aerobic rate of perceived effort, your HR is lower than usual
2. When you "go anaerobic", your HR rises a little faster than usual
3. You hit higher HRs than you are accustomed to

All of this occurs because the cut in volume and the added rest allows your body to do things it simply can't do when it is fatigued.

Make no mistake, though. Performing well when you are tapered is not "easy." Racing still hurts and, in fact, it can hurt more. After all, you are going faster and harder than you are used to! The body still needs to be able to cope with the effort. There is no magic here. Athletes who expect racing while tapered to feel easy become disenchanted when the lactate starts to build up and the lungs start to sear. Don't hit this pitfall. You will be able to cope with the discomfort brought on by hard efforts better, but you will still have to deal with it.

My suggestion is for you to do some research. There's a lot of good stuff to read on tapering out there. Find the guidelines you can live with—especially from a mental aspect—and then fully embrace them. Avoid second guessing your approach. Realize that you can drastically cut your training, keep the intensity intact, and achieve greater results than you might well expect or anticipate. But avoid doing "one last long workout". Physiologically, there is little if anything you can do to improve your level of fitness the final 2-3 weeks by continuing to train as usual. What you definitively need at that point is R&R. It's the rest that "opens up" the body and allows for your best performances to shine through. **HN**

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[3] Doug Lyle, Psychologist, lecture from TCC502 eCornell Plant Food Certificate course @: <http://www.ecornell.com/certificate-programs/personal-interest-training/certificate-in-plant-based-nutrition-certificate/crt/TCCC01>

[4] Raghavan SA., et al. L-citrulline mediated relaxation in the control and lipopolysaccharide-treated rat aortic rings. *Eur J Pharmacol.* 431(1):61-69, 2001.

[5] Vogel RA, Corretti MC, Plotnick GD. Effect of a single high-fat meal on endothelial function in healthy subjects. *Am J Cardiol.* 1997 Feb 1;79(3):350-4.

[6] Ibid.

[7] The Author reduced his total cholesterol from 232 to 151 mg/DL after 150 days following a 100% plant food diet.

ADDITIONAL NOTES FROM STEVE:

1) The recommended Omega-6 to Omega-3 fat ratio is 3:1 or less, while average estimated in America is 30:1, or higher. Needless to say, we are woefully lacking in the Omega-3 fatty acids, which is where supplementation with fish oil supplements (such as the Carlson Norwegian Salmon Oil) will be extremely helpful.

2) This is not to say that Omega-6 fatty acids aren't important, because they are; they're essential for life. The problems are that we're over-consuming them and that not all Omega-6 fatty acid food sources have beneficial effects – a portion of them do convert to anti-inflammatory Prostaglandin Series E1, but a portion of them convert to pro-inflammatory Prostaglandin Series E2. An important thing to know is that the higher the saturated fat, the more pro-inflammatory Omega-6's are. As Dr. Bill says, "Many endurance athletes are eating foods that cancel some of their training efforts"

so you want to cut back on Omega-6's in general, choosing foods such as nuts to obtain them, while increasing your intake of Omega-3 fatty acids.

3) One of the questions we get asked a lot is whether or not Nitric Oxide-enhancing supplements (things like arginine alpha-ketoglutarate or arginine aspartate) are beneficial. Dr. Bill responds:

"...we do not criticize any manufactured product but do not recommend raising or lowering some substances, which the body makes for special occasions, finely monitored by internal biochemical sensors. Nitric Oxide is one of those substances; hence, I do not recommend attempts to raise it or lower it by use of any exogenous substance unless under the supervision of a physician. Monoxidil is a synthetic version of Nitric Oxide. Topical Monoxidil formulations are applied to the scalp for increasing blood flow to the scalp and restoring hair growth."

"Nitric oxide is a colorless, neutral gaseous compound of nitrogen and oxygen (i.e. nitrogen oxide). Although most exogenous nitrogen oxides are toxic to human health, endogenous nitric oxide participates in several essential functions within the body. Nitric oxide has recently been elevated by researchers to the status of a neurotransmitter. NO molecules have a very short "life" - their half-life is approximately five seconds. In my opinion, nature intends this to be a short and limited endogenous expression; therefore, it should be tightly regulated

by letting the body make its own when necessary. It has a two-edged sword – too much can cause excessive vascular dilation and too little can cause excessive restriction. Here is what can happen with man-made dose: Nitric oxide reacts with superoxide free radicals to form peroxynitrite. Excessive production of nitric oxide generates peroxynitrite free radicals. This occurs from nitric oxide reacting with superoxide free radicals to form peroxynitrite free radicals."

"Personally, I prefer to leave this endogenous substance to the discretion of natural internal monitor sensing and production."

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There are so many L-arginine-rich food sources available, including the soy protein in Sustained Energy, Perpetuem, and Hammer Soy, that I think that additional L-arginine supplementation or any supplements designed for the sole purpose of increasing production of nitric oxide are unnecessary, unless recommended by a physician (as a possible treatment for hypertension, for example). Additionally, as Dr. Bill commented, the production of too much nitric oxide has negative health consequences, via the increase in peroxynitrite free radicals. **HN**



We're glad we could help!

My brother, Brad, and I are hardcore believers in Hammer products having seen the results first hand in our own racing. As a matter of fact, in our last 100 milers we ONLY used Hammer products i.e. Hammer Gel, Perpetuem, Endurolytes, and Anti-Fatigue Caps. Last year was our first experience using only Hammer products as our fuel source and my brother finished 2nd in his first 100-miler, The Old Dominion 100-miler. Two weeks ago, in an eight hour race, Brad won and I PRed using Hammer. Last week I PRed again in a 50k ultra trail race. I could go on and on . . . As a cancer survivor, I am able to do what most would consider impossible by the grace of God and with a little help from my friends at Hammer!

- James Hinton

Hammer Nutrition wins at 24 Hours Round the Clock!

BY STEVE BORN

Held annually at Riverside Park in Spokane, WA over the Memorial Day weekend, the 24 Hours Round the Clock mountain bike race is an epic event that incorporates hard-core racing along with a fun, festival-like atmosphere. Beginning at noon on Saturday, May 29th and finishing at noon on Sunday, May 30th, riders competing in various divisions vie to complete the most laps (each lap is approximately 15 miles in length) of a circuit within that 24-hour period.

Team Hammer Nutrition's team is staff members Matt Butterfield, Phil Grove, Jason Keister, and Dustin Phillips. Their job was to ride. Their support crew was Brian Frank, his son Miles, and me. Our job was to do everything possible to take care of each of them so that all they had to do was focus on riding the bike, which they did in phenomenal fashion. Taking the lead from the start, and relying on Hammer Nutrition fuels and supplements, Dustin, Matt, Jason, and Phil (this was the team's riding rotation for the majority of the race) put in strong efforts hour after hour after hour, which resulted in a hard-fought and well-earned victory.

It wasn't easy, though. After finishing in second place in their

first attempt at last year's race, the team and crew were better prepared physically and logistically, and eager to "produce the goods" necessary to earn the victory. However, this year's race appeared to have the strongest collection of four-person teams in its history. Pretty much everything had to go right for the team to achieve their goal of taking the top spot on the podium.

One of the biggest pluses this year was having the Hammer Big Rig there, which meant the team members could shower and rest, while also doing Globus Active Recovery sessions, in the comfort of an enclosed space, one that's indescribably more spacious and accommodating than a tent (which we didn't even have for last year's race). It's hard to describe just how awesome a vehicle it is, but the Hammer Big Rig really is the bomb and having it available this year was a major bonus for all of us.

Another plus was the weather, which was significantly milder than last year, where hotter-than-normal temperatures plagued the riders all day long, while nighttime temperatures dipped near or below the freezing mark (and being as unprepared as we were, we suffered mightily in that cold weather). This year, there were occasional spurts of light rain



*Team Hammer Nutrition on the podium.
Photo : Brian Frank*

and the winds picked up from time to time. Overall, however, the weather was pretty cooperative. With cooler temperatures still lingering from storms that occurred earlier in the week, and with the cloud cover hovering over the race venue for the majority of the race, both the daytime and nighttime temperatures were significantly more comfortable than in 2009.

The team started super strong, with Dustin doing the required Le Mans start of a 600-yard run before mounting his bike for the first lap. Dustin ripped off a 53-minute lap, which included his run, putting us in or near the lead. After reaching the start/finish line, he then exchanged the electronic transponder timing chip (the team's "baton") to Matt, who blitzed the course with a 49-minute lap. Matt then handed the transponder off to Jason, who put in a solid 51-minute effort, to be followed by Phil's first lap of 50 minutes. After the first rotation, things were looking good, the guys were crushing it, and the team was building a big lead over the current second place team, Team Extreme Power Wash.

Things were about to change, however.

Of the few downsides we had to deal with in this year's race, flat tires were clearly at the top of the list; the team had six of them in total, of all which, of course, were costly in terms of time lost. Dustin had the first one on Lap 5, but still reeled off a sub-hour lap. Matt uncorked another sub-50-minute lap, and Jason followed with a solid 54-minute lap. With things already looking really good for the team, in spite of Dustin's flat, we were ready to build on that lead. Unfortunately, Phil had the first of his two flats for the race, this one chopping nearly six minutes off of our 15+ minute lead.

Dustin started the third rotation for the team, completing his lap before dark, at which point all of the riders were required to ride with lighting systems on their bikes. Riding as darkness closed in didn't faze Matt at all; he shredded the course with a 51:26 lap. Jason followed with a sub-hour lap, as did Phil, in spite of another flat tire. After nearly 11 hours had been completed, Team Hammer Nutrition was still clicking off sub-55-minute laps on average and had built a nearly 15-minute lead over Team Extreme Power Wash and a 23+ minute lead over the Great Northern Cycles team (another bunch of great riders from here in Montana's Flathead Valley).

Then disaster, or something close to it, struck. On "unlucky"

Lap 13, Dustin suffered two flat tires. Unfortunately, he had only one spare tube with him, which meant he had to run with his bike for at least three miles. That unfortunate incident cost us our entire lead; for the first time, we were in second place.

Over the next few laps however, strong performances by all four riders allowed the team to reclaim their lead, now over the SET Coaching/Black Diamond Sports Therapy team, who

had overcome its own mechanical difficulties early in the race, and were now claiming the second spot, and seemingly getting stronger and stronger as the race progressed. Throughout the night, as the laps clicked off it appeared that it was going to be a two-team race; Team Hammer Nutrition and SET Coaching/Black Diamond Sports Therapy were distancing themselves from the other teams.

In the late night/early morning hours, Team Hammer Nutrition was still riding strong, but the riders of our closest competitors were starting to come on, recording faster lap times and cutting into our lead. By Lap 18, it was but a fraction over five minutes. However, when daylight was truly upon us, our guys felt reinvigorated and ready to prove they were indeed the best team in the race.

By Lap 22, about 20.5 hours into the race, Team Hammer Nutrition had a seemingly comfortable 13 minute, 21 second cushion. Unfortunately, Jason had a flat tire on Lap 23. That cost us a bit over eight minutes,

putting Team SET Coaching/Black Diamond Sports Therapy only 5:11 behind us. Needless to say, the outcome of the race was still to be determined. With 3.5 hours remaining, and with so many things that can happen in a race like this (crashes, flat tires, other mechanical problems, crew errors), it was far from over.

The way the race works, if you reach the start/finish line prior to the 24-hour mark, you can take another lap. Phil, who had been averaging the fastest lap times of the team throughout the race, was ready to do his scheduled lap (our 24th of the race), at which point Dustin would take over and do Lap 25. It was clear that after those two laps had been completed, we would have plenty of time to take a 26th lap. The question was who would ride it. Matt, who had been putting in some incredibly fast times throughout the race, was now nursing a severe strain on his IT band and, while still wanting and willing to ride, was no longer able to do so at the intensity he normally could. Jason had been riding strong but was



*Phil Grove smiles as he finishes a lap.
Photo : Brian Frank*

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understandably drained from his previous effort. While Dustin was on Lap 25 we all determined that Phil would take our final lap, even with less than an hour to rest after completing his previous lap.

Phil's lap was insanely strong, a sub 52-minute effort, which put us 10:21 ahead. Team SET Coaching/Black Diamond Sports Therapy wasn't about to give up, however, and was planning one last assault on us, via their two strongest riders. Dustin, who had been riding so well all throughout the race but was seemingly still unsettled a bit by his three flat tires, was ready to set out on his last lap of the race, the team's 25th. As I had done all race long, I waited at the "baton exchange area" with each of our riders, awaiting the arrival of whoever on our team was on course at that time.

Dustin's not the kind of guy who needs a motivational speech, but as he stood there waiting for Phil to complete his lap I felt that some words of encouragement were in order. I can't remember the exact words, but I do recall telling him to try and put the flat tires behind him and to go out and do his thing, basically a "let 'em see what you've got" pep talk. I didn't want to put any pressure on him but I also gently told him that

we needed a solid lap, one that would allow us to maintain a good chunk of our lead.

And Dustin delivered, more than holding his own against one of Team SET Coaching/Black Diamond Sports Therapy's strongest riders. Leaving absolutely nothing out on the course, Dustin came in with a solid 56-minute lap, losing only about two minutes. It was an immense effort, one that left him completely drained (and me darn near in tears) when it was over, and it kept us with an 8:03 lead. Although he had less than an hour to regroup from his previous effort, Phil seemed more than ready to meet the challenge of our competitors' strongest rider. Barring an accident or another flat tire, it seemed that victory was less than an hour away. But considering the flat tire issues the team had been dealing with throughout the race, nothing was for sure; I was a bit nervous as I watched Phil take off on the team's final lap.

While the race timers were doing a great job, it wasn't always possible to get lap-by-lap updates rapidly. So I took it upon myself to keep track of all our rider's split times, our team's cumulative time and average speed, and the time gaps we had over our closest competition. Now I didn't have to worry about that because our rider and their rider were both on the final lap together; after nearly 24 hours, whoever crossed the finish line first was the winner.

I don't remember how fast Phil's final lap was and it didn't matter. When we saw him heading down the final stretch to the finish, with Team SET Coaching/Black Diamond Sports Therapy's rider not in view, the victory was complete. When it was all said and done, Team Hammer Nutrition overcame every foreseen and unforeseen obstacle that was thrown at them and claimed a much-deserved and oh-so-sweet victory.

The guys used HEED, Hammer Gel, and Endurolytes to fuel themselves prior to and during their laps, and used Recoverite and the occasional Hammer Bar during their nearly three-hour recovery period between laps. Brian took care of hooking everyone up to Globus units after the completion of nearly all their laps. As far as supplements, the team relied on Race Caps Supreme, Mito Caps, Anti-Fatigue Caps, Endurance Amino, AO Booster, Super Antioxidant, and Energy Surge. Race Day Boost capsules and Tissue Rejuvenator were used on occasion as well.

The 24 Hours Round the Clock is the cornerstone race of our good friends at Round and Round Productions (www.roundandround.com), Gino Lisecki and Wendy Zupan. We've been honored to sponsor this great race for a long time and look forward to supporting it for many years to come. Gino, Wendy, and their staff/volunteers do an amazing job of putting together a top-notch race. If you're into mountain bike racing, I highly recommend doing this race.

To say this was a satisfying win is an understatement; for sure we'll be talking about this win for a long time. Still, we know there's always room for improvement, which is clearly at the forefront of our thoughts as the team prepares for the next big race - The 24 Hours of Adrenalin race on July 24th in Canmore, Alberta, Canada. We can't wait!



*Nighttime at 24 Hours of Round & Round.
Photo : Dustin Phillips*

*The race gets underway at 24 Hours of Round & Round.
Photo : Brian Frank*



FEEDBACK FROM THE TEAM

.....

DUSTIN PHILLIPS

"After 22 hours of racing, and the outcome of the race still unclear, I set out on my 7th lap not fully confident in what kind of time I could pull. I invested my confidence in both my training and in my product. I set out after taking one gel at the start of the lap and had four Energy Surge tablets tucked into the leg cuff of my bibs. The last lap went nearly perfect, I nailed my fueling for the entire 24 hours, and with the help of the Energy Surge, I was able to pull off another solid lap time after a 100 miles of intense racing. When I get asked at these races if they really work, I can emphatically say 'YES!'"

PHIL GROVE

"In my brief time as a 24-hour mountain bike racer, my take on the sport was that most riders start off guns blazing, but come to a grinding halt well before noon the following day. This "shock and awe" strategy might work against inexperienced racers who throw in the towel at midnight, but our foes wouldn't give up that easy. To win this long, drawn out battle, my team and I relied upon Hammer's full line of fuels and supplements to go out hard and keep the pace hot for 24 hours straight. In particular Huckleberry Hammer Gel, Anti-Fatigue Caps, Race Caps Supreme, Recoverite, and Energy Surge allowed me to complete my sixth lap (miles 75-90) only three minutes slower than my first lap. Maintaining our speed throughout the race gave us a competitive advantage over the rest of the dwindling field."

MATT BUTTERFIELD

"Typically between 3 and 5 a.m. the fatigue can no longer be ignored, but this race was different. My two best friends for 24's are Recoverite and Globus. Chocolate Recoverite and running an Active Recovery session on my legs with the Globus right after a hot lap keep me charging until day break!"

JASON KEISTER

"After a winter of too much tele skiing, and not enough riding, I was heading into this event doubting my race fitness. With the race rapidly approaching, and the boys constantly reminding me of how much slower than them I was, I knew I was going to need some help. Thankfully, I had a secret weapon in my arsenal! I loaded with Race Day Boost for the four days prior to race day, and took two capsules prior to each lap. The "Boost" came through and allowed me to ride much faster than I should have been able to. Combined with Chocolate Recoverite and Active Recovery on the Globus, I had an almost complete recovery between every lap!"



Photo : Brian Frank



Mixed phase E-stim training

EMS - Electrical Muscle Stimulation

BY JIM BRUSKEWITZ

The Globus crew has been busy! Many have progressed through all of the E-stim strength training programs. Most started with training their fast twitch muscle fibers (Type IIa that deliver raw strength applied over relatively short periods of time), and continued through the programs that train the intermediate fast twitch muscle fibers (Type IIa that can adapt to aerobic or anaerobic delivery of energy). From this point they have cycled through the endurance programs that train the slow twitch muscle fibers (Type I designed to deliver strength over the long haul). The season isn't over. Where do they go now with their E-stim strength building.

You may ask "Why switch up the training anyway?". Periodizing or phasing the training over time is done because the same kind of training

repeated for more than about eight weeks will turn on the athlete. When the athlete's performance plateaus after weeks of doing the same kind of training, performance can suffer. Athletes can lose motivation because they aren't getting results anymore, and worst of all, this is the time when injuries can occur.

What kinds of change will work now? Having focused the training on each kind of muscle fiber with the different strength building programs, the strength gains are broad and well-rounded. The competitive phase is the time to select specific kinds of strength that need further enhancement. It is also a time to maintain the gains already made. This will require a mix of programs that touch all muscle fiber types. Current and past performances identify which kinds of enhancements should be emphasized. Let's identify the various kinds of

performance that the different E-stim programs enhance.

Explosive Strength (ES) will develop strength used for 5 to 10 seconds. After 30 to 40 seconds it is not useful at all. If one wants to accelerate very quickly for a few seconds, this is the program that will develop strength for that purpose.

Maximum Strength (MS) will develop strength used for 15 seconds up through 1 to 2 minutes. By 3 to 5 minutes the amount of lactic acid developed will inhibit this kind of strength. Cyclists that bridge gaps where it takes a minute or 2 to do so, or runners that put the hammer down during a race to break the will of fellow competitors will benefit from using this program.

Resistive strength (RS) will develop strength for sustained efforts of 2 to 10-15 minutes. Longish hill climbs, a couple of miles of running very hard, any efforts that require a lot of strength for this time frame can benefit from this kind of E-stim training

Endurance Strength (EnS) or the Ultra Endurance Strength (UEoS) programs will develop strength for 10 minutes or longer. Mixed Phase training should include two or more kinds of E-stim strength programs at a time. The athlete should pick the programs that develop their desired adaptations and

include them in each training week. It's likely that those reading this are engaged in exercise that lasts an hour or more so include EnS for maintenance.

Example: let's say that an individual E-stim strength trains a muscle group three times weekly. This individual wants to increase the power needed to climb four minute hills. The weekly programs can be organized a couple of different ways to achieve results. The order of the workouts is flexible. They should follow the days traditional training and maintain a 48 hour recovery period between workouts. T-Th-Sat, T-Th- Sun, M-W-F, or M-W-Sat strength training days would all work. It's best to match the E-stim days with the harder traditional training days for recovery purposes.

Week 1

Training	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
E-stim		RS		RS		EnS	

How about an athlete that wouldn't mind improved sprint ability too? Adding some Max Strength or Explosive strength would be appropriate

Week 1

Training	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
E-stim		MS		RS		EnS	
(alternate plan)		RS		MS		EnS	

Repeat Week 1 for two to three weeks before changing the weekly schedule to address yet another goal. This will keep it fresh and effective.

Week 3 to 5 (6)

Training	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
E-stim		RS		EN		EN	
(alternate plan 1)		MS		RS		EN	
(alternate plan 2)		MS		ES		EN	

The possibilities are almost endless. Be creative. Harvest what you need from building strength with E-stim training and you'll appreciate your improved performance. Power up. **HN**

Real results with Globus

I just got back from competing in the Tour of the Gila. For this trip my teammate and I drove from Washington State to New Mexico and back. With the help of a borrowed Globus unit our legs felt in good shape after a long two day car ride. On the way down we used the Globus machine on the active recovery setting to keep our upper legs fresh. I believe this had a significant beneficial impact on the way we felt after arriving in New Mexico.

Each evening after racing I would use the Globus on the active recovery setting to help my legs recover from the previous days stage and prepare for the next day's event. I am positive this helped me attain the 2 stage wins, 1 3rd and 5th place overall in Category 2.

Thank You,
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(928 g)



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H/6	\$9.95
H/32	\$24.95
H/80	\$46.95

SKU	MSRP
HP/	\$1.25
HB/	\$14.55
H/J/	\$19.95

"It continues to amaze me that other companies come out with scary colors of energy drinks, fuel, gels, and recovery products. A friend of mine got some day-glo green gooey stuff on her running gloves the last cold day we ran together. I commented that whatever makes the day-glo color is scary, and asked if there were a couple FD & C yellows, a blue, and some other colors, plus artificial flavors and sweeteners. She read it and said that I was right. She hadn't really thought about it because she got it as a sample and it had a good name behind it. When I pointed the same thing out to my husband, regarding some samples we received in a race packet awhile ago, he asked me why they have to do that. I told him I had no idea, but I'm surprised they still don't get it. We threw all those samples out. I was glad to have proof that these supposedly good, reputable companies, who make such great claims, are producing consumables that contain garbage. I was able to validate to my husband and reinforce to myself why we continue to be faithful with, and budget for, a long list of Hammer products that have improved our training and performance. I was also glad to have the information for comparison when others ask me what is different about Hammer or ask me why their product isn't as good. My friends tell me I'm a great spokesman for your company and ask me if I'm sponsored by you and tell me I should be a sales rep. Why do consumers want their sports drinks/products to look 'cool' or 'pretty' when that's usually synonymous with scary ingredients? Why does an 'electrolyte replacement drink', which inevitably isn't even complete, have to be blue, purple, or green, and taste like something that isn't even found in nature. I tell people that, besides being so efficacious, Hammer is great because it is all-natural. The other stuff gives me a headache and makes me feel nauseous. There's something very seriously wrong with that! I gave my friend some more information on Hammer and some samples from my product. I don't think she's going to be using samples from the other companies anymore, at least not without reading the ingredients more carefully. So far, I haven't seen any others out there that have all-natural ingredients."

Thanks for everything!
Sheri Atkinson

ORDER TODAY!

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HAMMER
NUTRITION

Unflavored Hammer Gel Officially Retired

It was a hard decision for us to make, as we know that a few of our clients really enjoy the unflavored version of Hammer Gel. However, the percentage of those who like this particular flavor (or non-flavor) of Hammer Gel was quite small; in fact, the volume that we sold, and thus needed to produce, was diminishing on a regular basis. As a result of the consistently-decreasing demand for unflavored Hammer Gel, we made the decision to discontinue it.

To those who enjoyed Unflavored Hammer Gel, we apologize for any inconvenience and suggest that you consider giving the vanilla flavor a try. We think you'll find Vanilla Hammer Gel to be pleasantly mild-tasting and very similar to the unflavored version of Hammer Gel.



No scoop? No problem!

Have you ever misplaced the scoop that comes with your Hammer powders? What a drag! Without the scoop, how do you know how much powder to put in your bottle? Worry no more! With this handy chart your "where'd my scoop go?" problems are resolved!

HEED

Serving Size: 1 Level Scoop (29.0 g)

1 Level Scoop (47.0 cc) = 3.2 Tbsp or 9.5 tsp

Perpetuem

Serving Size: 2 Level Scoops (69.0 g)

2 Level Scoops (106.0 cc) = 7.2 Tbsp or 21.5 tsp

Recoverite

Serving Size: 2 Level Scoops (49.0 g)

2 Level Scoops (100.0 cc) = 6.8 Tbsp or 20.3 tsp

Hammer Soy

Serving Size: 1 Level Scoop (28.5 g)

1 Level Scoop (68.5 cc) = 4.6 Tbsp or 13.9 tsp

Sustained Energy

Serving Size: 3 Level Scoops (85.0 g)

3 Level Scoops (150.0 cc) = 10.1 Tbsp or 30.4 tsp

Hammer Whey

Serving Size: 1 Level Scoop (26.0 g)

1 Level Scoop (63.0 cc) = 4.3 Tbsp or 12.8 tsp

Hammer Gel

Serving Size: 32.9 g = 1.7 Tbsp or 5.0 tsp



- More quick conversions!**
- 5 cc is equivalent to 1 tsp
 - 15 cc is equivalent to 1 Tbsp
 - 3 tsp is equivalent to 1 Tbsp
- Tbsp = tablespoon / tsp = teaspoon

Give vanilla a try on your next order!

Hansel and Gretel had it easy

No High Fructose Corn Syrup

BY G.N. Jacobs

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(Source: nancyappletonbooks.wordpress.com -
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We have all read, seen, or listened to some variation of Hansel & Gretel from the Brothers' Grimm. A witch lives in a deep forest luring children with an edible house and sweet treats hoping to fatten them up for her cannibalistic urges. The children turn the tables as befits fairy tale heroes and get out alive.

Well, according to the newest research from Princeton University published officially in *Pharmacology, Biochemistry and Behavior*^[i] and for the mass market in *Science Daily*^[ii], Hansel and Gretel would be even fatter, slower and more lethargic eating today's sweeteners like high fructose corn syrup because the weight gain from HFCS is far greater than ordinary sucrose. This would put the outcome of tricking the witch into her own oven in doubt.

HFCS is a corn derivative that typically has 55-percent fructose, 42-glucose and 3-percent other larger sugars. It is cheaper than sucrose in the United States where it is easier to grow corn than sugar cane or sugar beets. Sucrose is a naturally occurring blend of equally balanced fructose and glucose. HFCS replaced sucrose in the early 1970s and the rate of obesity as a population percentage has doubled from 15 to 33-percent since then according to CDC figures cited by *Science Daily*.

The researchers conducted two experiments. One compared male rats eating rat chow and HFCS water to similar rats eating rat chow and sucrose flavored water. The weight gain was described as "much more" for the rats eating the HFCS water. The really interesting fact about this study: the sucrose water was highly concentrated at levels similar to the few

sodas sweetened with sucrose still in the US marketplace, but the HFCS water was half the concentration of the typical HFCS soda.

The second study lasting six months looked at high fructose corn syrup versus water. Here the rats ballooned up with 48-percent weight gains over rats just eating food and unsweetened water. The researchers described the high-fructose corn syrup rats as obese.

"These rats aren't just getting fat; they're demonstrating characteristics of obesity, including substantial increases in abdominal fat and circulating triglycerides," researcher Miriam Bocarsly reported. "In humans, these same characteristics are known risk factors for high blood pressure, coronary artery disease, cancer and diabetes."

The researchers speculated on the reasons why HFCS might be more fattening than sucrose. Apparently, fructose molecules in sucrose are bound to glucose molecules and take longer to hit the bloodstream than the fructose in HFCS, which aren't bound to anything. The researchers also mentioned that fructose seems to be processed in the liver into fat, while sucrose is metabolized by insulin from the pancreas and is more readily used as an energy source.

"Some people have claimed that high-fructose corn syrup is no different than other sweeteners when it comes to weight gain and obesity, but our results make it clear that this just isn't true, at least under the conditions of our tests," says psychology professor Bart Hoebel, who specializes in the

- continued on page 29

A "Super" combination

Hammer Nutrition and Superkarts! USA team up

Brian Frank & Hammer Nutrition are excited to announce their sponsorship of the Superkarts! USA (SKUSA) national pro moto series that includes SpringNationals in Sonoma, SummerNationals in Wisconsin, and culminates with SuperNationals in Las Vegas in November. The November race will draw over 400 of the best drivers in the world, including many Formula One drivers such as Michael Schumacher. In 2009, Formula One drivers did not crack the top 5 in the Super Pro class. That gives you an idea of the level of skill and fitness top kart

drivers possess. The S4 shifter class for drivers 30 years and older will bear the name of Hammer Nutrition. Karting is an endurance sport, so it's a natural fit for their "masters" class of drivers. As a form of four-wheel racing, shifter karts are one of the most physically demanding and driver fatigue is the number one challenge that these athletes face. Hammer Nutrition's Hammer Gel, HEED, Endurolytes, and Recoverite provide the drivers with the products they need to drive strong during repeated sessions in the karts.

Tom and Patti Kutcher, owners of Superkarts! USA, had this to say about the new partnership, "We're extremely excited to have a nutritional company involved with our racing organization. We know that Hammer Nutrition has been extremely successful in other endurance sports, and it's a great time to bring good nutrition to our racers."

For more information about Superkarts! USA, head over to their website at www.superkartsusa.com.



neuroscience of appetite, weight and sugar addiction. "When rats are drinking high-fructose corn syrup at levels well below those in soda pop, they're becoming obese—every single one, across the board. Even when rats are fed a high-fat diet, you don't see this; they don't all gain extra weight." [iii]

The researchers cite previous research articles that show fructose affects hormones like leptin that work with insulin to control satiety, the feeling of being full. This excerpt from the abstract says it all – "The combined effects of lowered circulating leptin and insulin in individuals who consume diets that are high in dietary fructose could therefore increase the likelihood of weight gain and its associated metabolic sequelae. In addition, fructose, compared with glucose, is preferentially metabolized to lipid in the liver." [iv]

Not feeling full induces more eating. In the meantime, we can imagine Hansel and Gretel being fed soda and other fructose-laden foods and winding up in the witch's meat pie. End of story. **HN**

REFERENCES:

[i] Bocarsly, ME, et al. "High-fructose corn syrup causes characteristic of obesity in rats: Increased body weight, body fat and triglyceride levels." *Pharmacology Biochemistry and Behavior*, 2010; DOI: 10.1016/j.pbb.2010.02.012

[ii] <http://www.sciencedaily.com/releases/2010/03/100322121115.htm> viewed 3/30/2010

[iii] <http://www.sciencedaily.com/releases/2010/03/100322121115.htm> viewed 3/30/2010

[iv] Elliott, SS, et al. "Fructose, weight gain, and the insulin resistance syndrome." *Am J Clin Nutr*. 2002 Nov;76(5):911-22.

"Your Raspberry and Apple Cinnamon gels are scary good." - Julia S.



Partners

Hammer Nutrition and USMS team up

BY STEVE BORN

Photo : Brian Wadley

As part of our ever-increasing desire to reach out to an even greater variety of endurance sports and the athletes who participate in them, we are excited to announce that Hammer Nutrition is the official nutrition sponsor of the United States Masters Swimming organization (USMS).

As is stated on the USMS website –

U.S. Masters Swimming (USMS) is a national organization that provides organized workouts, competitions, clinics, and workshops for adults aged 18 and over. Programs are open to all adult swimmers (fitness, triathlete, competitive, non-competitive) who are dedicated to improving their fitness through swimming. Founded in 1970, the non-profit corporation is organized with over 500 clubs in 52 regions throughout the United States. Membership numbers more than 50,000, with individual members ranging in age from 18 to over 100.

Within the clubs, structured workouts, often with a coach, offer well-thought-out training assistance. Pool and open-water races provide opportunities to compete and measure individual progress at the

"Thanks for being a sponsor of the U.S. Masters Swimming. I'm a user of your products and Hammer Gel fueled me to some great swims at Master Nationals this weekend in Atlanta!"

- Stuart Roberts

local, state, national, and international levels. USMS programs also offer stroke and technique clinics, workshops, and instruction, as well as social functions. All USMS programs are designed to help swimmers improve fitness and/or train for specific goals, and offer active support for a healthy lifestyle through friendship and camaraderie.

Hammer Nutrition will be providing nutritional support for the competitors at a number of USMS events, some of which have already taken place. Others include:

- **USMS 2-Mile Cable Championships** – Charlottesville, VA (July 10)

- **USMS 6+ Mile Open Water Championships** – Noblesville, IN (July 17)

- **U.S. Masters Swimming Long Course Meters National Championships** – San Juan, Puerto Rico (August 9-12)

- **H2Open Series**, a four-part open water swim series – upcoming races in Chicago, IL ("Big Shoulders" 5K & 2.5K distances – September 12) and Sarasota, FL ("Tropical Splash" 1K, 3K, & 5K distances – October 2)

- Several Short Course Yard Championships across the country throughout the entire year.

The first event that Hammer Nutrition was present at was the U.S. Masters Swimming Short Course Yards National Championships, held in Atlanta, GA on May 20-23. An estimated 2000+ swimmers participated in this four-day event. Read Laura Labelle's firsthand account of this event on the facing page.

A wealth of information about the United States Masters Swimming organization, a complete race schedule, race results, and more can be found at the USMS website at www.usms.org.

Hammer Nutrition is honored to partner with this great organization and we'll keep you updated on what's happening with Hammer Nutrition and USMS via the Hammer Nutrition blog, Facebook page, and Endurance News.



Hammer makes a big splash!

BY LAURA LABELLE

Atlanta Georgia Tech Aquatic Center, May 20-23rd.

It was the first event for Hammer Nutrition, as an official USMS sponsor, as well my first event as a company spokesperson. I have had a very close relationship with the company for over 23 years, as my brother is the sole proprietor, affording me the privilege of using these phenomenal products from their inception to the present. In the beginning, I only used the vitamin type products sporadically. Although I have always been athletic, practicing all forms of equestrian sports, kickboxing, competitive ice-skating, skiing and many other sports, I was not always as dedicated to supplementing. In the past six years that I have been seriously training as an endurance athlete, I have come to love a full array of Hammer products and feel the benefit of proper fueling with Hammer products and proper nutrition on a daily basis.

Although most people typically think of Hammer Nutrition for the endurance fuels that they make, they also have a full line of supplements that my entire family uses to prevent illness and promote better health

and longevity. Why do these products stand out to me and make me so passionate and excited to be involved with this company? They are nutritionally above the rest (which shall remain nameless) because they contain no added refined simple sugars, high fructose corn syrup, artificial colors, or sweeteners. As a chef for over 25 years, I seek quality in nutrition and stay away from processed foods and chemicals, which we believe to be performance reducers. In my opinion, Hammer is as good as it gets for clean fueling.

As the first day of competition got rolling, I was able to set up my booth featuring HEED and Hammer Gel, two of our “high energy” fuels. Both are approximately 100 calorie servings of complex carbohydrates, with HEED having the addition of electrolytes that provide you instant energy without stressing out your digestive system or giving you an unpleasant “flash and crash”. The difference between the two products is in the delivery system. HEED is typically consumed in 16 ounces of water; Hammer Gel is usually consumed straight out of the container.

I was able to meet and feel the tone of the distance swimmers. Distance swimmers are a different breed than the sprinters and have totally different training needs and habits. The distance swimmers wanted more information and were slightly hesitant to try the gels. Those that did said they “liked them and felt great during my swims”; I did not get one negative comment in regards to taste or digestive upset, which was exactly what I expected and hoped for.

Day two was slightly more challenging for me, as I myself swam four events, and ran the Hammer booth. This day brought many more participants and sprinters as well. The HEED coolers ran constantly and I had a steady flow of gels going out with people, who then came back to tell me they “loved them” and “could I get another for my next race, please?” I had numerous people come back to the booth to say they went their fastest ever, some even setting national records. I do not, for one minute, claim responsibility for these amazing swims; as an athlete, I know how hard these magnificent people worked for these results. But the fact that they felt compelled to come back to the booth and share their results with me, meant in some way, they were aware of feeling a benefit from the use of Hammer products.

Day three was really busy, word was out, and many people were coming by to see what all of the “buzz” was about. I had to laugh, as I was now blatantly aware of Hammer Gel wrappers and Hammer cups all over the facility. People kept asking questions like “How long before my race should I eat this?” Again, I was overjoyed about the number of people who came back to share how good they felt after using the products for their races, grab a catalogue, and ask me more specific questions about other products and fueling in general. I was also happy to meet many swimmers who have used and loved our products for years. They were all saying, “It’s about time you came to see the swimmers”. Yes, swimming is an endurance sport! We train to build endurance and enjoy the benefit of our fitness level every time we race.

Day four was a blur, it went by so fast and was just so exciting. I was able to

give people access to our website and our customer service experts. We have an amazing forum of archived endurance questions, advice, and tips. Hammer Nutrition also has a staff of people who are trained to advise you on your fueling needs and supplementation. I was

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HAMMERING IN ST. GEORGE!

My name is Todd Allen and I am a Hammer Nutrition fan; I'd like to think your number one fan! I use many of your products from Premium Insurance Caps to Perpetuem for my long distance events - HEED for under two hours. Perpetuem was my fuel source for Ironman St. George, UT which was on May 1, 2010. St. George was a brutal course and Hammer helped me through to place 378th overall. I also used Perpetuem for Ironman Arizona in November of 2008 and will be using it again for my next Ironman in

Cozumel, Mexico in November 2010. I take Perpetuem every 15 minutes throughout the Ironman events once I get settled on my bike after the swim. I set my watch to go off every 15 minutes for nutrition and water. I use 2-hour bottles on the bike and 1-hour bottles in my fuel belt flasks.

I want to thank Hammer for having such wonderful products and for all the great people you have on your staff to answer questions and give guidance.

Left to right Adam Collum, Todd Allen, and Tony Brwer. Photo taken by Jackie Brewer above the city of St. George.



- continued from page 31

thrilled to make contact with exceptional individuals, coaches, and swim meet organizers, as well as companies for sponsoring and doing business with. My teammates were all fueled by Hammer, as they are throughout the year in training, and we've just enjoyed a second year of team sponsorship with Hammer Nutrition.

Personally, I swam five lifetime bests in this meet! I was over the moon. While I am pretty new to swimming, and was not setting records or in the top ten, I am still getting faster and faster as I get older! I am not able to eat at all during a meet, as nerves stop my digestive system from dealing with real food. I only use "fuels" and never feel starving or faint with hunger; to the contrary, I feel powerful and typically have my best swims later in the day, as I get more relaxed. When I came home from Atlanta, I had talked myself out of a voice; I was so passionate about sharing these extraordinary products with the world of masters swimmers, who I find to be unbelievably inspiring.

I am very excited about the years to come in our partnership with USMS as an official nutritional sponsor. Please go to the USMS site and click on our link; you will receive 15% off your first order and a free swim cap. Also join us on Facebook and Twitter or email me (llabelle@hammernutrition.com) with any feedback. I would love to hear from you or put you in touch with the appropriate person(s) to help you with your needs. Fuel Right and Feel Great!

Feedback from a national record holder

At the recent U.S. Masters Swimming Short Course Yards National Championships, held in Atlanta, GA, Laura caught up with masters swimmer, Sue Dills. When asked about the role of Hammer Nutrition products in her training and racing, this is what she had to say.

"I am about to head out to my swim workout and just ate the Raspberry Hammer Gel. These are my thoughts on nutritional supplements; as I get older, I realize it is even more important to train smart. This is the first year that I have

done consistent strength training. I am always trying to improve my technique to be more efficient in the water. But along with that is proper nutrition including hydration, recovery and race prep. I used the Hammer powder stuff for about 10 years when I was into triathlons and also for biking. It was great and I am glad you are now focusing on swimming."

Sue must be doing something right as she placed first in all 6 individual events (400IM, 200 free, 200 back, 200IM, 100IM, 500 free), and set 4 national records! Nice job, Sue!



Sue with members of her family in Atlanta.

Hagens Berman holds their own on Mt. Hood!



Hello all,

The team won the Team GC competition at Mt Hood this past week and placed Sam Johnson in 5th on individual GC and Lang Reynolds in 19th. For those of you that don't know, team GC is based on the accumulative time of your 3 best riders on every stage. What this represents is a true team effort and consistency across the board. We beat 2nd place by over 8 minutes.

Thank you for all of your support.

Joe Holmes
Director, Hagens Berman LLP Cycling Team

"Thank you, you guys rock!" - Ian M.

Intelligent Swim Performance Training

BY SHANE EVERSFIELD

Swimming has the distinction among endurance sports of being the most technique-oriented. Since water is 7 times more dense than air, even world-class elite swimmers are just 9-10% efficient. For the rest of us, just 2-4% of our energy expenditure actually moves us forward. What a great opportunity! A one percent increase in efficiency can yield 25% in performance gain. So, what's the most intelligent way to increase swim performance - focus on improving efficiency or aerobic capacity?

Here's a hint: Those world-class elite swimmers devote about 90% of their training to technique - both through drills and low-moderate intensity swimming with specific technique focal points. Just 10% of their training is devoted to race pace intensity! Amazingly, the vast majority of swimmers, triathletes (and their coaches) disregard the precedence of technique mastery and focus on swimming hard - technique be damned! "Uh, no pain no gain."

The Big Three: Efficient swim technique has three components: balance (both fore-aft and rotational), hydrodynamic body position (called streamlining) and propulsion. Training at high intensity without regard to these fundamental elements of smart swimming is . . . well, dumb. The slogan for intelligent swimming: "No brain, no gain!"

This article assumes that you already have the “tools” to study and continually improve your balance, streamline and propulsion. These “tools” include comprehension of hydrodynamic principles, as well as drills and focal points that address your particular needs. (For more visit www.totalimmersion.net.)

How does the technically proficient distance swimmer/triathlete intelligently pursue performance? Following is a basic guide:

SPL: Begin by establishing your SPL - the number of strokes per lap you take with your most balanced, streamlined and propulsive swimming form. In your next few pool sessions, monitor your SPL at various intensities. Keep in mind that your most efficient swimming form is at a low-to-moderate pace. Here is a key principle for brilliant efficient fishlike swimming. Move through the water instead of moving around in it! The less you thrash around, the less turbulence you cause. Just watch a fish!

Swim Golf: Typically, a lower stroke count means you are swimming more efficiently - using less energy to move through the water (not in it). Play “swim golf”: Swim a distance - say, 100 yards - at a moderate pace, then add your stroke count to your time (in seconds) for the distance. Now try swimming the same distance at a faster or slower tempo - by increasing or decreasing your stroke cadence - and tally SPL and time again. Is your score higher or lower? Just like golf, you’re striving for the lowest score. This is a great way to evaluate your efficiency - your ability to maintain balance, streamline and propulsion - as you increase tempo.

Tempo Training: I have only one

“swim toy”. It’s not a kick board, pull buoy, snorkel or pair of swim paddles. It’s a Tempo Trainer - a waterproof metronome I slip up into my swim cap. Here’s how to use it to pursue intelligent swim performance: Warm-up with a focus on technique. Pick a few specific focal points or drills and integrate them into your whole stroke swimming for the first 10-15 minutes. Then, swim another 100 with your best technique and get a feel for your stroke cadence.

Now turn on your Tempo Trainer and find the tempo that meshes with your stroke cadence. For efficient swimmers at a low-to-moderate effort, this is typically between 1.20 and 1.40 - meaning that time interval between each beep (and hence each stroke) is 1.2 to 1.4 seconds. (Note that the lower the number, the faster the tempo.) Now, swim a given distance at that tempo, monitoring your SPL. If your SPL increases by more than 2 strokes per lap (in a 25 yd/m pool) over the distance, your efficiency is beginning to diminish. Slow the tempo or shorten the distance. If you are successful at maintaining your SPL or even decreasing it over the distance, increase the tempo by subtracting .02 (two one-hundredths of a second) as you rest at the wall. Now swim the same distance and strive to maintain your previous SPL, even though you have increased your cadence by .02 seconds per stroke. (For consistency, I allow 3 beeps for each turn and push-off.)

Manipulate these variables to train performance and efficiency: Cadence, SPL, distance, recovery time and subtle changes in technique. As you manipulate these variables, compare your time to your perceived rate of exertion (PRE). Some things to consider as you approach swim training in this way: SPL is an accurate indicator of

efficiency, but absolute minimum SPL is not the ultimate goal. You may find that your most “efficient” 100 yard repeats - comparing time to sustainable, repeatable effort - is not your absolute lowest stroke count. Optimum SPL will vary over distances, as will cadence.

The Big Picture: Always consider your training and racing goals: Performance training with a focus on optimal technique is vastly different for an Ironman than it is for a 1-mile swim-only race or a 100m freestyle competition in a pool. A 10% reduction in energy for a 1% reduction in performance is a wise choice for the Ironman, but a poor one for the 100m sprint.

Neural Nanoseconds: This approach to performance is focused on training your neural system to maintain efficiency at higher cadence, rather than just swimming harder with diminishing technique. Evaluate your performance based on your SPL, PRE and your time. The “little beep” has an amazing way of keeping you very attentive during each nanosecond of each stroke, whereas the “swim hard” method keeps you gasping for air as you churn through the water, praying for the end of the pool. Move through the water, don’t move around in it!

I have offered just a glimpse of this technique-focused approach to swim performance, which Terry Laughlin, Founder of Total Immersion Swim has been developing for years. See Terry’s blogs for lots more information on tempo training workouts. **HN**

*Shane Eversfield, Total Immersion Master Coach and author of *Zendurance*, is currently producing a DVD “Tai Chi For Athletes”, and a “vook” (e-book with embedded video) on triathlon cycling technique. Both will be distributed through Total Immersion. He is available to lead workshops: Shane@totalimmersion.net*

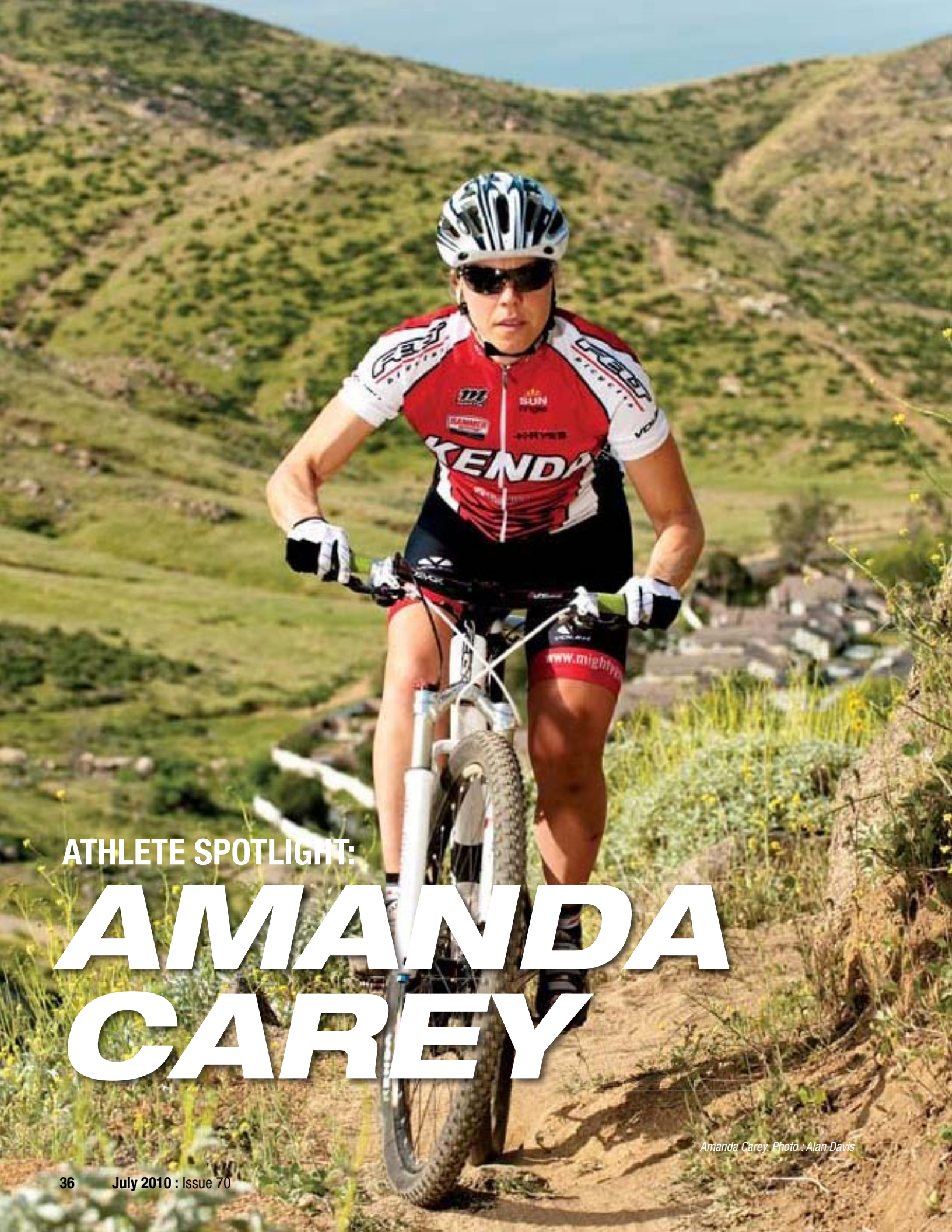


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ATHLETE SPOTLIGHT:

AMANDA CAREY

Amanda Carey. Photo: Alan Davis

Our "spotlight" athlete in this edition of Endurance News is professional mountain bike racer, Amanda Carey, from Victor, Idaho, a small but growing town near the Wyoming border and within close proximity of the well-known ski resort town of Jackson. Amanda has been racing for the Kenda Professional Mountain Bike Team for the past three years (2008-2010) and is a rising star, with an impressive resume over the past couple of years. Here's just a sampling of her accomplishments; what Amanda considers her career highlights:

- 2nd place – Leadville 100 in 2007 and 2009
- 1st place – 2008 Iceman Cometh, 4th place 2009 Iceman Cometh
- 2nd place – Intermontane Challenge Stage Race – Kamloops, BC – 2009
- 2nd place – Park City Point-to-Point – 2009
- 1st place – Front Range 50 2009
- 1st place – Santa Ynez Classic Kenda Cup West
- 1st place – Cascade Creampuff – 2007
- 1st place – The E100 – 2007

Amanda's 2009 results—and these are just in mountain bike races—are quite impressive . . .

- 1st place – Desert Rampage, Intermountain Cup, St. George, Utah
- 3rd place – Kenda Cup West Sagebrush Safari, San Diego, CA
- 1st place – Kenda Cup West-Santa Ynez Classic, CA
- 1st place – Front Range 50 Miler, Lakewood, CO
- 1st place – Soldier Hollow Intermountain Cup, UT
- 1st place – Sundance Spin Intermountain Cup, UT
- 7th place – Marathon National Championships, Breckenridge, CO
- 2nd Overall – Intermontane Challenge Stage Race, Kamloops, BC
- 2nd place – Leadville 100
- 2nd place – Park City Point

... and her results so far in 2010 are pretty impressive as well (2010 is obviously shaping up to be another great season) –

- 11th place – Fontana Pro XCT, XC, 12th short track
- 14th place – Sea Otter Classic XC
- 1st place – Barking Spider, Wild Rockies Series, Boise, ID
- 1st place – Cohutta 100, Ducktown, Tennessee, NUE Series Race #1
- 2nd place – Front Range 50, Lakewood, CO
- 1st place – Dirt, Sweat, and Gears 12-hour, Fayetteville, TN

A longtime Hammer Nutrition client, Amanda and I had a chance to catch up shortly after her return home from Fayetteville, Tennessee where she competed in the Dirt, Sweat and Gears, a 12-hour endurance mountain bike race. As a former ultra endurance competitor myself (albeit on a road bike), I really looked forward to hearing what Amanda had to say and, especially, her perspective on ultra distance racing. It turned out to be a great interview, one that I thoroughly enjoyed.

STEVE: First of all, congratulations on your win at Dirt, Sweat, and Gears . . . great effort!

AMANDA: Thanks. It was a wild day of racing. The weather kept it really interesting, that's for sure.

STEVE: If I'm deciphering the results correctly, you won by a sizable margin, completing ten laps in a bit under ten hours, 40 minutes. You clearly had plenty of time to complete another lap before the finish time would be reached. However, the next rider in the Solo

Pro Open Female division had completed the same amount of laps but needed just about the full 12 hours to complete them. Was that the primary reason you opted to not go out for another lap, because you had built such a lead over your competitors?

AMANDA: I stopped early because I could and because it was the smart thing to do. I had steadily built a lead throughout the day by riding strong and steady and managed to lap the field by about 7:00 pm. I came into my pit at 7:40 pm and my husband told me that I

could be done if I wanted to be done and it was up to me if I wanted to do another lap.

It's funny, the more racing experience I get, the more I have learned to not let my ego get in the way of smart decision making. I easily could have finished another lap. However, the real question at that time was "should I?" And the answer to that was clearly no.

STEVE: I was looking at the results and it appears that you would have more than held your own against the Solo Pro Open Male field. That's got to make you feel pretty good . . . or do you not think/care about those kinds of things?

AMANDA: Of course it feels good, but what feels even better is the accomplishment of putting together a really solid race from start to finish.

STEVE: I was checking out your blog (amandarileycarey.blogspot.com) and you mentioned that the weather on race day in Fayetteville was pretty harsh - 92% humidity, temperatures reaching 85-90 degrees, and a 40% chance of severe thunderstorms and rain showers. In fact, after about three hours of racing, the rain came in full force . . . as you wrote in your blog: "Thunder, lightning, and a deluge of rain hit the north half of the loop. It was the strangest weather event I've ever seen on a race course. Half the course turned into a wet, sloppy, peanut butter mud-filled death march and the other half remained dry."

All of those conditions—especially the high humidity and warm-to-hot temperatures—must have been pretty difficult to deal with, especially with you coming from Victor, essentially a mountain/ski town. Were you concerned about the conditions and how did you cope with them?

AMANDA: The mud didn't concern me as I am really comfortable riding in sloppy conditions, but the humidity worried me a lot. I don't suffer too much in dry heat, but for some reason my body freaks out in humid conditions. Historically, I have always struggled and had poor results in humid conditions (Sea Otter 2009 comes to mind). It doesn't even need to be that hot

- continued on page 38

temperature-wise. For me, there really is not much I can do to physically prepare for those conditions. I just mentally prepared myself to feel icky and sticky all day. I also made sure that I preloaded on Endurolytes the morning of and the days leading up to the race (and of course during) and upped my fluid intake during the race. The mid-race rainstorm helped a lot but there was no real way around it, I suffered.

STEVE: Let's backtrack a bit here. When did you start riding and what got you into the sport?

AMANDA: I started riding trails shortly after I moved to Jackson Hole in 2000 to be a ski bum. I needed something to do in the off-season and I quickly found that mountain biking gave me the same adrenaline fix as snowboarding did. At the time, my sister was a pro downhill, but I had never taken an interest in the sport until after college.

I quickly realized that the mud season was so long in Jackson that it made sense to buy a road bike, too. So, I got a road bike in 2004 and the same year competed in my first road race. But what has kept me so dedicated to bike racing and certainly what got me interested in it in the first place has been the consistent and positive encouragement from my friends, family, husband, and training partners throughout my ever-evolving career.

STEVE: So you started in road cycling – I believe your first race was LOTOJA, a one-day, 206-

mile road race from Logan, UT to Jackson, WY. Did you continue to do road cycling for awhile and then switch over to mountain bike racing? Or did you quickly realize that you either were an even better mountain bike racer, enjoyed that sport more, or both?

AMANDA: I tried road racing for a year and it never really clicked with me. It just always felt like I was trying to fit a circle into a square; no matter which way I turned it, it just didn't quite fit. I had some decent results but I never felt positive after road races. And that's where mountain biking started to make more sense to me. I started racing mountain bikes in 2006 and just fell in love with the people, the venues, and most importantly, with the riding style. Mountain bike racing is just more my personality; no waiting around, no hiding in the pack, no parading in circles for hours so a team can line up a sprint finish. The gun goes off and you just pin it as hard as you can for as long as you can. That's what I love most.

STEVE: Of the races that you've competed in during your career, which one (or ones) are your favorites, and why? What makes this/these particular race(s) special to you?

AMANDA: Wow, hard question. There are so many great races and wonderful promoters out there who pour their heart and souls into their events. But Iceman is one of my favorites just because the atmosphere is so exciting. In terms of

course quality, the Park City Point to Point definitely tops my list. My face hurt from smiling so hard the entire day because the single track there is so sweet.

But, then there's Leadville. Even though the course is mostly road or double track, it is one of the most exciting and electric competitive atmospheres a racer could ever experience. Having 10,000 people scattered along the course cheering you on throughout the day was amazing. Ultras can be very isolating and most of the time it is a very lonely racing experience. Ultra racers are accustomed to listening to the voices in our own heads, not cheers from spectators! Anytime you have crowds like that cheering you on all day, it makes a race special.

STEVE: Is there a particular race that sticks out in your mind where you could describe your performance as being "as close to perfect as it gets"?

AMANDA: Iceman, 2008. I just felt "on" and remember that as a day where everything felt easy, automatic. Those feelings gave me the confidence to attack mid-way through the race, to drop the two women I was riding with and ride solo for the win. There was a real absence of thought involved. Pure action, no thinking. The effort just flowed out of me. Why it happened? Well, if I knew that I would be winning a lot more races!

STEVE: I think everyone has had at least one race where absolutely

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nothing went right no matter what they did. Have you had an experience like that? If so, what race was it and what happened that made it such a rough race?

AMANDA: Oooooohhh, yeah, that's an easy one. Last year's Leadville 100 (2009) was the worst race of my career for many reasons. And, unfortunately, this very bad day happened during my most important race of the season. Leadville was my "A" priority race for the year and everything up until that point had been build up for that day. I am not at all hesitant to admit that I REALLY wanted to win and had dedicated a lot of effort, mental energy, and time training on the course to make it happen.

The day was just bad all around. It started off with me getting sprayed in the face and neck with fresh cow dung in the first section of dirt, so I had cow poo all over my gloves and body for most of the race. And I just didn't feel as good as I had hoped I would feel. However, things really took a turn for the worse 50 minutes into the race when I flatted. I discovered that I had torn a sidewall while riding just behind the eventual race winner. I tried to seal the flat with CO2 but that didn't work. I finally had to put a tube in and after putting it in, discovered that the tube had a hole in it. By that time, I was out of CO2 so I had to beg a tube and a pump from someone. Finally, 20 minutes later, I was on my way, borderline hypothermic (it was raining and about 40 degrees at the time) as I had just stood still for waaaay too long. In the meantime, I had been passed by hundreds of slower racers right before the critical powerline section of the course. That not only left me in "chase mode" all day, it caught me behind all the slower traffic on the descents that I had just buried myself trying to pass at the start.

Although I struggled with physical challenges, the mental battle was the hardest part. I had a hard choice to make the moment I got rolling again after I fixed my flat – do I feel sorry for myself and quit or change my focus? Don't get me wrong, I spent a healthy dose of time lamenting my unfortunate and complicated flat, but I made the pity party a short one and refocused my efforts.

So even though I finished 2nd overall, it was an extremely disappointing day for

- continued on page 40



Amanda Carey. Photo : Alan Davis

me. It was one of my hardest days on a bike, yet to this day, it is still one of my proudest. I had the flexibility of mind to change the game plan mid-race when things weren't going my way. I never gave up. I'm charging just as hard after Leadville again this year. There's no way I am going to take the safe approach of "we'll see how it goes." I'm in it to win it, so wish me luck!

STEVE: You had been a client of ours long before you were on a Hammer-sponsored team. How was it that you chose Hammer Nutrition?

AMANDA: My local bike shop had Hammer products on the shelf and a lot of my cycling buddies who introduced me to the sport used a variety of Hammer products. I remember my first taste of apple cinnamon Hammer Gel; so tasty and it made me feel great on the bike. From there, I was hooked! Over time I have tried almost every product and have now established a regimen that works well for me.

STEVE: Obviously, these races, be they short-duration or ultra distance, are very demanding. What does your fueling and supplements use look like in the course of a race?

AMANDA: I have to admit that I have a very sensitive stomach both pre-race and during races. After a lot of trial and error, I have learned that my body responds best to a very similar fueling plan in shorter XC races and in ultra events. That means HEED, Hammer Gel, and Endurolytes. My pre-race

meal is always baby food with a scoop of Hammer Whey mixed in 3-4 hours pre-race (don't knock it 'till you try it!). It has good, easily digestible carbs and the protein keeps the sugar rush at bay. There was a time where I relied on products like Sustained Energy in my ultras, but as I got faster and increased my capacity to ride at a harder effort for longer, my system would no longer tolerate protein. I always finish races of any distance and training sessions with Recoverite. Although the new chocolate flavor is awesome, strawberry is still my favorite. I also take Race Caps Supreme religiously both in training and during racing for their recovery element.

I tend to have trouble sleeping at high altitude and after ultra races. I never travel without REM Caps and take them regularly before, and especially after, races. I don't wake up drowsy and a little goes a very long way. Next on my Hammer wish list is a Globus E-stim unit. Then, I think I will have the real, total Hammer package!

STEVE: What's coming up on your 2010 racing schedule?

AMANDA: Lots! After my next 100-miler (the Mohican 100) I am going to take a break from the ultras and shift back into more XC-distance races in July to get in some speed work to prepare for Leadville, which is my "A" priority race of the season. Marathon Nationals are July 4th in Breckenridge and although the distance isn't quite long enough to suit my strengths, I still want to do well there. The Breck Epic is something

I put on my schedule for fun, as it is a week after Leadville and I figured after all that focus and training I will just want to be somewhere spectacular, riding phenomenal single track with no training or performance pressure for a week straight! After a few weeks off, I'll kick off a full UCI cross schedule with Cross Vegas and carry that through to Cross Nationals in Bend, OR in mid-December.

STEVE: Do you have any major plans, in terms of racing, for the upcoming seasons, or are you just taking it season by season?

AMANDA: I really just go season by season. I would like to do more mountain bike stage racing in the future and definitely want to race internationally someday. I think more funding and some racing partners need to come up for that to happen, but events like the Cape Epic, the Trans Alps, the BC Bike Race, and maybe La Ruta all come to mind. I still have no desire to get into 24-hour racing. I like riding my bike too much to have to wait that long to recover between races!

STEVE: Aside from racing, what other hobbies/interests do you have?

AMANDA: Right now I am working on my Master's Degree in Sports Psychology. It's an online-based program so it enables me to take work with me to race and to train. My end goal is to get into health and wellness coaching rather than working exclusively with athletes. Cycling has taught me so much about the incredible benefits of a healthy and

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Amanda Carey celebrates her win at Dirt, Sweat, and Gears. Photo : Paul Henry

active lifestyle, I am more interested in working with everyday folks who perhaps need just a little encouragement to move towards a healthier, more stress free lifestyle. Right now, graduate work pretty much takes up all my time outside of training and racing.

STEVE: What pieces of advice would you give to someone who's just getting started in long distance mountain bike racing?

AMANDA: The one simple piece of advice I give to beginner ultra racers is this: come to every start line mentally prepared to ride your bike all day. That's it. Ultras are all about making the commitment to the adventure before the adventure starts and expecting that there will be times when you are going to feel awful and times you are going to feel great. You have to know that it is all part of the experience.

The beauty of long distance mountain bike racing is that whatever you are feeling at any given moment during a

race won't last. As long as you make the emotional commitment to riding through the rollercoaster of emotions and supporting yourself through the crazy spectrum of feelings you will have during long distances, it's all going to be okay. Go easy on yourself. Smile. Chat with other racers. Most importantly, be your own cheerleader. The race is going to be hard enough. You don't need to make your day harder by getting down on yourself if you do start feeling bad! Accept it and put your energy into something else . . . like how awesome it is that you are out there doing it in the first place.

More specifically, if you start getting at all serious about racing, get yourself a coach. It is the best investment I ever made. I started with my current coach, Eric Orton, almost immediately after my first road race. He has been such a critical part of my success as an athlete and has given me an invaluable amount of guidance throughout my developing career.

STEVE: How has Hammer Nutrition helped you in your training and racing?

AMANDA: What I like the most about Hammer is the wide variety of products and knowledge they make available to athletes. As I mentioned before, my fueling strategy has evolved over time according to my race length and my ability. Hammer not only has the range of products necessary to allow me to change my fueling strategies, they have the knowledgeable staff, newsletters, and general information available to me so that I can continuously learn more about my fueling and recovery needs.

STEVE: Thanks for taking the time to chat with me, Amanda; it was awesome! Thanks for representing Hammer Nutrition so well in your training and racing, and best wishes for continued success to you!

AMANDA: Thanks, it was my pleasure!

"I live in Tucson and the heat is coming on . . . nothing works as good as Hammer Nutrition!" - Alex

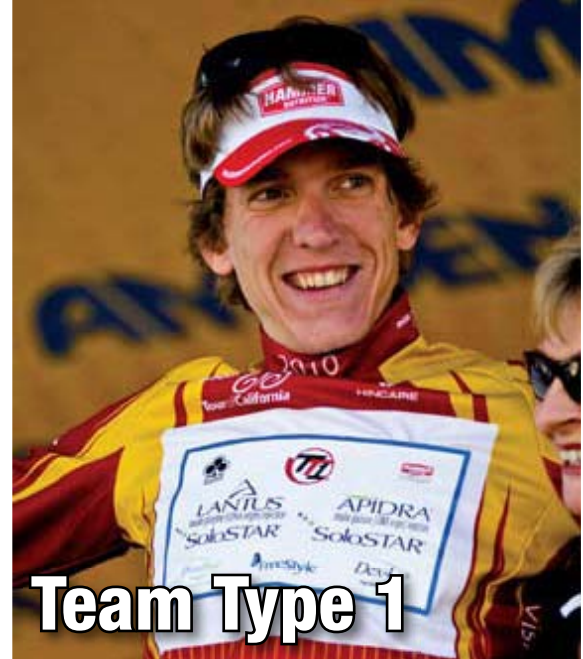


Nate Weston Back from Belgium

Highwood Omnium

1st in Category 3 in the Time Trial
3rd in Category 3 in the Road Race
2nd in Category 3 in GC

I had just returned from Europe and was very curious as to how much of an impact my racing and training in Europe would have on my U.S. racing. My Canadian teammate Jannes Wessels told me, "it never gets easier, just faster." That it did. In my first race back in the U.S. I suffered my way through a 9 mile time trial at the Highwood Omnium and much to my surprise, I ended up winning by 26 seconds. I had hoped to do well, but winning was above and beyond my expectations. I went on to have a decent road race that afternoon and a 2nd place overall in the GC which I was very happy with. Great welcoming home present!



Team Type 1

"At the beginning of the Amgen Tour of California, I mostly ate as much solid food as possible. The Hammer Bars were the best fit. The further we got into the race, I started taking in more and more gels. Hammer Gel gave me energy very fast. It was easy on my body which was ideal during the final stage of the race.

The queen stage of the Tour of California was Stage Six - a stage with seven KOMs, 12,000 feet of climbing at altitude, and around 135 miles long. This stage definitely required the most energy out of my body. The length of the stage in combination with the heat that day made it a big Hammer day! I lost count, but I am sure I had a lot of Hammer Bars and gels!

I had a very strong week during the Tour of California and without the Hammer products I would have had an even harder time getting the King of the Mountains jersey!" - Thomas Rabou

Being different makes a difference

Just a note to say thanks for great products and information. My daughter got me started on Hammer Nutrition by sending me some Perpetuem. Have since been using Perpetuem along with Heed, Recoverite, Gels and Endurolytes. Did my first century last year totally fueled with Hammer. Skipped the rest stop food and just mixed up some more Perpetuem following your directions. Finished strong. Guide to Success was very helpful. Got my older brother started up. We just did an Adventure Cycling trip and kept the fuel going with Hammer. Hauling the extra 50 pounds on the bike was an experience. Recoverite was first on the list when getting into camp. While I am not a hardcore racer (not even close) I remain consistently impressed with your products and with your company. You really are different.

- Pete Huley



Pete (R) and his brother Bob the morning of their departure on the Adventure Cycling trip.

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As has been our policy right from the start, unlike many other companies, we do not attempt to make a profit on shipping charges. Now we're going above and beyond that commitment, making things simpler for you when it comes to shipping and saving you even more money at the same time!

As you can see from the tables to the right, these are significant savings for you across the board, especially when you order \$100.00 or more! We do, of course, continue to offer 3-Day, 2-Day, and Overnight service, and we'll continue to use the FedEx published rates for orders being sent via any of these expedited methods. However, now when you choose "cheapest way" (i.e. FedEx Ground) you'll save more money than before!

Athlete feedback about our updated shipping policy!

Joseph Manacaruso called and mentioned that he really appreciates the free shipping for orders of more than \$100. He used to make sure his orders were over \$250, for the old free shipping policy, and always got in trouble with his wife. Plus, he couldn't afford to order as often. He also refers Hammer to friends and finds that people are more comfortable with ordering products from a new company if they don't have to pay for shipping.

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\$50 to \$99	\$9
\$100 to \$149	\$10
\$150 to \$249	\$11
\$250+	FREE



Have your mousse and eat it too!

A delicious post-workout snack

Mix together a cup of ricotta, a scoop of chocolate Recoverite, and a splash of vanilla soy milk. It's like chocolate mousse!

- submitted by Leslie Cornick



Making the winning formula simple again

BY TONY SCHILLER



Andy Schultz takes the top prize at the Whiskey 50.
Photo : Ben Sullivan.

We're just coming into the heat of the season. If you can already call your season a complete success, you're definitely in the minority. For most of us, success in this season all hangs largely in the balance of what we do in the next several weeks.

So you read and skim through these pages, chock full of cutting-edge sciences and motivation, hoping to find that little nugget you can apply now to turn your 2010 season into the one you dreamt about last winter. It's a good practice. Even if the information isn't always new to us, sometimes it's all about timing and delivery. Ideas that may have never registered before can suddenly hit home when the student is ready.

At the same time though, information alone rarely changes behavior. The reason that's true for endurance athletes in particular is we are notorious for seeking information that anchors us further into our current patterns and beliefs. Here are three really common examples of what I'm referring to:

- The overtrained athlete won't seek advice on how to recharge by cutting back – he finds new ideas on how to beat the fatigue by working through it without ever reducing miles
- The wound-so-tight athlete doesn't Google "letting go techniques for reducing stress" – she looks for better ways to analyze her training, pay more attention to details and intensify her focus
- The guy who can't get himself out the door to log miles isn't the one who joins training groups – he's the one at the workshop asking all the questions about maximizing "training zones" and "periodization"

As they say, we are what we are. So as you read these pages and look for that little pearl of wisdom on making the most of the rest of this season, try some simple approaches. Sometimes, the little things make the biggest difference of all. Most definitely, they're easier to take, to have success with, and to maintain. It's not about big changes – they usually don't stick and they rarely work. Just start with some really simple but maybe not so obvious questions like:

What's one thing I change or do, right now, that will have an immediate impact on my season? What's blocking me from doing it? How can I overcome that? What's the first step? When will I take it?

Going through that process last winter helped me to see my truth... I'd gotten sloppy. I was mailing it in. I was sleeping in and not doing the first workout of the day until after work. I assumed it was a motivational issue like not having a clear goal and needing some new inspiration. That wasn't it at all. I'd just broken routine and fallen out of the good habits that had been my key to success. That makes everything harder, including motivation.

That's when I went back to the basics, putting myself once again through the 15-day challenge which I wrote about here in the last two issues. It was a simple fix – doing 2 x 15 minute workouts everyday for 15 straight days – but the simplicity is what's beautiful about it. It was an easy way to quickly get back on track and into good daily habits.

Which comes first, forming good habits or taking repetitive steps for 15-straight days? Training is hard until you get into the habit of making it easy. It was amazing how many things fell into place again once back into the habit of training well.

Attitude works the same way. When you really care about your racing and you're not racing well, it's hard to have a great racing attitude. At the same time, it's hard to race really well if you don't have a great attitude. So here's what might seem like an absurd comment: when you're not racing well, sometimes the last thing in the world you should put more energy into is thoughts of why you're not racing well. You might get a lot more out of asking yourself, how would I be acting if I were racing really well? Then act that way. You don't make great music because you're a rock star; you become a rock star by making great music.

As crazy as it sounds, that's the formula. How you race is not always a reflection of how things are going in your life. Sometimes, racing well is what helps to hold things together when your life feels a little out of control. And then at other times, you need to get your life in control in order to race well again (think Tiger Woods).

So, now that I have you thoroughly confused, let's simplify the whole gist of this article this way:

- To feel faster – do fast stuff**
- To feel less tired – rest more**
- To feel less stress – lighten up**
- To feel higher energy – get energized**
- To feel funnier – laugh more**
- To feel worthy – be deserving**
- To feel confident – believe in yourself**
- To feel hunger – crave something**
- To feel invincible – embrace your gifts**
- To feel motivated – motivate a friend**

Joint health second to none!

"Breaking into 2010 as a Hammer Nutrition-sponsored athlete is an awesome boost to my athletic career, no doubt about that. Just coming off a Boston Marathon qualifier (last November) fast enough to enter in sub-elite status sweetened my new year even more. Then a top ten finish at the National Masters 1/2 Marathon C championship in Florida (January) brought positive reinforcement indeed. In all, I felt recovered and ready to P.R. in Boston come April.

Just two weeks prior to the prestigious marathon I suddenly pulled up lame. Half way into a recovery run, tendinitis seized my right ankle and stopped me cold. Historically, I have been blessed with very few injuries in my 25+ years of competing. This body has hammered through sports ranging from alpine racing to IM triathlons. The few issues that held me back for a time basically stemmed from overtraining . . . go figure. What can I say, I am focused and intense in matters of the soul. I DON'T hold back. Every now and then we are forced to hold back by what ails us . . . forcing a time of recovery and mental rejuvenation. Often it comes at the most tragic time . . . smack in the middle of an awesome race season. Damn.

So far this year, I have canceled three high profile events due to this persistently aggressive injury. Ice baths, topicals, and electrical stimulation helped, but OTC (over the counter) aids twisted my intestines up causing more misery. Being a naturalist, I rarely take synthetic anything, so drugs are way down on my shopping list. This is why such aids cause more upset in nasty side effects than what it's worth. As if being sidelined by injury isn't enough of a kick to my 'gut'.

Rummaging through supplement drawers, I came across my misplaced bottle of Tissue Rejuvenator. Ditching the OTCs and taking T.R. instead was the first real step to aiding overall recovery. Right on!

I am still nursing the tendinitis, coming back methodically in hopes of peaking out for a Du World Championship in Scotland later this year. T.R. is back in the gym bag, helping me recover faster with its bang-up blend of natural anti-inflammatory nutrients. Thanks, Hammer Nutrition!" - Christine Hauger



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" The customer service is stellar. Thank you for your assistance!" - Scott D.

Climbing into the history books

Hammer powers teen, and family, to Everest summit!

This must be the topper for the saying, “The family that plays together stays together.” You see, Paul Romero and Karen Lundgren are superstars in the world of adventure racing, and we at Hammer Nutrition have been honored to sponsor them for many years. However, there’s another stud among the roost and what he’s done is a nothing-short-of-phenomenal, one-of-a-kind achievement.

On May 22nd of this year, 13-year-old

Jordan Romero became the youngest person to reach the summit of Mt. Everest. In addition, Paul and Karen reached the summit with him and became, as is listed on Jordan’s website, “The First Family to Stand Together on the Summit.”

I had just a quick moment to talk to both Karen and Paul prior to this issue of Endurance News going to press. Karen told me that they all used a variety of Hammer Nutrition supplements including



Premium Insurance Caps, Tissue Rejuvenator, Endurance Amino, and Super Antioxidant. They also used the Sedona Labs probiotic product, iFlora, which Hammer Nutrition distributes. Karen said to me, "We, and Jordan as well, know the importance of taking things like Premium Insurance Caps on a daily basis."

As far as fuels are concerned, they used Hammer Whey quite extensively, as well as Hammer Bars. Karen told me, "Our plan was to use Perpetuem on our Summit Push; however, when our water was frozen it wasn't possible." When I asked her and Paul if they all used Hammer Bars, Paul emphatically replied, "HELL YES, Hammer Bars! Had two at high camp and at least three that fueled each of us to the summit; it was about the only thing we could eat."

We at Hammer Nutrition congratulate Jordan on an absolutely astounding accomplishment, and also want to congratulate Paul and Karen as well for this most-amazing achievement. Is this the "Super Family" of endurance athletics? I think you'd have a hard time coming up with one to top Jordan, Paul, and Karen.

Congratulations again to all of you from your friends at Hammer Nutrition!



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Hammer Bars travel to Everest



Karen Lundgren, Jordan Romero, and Paul Romero climb with their sherpa to the summit of Mount Everest.

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Promises to Break and Promises to Make

BY BILL NICOLAI

*"And you know that you're over the hill
when your mind makes a promise that your body can't
fill"*


- Little Feat

*"The woods are lovely, dark and deep, but I have
promises to keep, and miles to go before I sleep"*

- Robert Frost

So much of our sporting life is determined by promises we make to our selves. Each day we set out to do a run or a ride, each time we sign up for an event, set a goal for that event and when we commit to a training schedule; all of these acts involve the choice of one alternative over another. And with each decision, there is often an accompanying promise made. Once you make a promise to yourself, you may well follow it for better or worse, so it is good to be mindful of the promises you make and take care that they lead to healthful and pleasant outcomes.

But it is not just the resolve to do something or a commitment to a goal that encompasses the promises we make. Frequently we make promises to ourselves that limit our success. We hedge, we waffle, and we give ourselves an out. These often-unwitting commitments to mediocrity sneak into our consciousness and become negative influences on success and happiness. Try to note where you have made such unhelpful promises and if you find any, I suggest you abandon them. I have found that some of the most important promises are the ones I end up breaking.



*Dustin Phillips leads the peloton around
a turn at the 2010 Fish Trails Criterium.
Photo : Jason Keister.*

Promises to Make

Resolve that you will do this for fun

The pain = gain crowd eventually loses interest, because in the end it is impossible to keep up something you don't enjoy.

Promise not to focus on beating someone else in a competition

Why should you let someone else decide for you whether you are successful? Your true competition is yourself.

Promise to trust yourself.

You are not lazy, you are not inept, and you will improve. So many athletes negate their success by telling themselves they cannot succeed. They are right.

Promise to do what you are doing.

I often see people who want to be fit trying to read a book while they stair

climbing or listen to music while they ride. They never seem to make any progress. All the best athletes I know pay full attention to what they are doing.

Promise to keep other life goals intact.

A friend of mine let his business languish while he put everything into qualifying for Hawaii, and almost did. It cost him five years to put his business affairs back together. He became overweight and stopped his athletics. But there is a happy outcome. I now see him running and riding and since he has aged up, maybe he will achieve his objective.

Promise to try something new.

If you find the long distance cycling training for triathlon pleasant, maybe a double century is the direction you should go. How about unconventional

multi-sports events involving kayaking and mountain bike legs?

Promise to finish.

A finish in a challenging event is always more satisfying than having gone fast at some point, only to fail and DNF.

These are some of the promises I have found that benefited me and these have become the promises to keep. So break the promises that are holding you back and then take a fresh look at the commitments you have made. Have you promised yourself enough?

Promises to Break

Limits to ambition.

If you vow you will never do an event longer than an Olympic triathlon, you may later find that a half iron distance event is actually more fun. I once told myself I would never do an event I couldn't complete in one day, only to find I really enjoyed multi day bike races.

Promises to slow down.

So many athletes reach a point where they stop trying to go faster and from there they begin a slide towards giving up entirely. The essence of these sports is that they are a challenge, so a promise to participate half-heartedly is to miss the main point.

Keeping to a preordained race plan, no matter what.

You can sometimes save a race by abandoning intended pacing in favor of one that feels right and matches the conditions you experience on the course.

Last fall in a very hot 12-hour time trial, I slowed after hour 9 when the temperature became an issue. Several of my age group competitors then passed me as they kept hammering onward. But they all dropped out by hour 11 and I won the age group.

Promises to maintain a set schedule of goal paces and times.

You might be observing these standards, when they are beyond your ability or current level of fitness. If you blindly persist it will likely lead to injury or sickness. If your plan is going south as you approach race day you may well find that a somewhat more freeform approach will work better. Once in a while forget about pacing and do some runs and rides just for pleasure. Often your fitness will improve and your goals become obtainable as you find your own natural pace.

Promises to quit.

Some athletes do this at some arbitrary age or when they can no longer maintain some previously obtainable pace. I once promised to reach my athletic peak at age 55 and indeed I did finally do an ironman when I attained that age. Then I realized that I could still get better, so I broke that promise and went an hour faster the following year.

Thus, I have found that many promises I have made were unworthy of me and I have benefited greatly from abandoning them. Do you have commitments that are not working for you and holding you back? If so, by all means break those promises.

"I received my order last Saturday and it was very well packed! Who ever packed and shipped it did a very good job." - Leticia M.

Website Updates

Now it's even easier to navigate! BY STEVE BORN

We've been super busy updating our website and we want to keep you up to date on what's been happening. Here's what we've done!

Hammer Forums

The Hammer Forums have replaced our old Yahoo lists with up-to-date forum software. Here you will find the same relevant discussions—on two separate forums, the Endurance Forum and the Electrostimulation (Globus) Forum—with Hammer Nutrition experts and clients, directly on the Hammer Nutrition website. There are many new features that make the forums easy to use, including a digest email that alerts you of new posts you wish to see via email. You'll find more information about the Hammer Forums at www.hammernutrition.com/forums/ucp.php?mode=register. Check it out, register today, and be a part of these fun and informative discussion forums.

Events Calendar

Coming soon! The new events calendar will be a location-searchable database of all of the events Hammer Nutrition sponsors, which will once again easily exceed the 2,500 mark this year.

Athlete Education Series (AES) Now Available Online

All of the great information from the Athlete Education Series pieces is now available to you online! As the saying goes, "Knowledge is Power" and all of these AES pieces contain detailed information that will educate you on specific Hammer Nutrition fuels and supplements. Just a click of the button will take you to whichever product we currently have an AES piece for. We will be updating this area of the website constantly (as soon as a new AES piece is completed) so check it out.

New Digital Format for Endurance News and Athlete Education Series

This offers the same viewing features as reading a publication in print. The digital format is an interactive version of our publications with links to all relevant information, and easy PDF download with print, email, and search capabilities. This new format allows you to turn the pages right on your screen as if you were actually reading the printed version. You'll find all the issues of Endurance News, and the most current Athlete Education Series pieces online.

Other Features

The Hammer Nutrition blog contains lots of useful information, tips, and interesting stories and features that we know you'll enjoy reading. We update our blog regularly so visit often!

The Hammer Nutrition Facebook page now has over 5,500 fans and is growing on a daily basis. If you're a fan of Hammer Nutrition, you'll want to make sure you're a part of our ever-increasing fan base. Join today and receive exclusive updates and interact with other Hammer Nutrition fans.

Quick Order Page

We have created a slick new website feature for new and returning customers alike. Pictured to the right, the quick order page lets you view and order all of the Hammer Nutrition fuels & supplements on one page. Your cart scrolls along the



page with you, making it a one-stop shopping destination. If you want to know more about a product, detail links take you to the product pages.

QUICK LINKS

FORUMS :

www.hammernutrition.com/forums/

ELECTRONIC AES :

www.hammernutrition.com/knowledge/athlete-education-series/

ELECTRONIC ENDURANCE NEWS :

www.hammernutrition.com/knowledge/endurance-news/

BLOG :

www.hammernutrition.com/blog/

FACEBOOK :

www.facebook.com/hammernutrition

QUICKORDER :

www.hammernutrition.com/quick-order/



Catching Up With A Friend

Back in Endurance News #65, Brian wrote about how gratifying it was to catch up with long-lost clients/friends. In “A Blast From the Past,” Brian talked about one of his first sponsored athletes, John Devere, and how great it was to reconnect with him, hear about his attempt to return to competitive athletics, and to know more about his children, Kieran and Ian, both of whom are budding athletes.

What wasn't discussed was the tough road John's had to take to get back to simply being active, let alone competitive. Apparently, John's body had taken quite a toll over the years; he was in constant pain and was thinking that a double hip resurfacing and/or replacement was his only option. When Brian heard about it, he supplied him with quite a bit of advice, along with some Tissue Rejuvenator and Boron to try in the hopes of helping him avoid the surgery, become more pain-free, and perhaps even get back into competitive athletics.

Earlier this year, John wrote to Brian and said, “I've been taking the Tissue Rejuvenator and Boron for my hip. I don't know what's in those things, but my hip has been doing much better. I was sure I'd have to have my hip replaced/resurfaced this year, but lately it's been feeling pretty good. I will continue to take both products and hopefully it will prolong having to have surgery. I can't say ‘THANKS’ enough for putting me on those products.”

Brian wrote John back, CC'ing me in on the reply, and we both thanked him for such a great testimonial, while also providing him with a couple more suggestions (such as the Carlson Norwegian Salmon Oil) that would augment the benefits that he was receiving from the Tissue Rejuvenator/Boron combination.

We recently received an email from John who said, “I've been staying on the regimen you and Born put me on and it seems to be working. Hip's feeling pretty good. Did a 90-mile road race today and raced Pro/1/2's and got 3rd!!! Not bad for a 50-year-old man!!! I'm slowly getting stronger and I know the supplements that I use from Hammer really, really do help!”



John also took the opportunity to bring us up to date on his children and their racing. He wrote, “Kieran won the Sierra Kids Triathlon a couple weeks ago. They made her race up and she had to race 13-14's, even though she's only 12. She worked so hard for it and beat two girls she's never beaten before. She also won two time trials (see Kieran's picture on page 58). Again, thanks for all the support you and Hammer have given our family. Oh, and my son [Ian] won the six and unders in his first triathlon!”

We want to thank you, John, for keeping us up to date on the athletic endeavors of you and your children. Congratulations to you, Kieran, and Ian on your accomplishments! We also want to thank you for such positive feedback on how the Hammer products have helped all of you!



Tina Pauley (left), fueled by Hammer, smiles at base camp on Mount Everest. Tina, and a group of 23 other athletes (below), took part in the 'Everybody to Everest' event which raises funds for the Challenged Athletes Foundation (CAF). To date, the group has raised over \$100,000!



THE *Classic* CYCLIST *Part One*

BY CHRIS KOSTMAN



*The author (L) with Sky Boyer near Mount Laguna, CA during a rough riding adventure on classic steel.
Photo : Dustin Sharp / Paleo Velo*

Road Cyclists entering the sport over the past fifteen or so years have tended to come in by way of mountain biking, triathlon, or fitness, rather than pure road cycling. As a result, most of these “cyclists” lack the knowledge which makes up the foundation of the classic cyclists’ repertoire and which builds upon the backbone of the sport. Here are some things the classic cyclist knows and does:

Proper Warm-Up

The best way to start a ride, or conduct any aerobic activity, is to warm up properly. “Warming up” is not just about elevating heart rate, however; it’s also about gradually warming up the entire body and bringing one’s attention to the matter at hand. This takes time to do it properly. A classic cyclist will take the first ten to twenty miles of a ride, or even a race, to warm up properly, usually staying off the big chainring and two smallest cogs. As a result, he or she will actually ride better and more quickly than the current jackrabbit style of cyclists who catapult onto every training ride or event. Frankly, it’s shocking to me that riders today just take off “like a bat out of hell” even on a training ride, or social ride. Back in the day, at a double century or a road race, riders would all

cruise together for the first hour or more, socializing while warming up properly. They’d end up becoming fitter, setting faster PRs than riders today in the same events, getting to know one another better, AND having more fun.

Work Together

Most cyclists nowadays not only don’t know how to ride in a peline, but that they don’t even understand why they should. In ultras, or even club rides, where drafting is allowed and the overall intention is to get down the road ASAP, one thing should be kept in mind: Work together, and when it’s not your turn up front, covet that rear wheel of your buddy! In the moment, you may think “it’s too hard to keep up at this speed,” but the classic cyclist knows that riding solo instead of with another means more work and less speed. Where’s the logic in that? Equally important, there’s a beauty and a grace to working with one or more fellow cyclists with an “all for one, and one for all” attitude.

This effort to keep the group together is specifically continued at checkpoints during events; those who arrive together, leave together. (Riders today will often sneakily slip out of a checkpoint a minute or three ahead of the riders whose wheels they were just drafting.

Riding solo, or with just one or two others, they will then ride more slowly than they had been in the group. Why not just keep the group together after the checkpoint, too?)

Embrace Suffering

Allow me to let Tim Krabbé, author of “The Rider,” explain:

“The greater the suffering, the greater the pleasure. That is nature’s payback to riders for the homage they pay her by suffering. Velvet pillows, safari parks, sunglasses; people have become woolly mice. They still have bodies that can walk for five days and four nights through a desert of snow, without food, but they accept praise for having taken a one-hour bicycle ride. ‘Good for you.’ Instead of expressing their gratitude for the rain by getting wet, people walk around with umbrellas. Nature is an old lady with few friends these days, and those who wish to make use of her charms, she rewards passionately.”

The classic cyclist accepts suffering as an intricate part of the experience. He or she certainly doesn’t whine in person, nor blog about “how tough that was” after the fact, nor just “call it a day” like

- See 'Classic' on page 55

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Suzy (in pink) and her Ragnar Relay Team at Dana Point after 31 hours of running.

Racing after injury

BY SUZY DEGAZON

I do not know what better way to get back into shape than racing after injury! There are no expectations of setting new records, no pressure at setting a goal. My only goal was to really enjoy my Boston Marathon experience and if that mean's walking half of it so be it. Then just 3 days later I had volunteered as a Relay runner for a group of runners who needed one more runner on their So Cal Ragnar Team! So I found my self with 8 weeks of down time into two weekends of fun racing!

Boston was a blast! I was not going to miss it; I was staying with my friends the Laskas' and travelling with my friend Jodi. Two days before the race we went for a 4 mile jog...mm was not feeling the love my foot should be giving me, it took a little time to warm to the feeling of cold Boston weather and actually running did not feel effortless and questioned my sanity at this point as to why I was in Boston! But after

walking around the expo, picking up my race bib, seeing the Brooks USA booth and stopping by Polar Heart Monitors I began to get excited wow, this is Boston!! And it would be my 46th Birthday and I was going to have a great race!

Race day came, the sun gods on my side even so I was dressed warmly! The atmosphere was electrifying, I was still recovering from a dental procedure and had my foot taped. I listened to the stories of athletes not training etc and chuckled they all looked in top shape to me! The gun went off and I was on my way to finishing the Boston Marathon, with so much history surrounding Patriots Day, I felt blessed to be a part of the celebrations. The crowds were amazing from the scream tunnel to College girls begging the runners for a kiss!! (I passed on that) There was way more down hill than I could ever have expected I knew I had to keep moving forward, Heartbreak Hill came and

went; I was so happy I was carrying Hammer gel and electrolytes as the only gel in the entire race was at mile 17 for the marathoners. My quads were screaming at me to stop, my foot was holding up, I slowed my roll and was sprayed down with Kool n Fit, gosh only 2 miles left, then suddenly I could see the finish despite all the adversity and dental issues I was going to finish Boston and in an unbelievable time of 3 hours 31 minutes! I began to cry it was all too emotional I had leg spasms and my hamstrings were so tight you could have played a violin but the bling bling was a priceless addition to my collection of medals! I called my husband who could not believe I was crying!! But it was pure happiness!

After the race and celebrations the worse part was sitting on a plane for 6 hours to get back to California, I had one full day before I was whisked off to Ventura to be part of a team of 12 Relay runners!

More time spent in a sitting position. By Thursday evening I was thinking I had probably bitten off more than I could chew! I was having trouble walking but needed to pull off three runs (23 miles in total) as part of my contribution to 200 miles in total.

The Relay was named after Ragnar who was a 9th century Norse King. He was a pirate, a raider, a conqueror, an explorer, and a wild man. The tough, fearless, rugged attributes of this Norse King are supposed to be shared by all who participate in the Ragnar Relay. In much the same way, a Ragnar Relay provides runners the freedom to roam, to explore - a free-spirited curiosity to get out there and experience outdoor adventure. And maybe even to conquer. And though tough or rugged may not have perfectly described the 12 of us, these attributes could become a goal. The freedom to roam was questionable as the Ragnar team ran a tight ship! We were part of 282 teams in total! Insane!! Having fun was the goal; I was taking Anti-Fatigue Caps, and Race Cap Supreme and supplied the whole van with HEED, Endurolytes, and Recoverite. I was trying to keep hydrated and stretch.

At 9.30am our first runner left, I was runner 8! And spent a long time at the transition I used that time to elevate my legs and clean my teeth! And took in all the different costumes runners were wearing! It's a funny thing but you can be feeling really tired and sore then you put on your race gear it is like putting on a superman cape I felt ready to race! I tied up my Brooks Shoes and checked my heart rate wow 55! I am either

really tired or ready to roll. I stand in the chute, there is so much cheering and shouting I am soon wide awake, we make a successful pass of wrist bands and I am off for my first leg. Why I get the uphill run I have no idea, but was not too bad considering the quad busting down hills I had experienced in Boston on Monday! I kept my stride short and soon was passing the wrist band on. My second leg was at 3am in the morning relatively flat I was in reflective gear and ran on the sandy path towards Santa Monica Pier! Yup 3am in the morning running with the Ocean on my right side and in blackness! I was not alone as the runners were spread out like a string of pearls! My last run was in day light through urban Orange County, I was so happy to finish that leg of the run! I could rest until our last runner ran across the finish chute at Dana Point. I had a killer suntan and as I was resting several runners asked where I had been on vacation! Thank You Ocean Potion! The Relay was a blast 12 total strangers which over the course of 31 hours became friends, our team the Bruisers were black and blue and ran all over. Other teams were dressed as Indians, Vikings, cops and robbers etc... all raising money for different charities. We all lacked sleep and a good shower but when we crossed the line at Dana Point all VERY happy!

In conclusion I had been injured and depressed cooped up for weeks, despite the odds had done Boston and finished Ragnar Relay. What a great way to find out that I had not lost complete fitness and I was back on the road to recovery and a great season after all!! **HN**

- 'Classic' from page 53

some child collecting up his toys from the sandbox to go home and pout with Mommy.

Esprit De Corps

Whether he or she rides as a lone ranger or a dedicated club rider, the classic cyclist shares a bond with all fellow cyclists. As such, other cyclists are always acknowledged along the road, usually with a tip of the head to riders in the opposing direction, or a cheery hello when passing or being passed. Classic cyclists never ride hi-lessly, wavelessly, and nodlessly by. Likewise, categorizing or deriding other cyclists is a pursuit never considered. All on bicycles are appreciated and respected.

Equipment in Synch With Ability

Until about 20 years ago, it was relatively easy to spot a good cyclist. Simply put, good bikes went with good riders. Sometimes good riders went with so-so bikes, but the opposite was almost never true. Unfortunately, that's not the scene today as cycling has become trendy, hip, and stylish. (Note that stylishness is, of course, the absolute antithesis of style.) Cycling has also become a status-related activity, so much so that when one sees a really fine machine humming down the road or trail, it is almost invariably being ridden by someone whose ability doesn't come close to matching his or her checking account. Of course, the classic cyclist can spot the poseur right away, regardless of his or her equipment (but is still nice to him or her).

Stay Tuned to the next edition of Endurance News for Part Two of The Classic Cyclist! **HN**

Chris Kostman has been a classic cyclist since 1982. Besides competing in races as diverse as the Race Across America, the Iditabike Mountain Bike Race, and the 24 Hours of Canaan, he also organizes the Badwater Ultramarathon and Furnace Creek 508 races, a series of four century rides, and the Rough Riders Rally. This is his fifteenth article for Endurance News. Learn more at his blog, www.XO-1.org, and at www.adventurecorps.com.

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I'm A Hammer Athlete

Yolanda Flamino

Sport: Ultrarunning

Hammer Athlete Since: 2005

Goal: 2012 Olympic Marathon Trials

Can you tell me your favorite thing about running?

I really enjoy the actual physical act of running. There is something very freeing about being in motion while the mind is also released and free to roam. I enjoy this connection as well as the connection to the environment and surroundings; I find it very cathartic and spiritual. The analytical side of me also enjoys the planning and goal setting that comes from writing training schedules and working towards a final goal.

How did you get your start into running and how long have you been at it now?

I started running in middle school as

part of a running club and then joined the cross country team in eighth grade. My math teacher talked me into trying the running club and after much foot dragging, I finally decided to give it a try. I fell in love with it the first day. I remember it being both hard and fun—a winning combination. I continued to run cross country and track throughout high school and college and transitioned more into road racing post-collegiately. I have been running for about a total of 20 years.

What are some of your running highlights over the years, and what is one of your big goals for this year?

A few of my running highlights are qualifying for the NCAA cross country championships my sophomore year of college. I went from finishing about 170th at the regional meet (the qualifier for NCAA's) my freshmen year to finishing 4th at the regional meet my sophomore year. The marked improvement was directly tied to an increase in workload and that has proved pivotal to my attitude toward training. Another highlight was winning the 2007 San Francisco Marathon and qualifying for the 2008 U.S. Olympic Marathon Trials.

A big goal for this year is to qualify for the 2012 U.S. Olympic Marathon Trials. In addition, it is a goal of mine to set a new PR in "every" event from the 1,500m-marathon this calendar year. The shorter races are going to be a huge challenge, but it gives me something to shoot for and will force me to vary my training throughout the year.

Do you ever see yourself doing anything after running?

I do. As much as running is part of

my daily routine and a gift I hope to continue to have the opportunity to enjoy, if for some reason I could no longer run, I think, after some readjustment, I would be just fine. I have many other interests and would pour myself into other pursuits. I think I would still apply a lot of the same skills that have been reinforced from training over the years, such as planning, persistence, patience, and goal setting.

In regards to your most recent win at 50K nationals, what inspired you to run that event and were you surprised at your win?

At the time, I was training for the Boston Marathon and had just felt one of those "clicks" in training, where you feel as if you just made a jump in your fitness level. I noticed that my aerobic fitness was coming along really nicely when I received a mass email from USATF regarding the registration deadline for the 50K. It lingered in my mind throughout the week and I signed up about three hours before the initial deadline. Going into it, I thought I could place well and then found myself in the lead position before hitting the halfway mark. At that point, I just focused on maintaining position and testing out the new distance.

Do you think your running will evolve into more of the ultra distance races due to your recent success?

For at least the past few years, I've been interested in expanding into the ultra races and the 50K was my first step in that direction. I feel I still have some unfinished business in the shorter races (5K and up), so I probably will still be leaning more heavily in that direction, but could see myself incorporating some 50K and 50-mile races into my yearly schedule.

Why Hammer Nutrition and your affiliation with our company?

I started using Hammer Nutrition products about five years ago and immediately liked how they worked and tasted, as well as the relative transparency of the company. I enjoyed reading the studies regarding the products and appreciated the holistic, healthy view held by the company. I applied for sponsorship this past year and was thrilled to be selected as a Hammer Nutrition sponsored athlete. It's a company I am proud to represent and promote. **HN**



Peru National Champion Wears Hammer!

Hi Hammer,

Back in February, you graciously let me purchase two Hammer kits (shorts, jerseys, arm warmers) at cost. I sent these gifts to two young cyclists in Peru, whom I have been supporting through Lon Haldeman's (who owns PAC Tour, www.pactour.com) incredible efforts to promote cycling and racing over there. I have been collecting and donating used cycling clothing for four years now, but I was especially happy to be able to purchase a brand new kit to send to each of the young women.

Just thought you'd like to know, as the press release reports (see right), that one of those young women - Alessandra - recently won the Peru National Road Race!

I've attached a photo of Alessandra (on the right) and her younger sister, Samantha.

Thanks again for allowing me to purchase the Hammer kits at such a great price. You can imagine the joy it brought to both of them to have brand new clothing to wear while training and racing!

- Jennie Phillips

The following is a rough English translation from the press release of the race organizer.

Alessandra Dávila Rodriguez, of 23 years, from the jungle region of Iquitos snatched the first place from the current national champion from Lima. Alessandra won the road race by 2 kilometers. What a thrill it was for the people who understand this sport to see this cycling prodigy pedal her way to this win.

Last week the Sports Panel reported that Alessandra had earned the number one national women's cycling ranking organized by the Sports Confederacy Peruvian of Cycling when she won the Cycling Opening Cup.

"I am going to be the best of Latin America and a pride of the Amazon Region and Peru" Alessandra said after the race.

Alessandra's 15 year old sister Samantha and Doctor Dustin Dinis also from the Amazon Region won their races in Lima. The Sports Panel commended the riders from the jungle for their accomplishments despite coming from the land of continual rain and only 55 miles of roads within 300 miles of their city of Iquitos. The riders from the Amazon do not have the available equipment and many of them are racing on scavenged bikes and parts.

(Alessandra and Samantha are using bikes donated by PAC Tour riders two years ago).

Their arduous daily training daily in the seasonal rain, and with a lot of discipline, are giving their fruits.

Alessandra and Samantha are being coached by Efrain Abdallah who has coached the Columbians at the Pan American Games and the Olympics. Mr. Abdallah says of his Amazon pupils "At present Alessandra the best in the Women's Elite Category and therefore I assure that she will give a medal to Peru. It surprises me the discipline and sacrifice of Alessandra. She does not have a rival in Peru. Her sister Samantha does not have rival in the category Junior".

The next competition organized by the Federation of Cycling is the return to Huacama during the 23 and 24 of April. Coach Abdallah says "One must defeat them to all to be considered the best. Alessandra can surpass all the South American competition. The pride of the Amazon now only lacks the support of the authorities and of the private enterprises so that she can compete during all the year without objection."

"I have to say that you guys have outstanding customer service." - Andres P.



Are Hammer products good for kids?

BY STEVE BORN

*Kieren Devere, 12 years old, races towards the finish at the Millerton Lake Sprint Triathlon. She won the 14 and under age group.
Photo courtesy of John Devere.*

Not too long ago I did a fueling seminar in California for a women's triathlon club/team. A day or two later I received an email from a client who wrote:

Hi Steve,

Thank you for coming to speak at our DMC team meeting last night. I forgot to ask, but have been wondering if Hammer products (gels) are okay for kids. My son is 11 years old and about 105 lbs. This summer he will have 8:00-9:15 am swim practice every morning, all summer long! I was wondering if it would be okay to give him some Hammer Gel just before he leaves for practice instead of breakfast. He would then eat a regular breakfast after practice. I know that there are all natural ingredients in Hammer products but wanted to check to make sure they are okay for kids.

*Sincerely -
Sarah*

Here was my reply to her:

Hi Sarah -

To answer your question - yes, Yes, YES! - Hammer Nutrition products are absolutely ideal for younger athletes/active children. Unlike most-to-all of the energy bars, drinks, and gels that are available to athletes young and old, none of our fuels contain any refined sugars or artificial colors, flavors, sweeteners, or preservatives. One of our slogans is "Health Food For Athletes"

and that really is true, especially when our products and their ingredients are compared to the junk that's out there. Hammer fuels contain all natural ingredients and they are undeniably better choices for children/youth athletics.

I am especially appalled at the ever-increasing number of nothing-but-sugar, mega-caffeinated, and artificially-sweetened energy drinks (most of which also contain some very questionable ingredients) that are lining the shelves of grocery and convenience food stores, AND that are being directly marketed to children. I personally wouldn't put this kind of garbage in my body and if I had children, these types of "energy fuels" would NEVER make their way into my home, let alone my children's bodies.

So yes, giving your son some Hammer Gel before his swim practice is something I highly recommend because of the quality of the ingredients, as well as the lack of all the junk sugars and artificial additives. I also think that HEED would be a fantastic drink for him to use during his practices, as well as immediately afterwards (for rehydration purposes). As is the case with Hammer Gel, HEED contains no refined sugars and no artificial colors, flavors, sweeteners, or preservatives. It has proven to be a huge hit for use in youth athletics (soccer, swimming, baseball, etc.), so that's an option I'd definitely encourage you to consider.

I hope this information and these suggestions will be helpful to you, Sarah. If you have any questions please don't hesitate to email me, and thanks again for having me at your team's meeting on Monday evening!

*Sincerely -
Steve*

A day or two later, I received the following email from Sarah:

Hi Steve -

Thanks so much for your email. I gave my son some Hammer Gel yesterday. He said he felt great. So we will continue to use it and I will give him some HEED to try as well. Thanks again for all of the very useful information!

*Sincerely -
Sarah*

If you have young athletes in your family, fuel them right! As mentioned earlier, Hammer Nutrition fuels are of the highest quality and contain no added sugars and no artificial colors, flavors, sweeteners, or preservatives. You don't want to put any of those things in your children's bodies (nor yours as well), which is why you won't find them in Hammer Nutrition fuels. Hammer products are clearly the best option available when it comes to fueling the body, both young and not-as-young!

Have you heard? Hammer fuels are kosher!

"I just wanted to drop you a quick note to tell you how thrilled I was to learn that your gels and recovery drinks are once again kosher-certified. I was a diehard user until I saw that the products were no longer certified kosher last year. I can't tell you how disappointed I was. I ride with a group from my synagogue and we all used your products. Lo and behold, I happened to glance at your gel packets while in a bike shop and I saw the CRC certification was back. I immediately told my buddies about it. I know quite a few serious riders who look for kosher products for a variety of reasons and all will be glad to hear that you guys are once again a great option. Thank you so much."

- Shalom Nelson

You're right, Shalom, though our Hammer fuels took a short break from carrying the kosher logo, it's back! The Chicago Rabbinical Council (cRc) has kosher-certified the Hammer Nutrition products listed below under the Kashruth Certification.

Kosher Pareve Certified

- Hammer Gel
- HEED
- Perpetuem
- Sustained Energy
- Hammer Soy

Kosher Dairy Certified

- Recoverite
- Whey

The following natural products are manufactured for Hammer Nutrition by Living Ecology of Corona, CA under the kosher supervision of Natural Food

Certifiers:

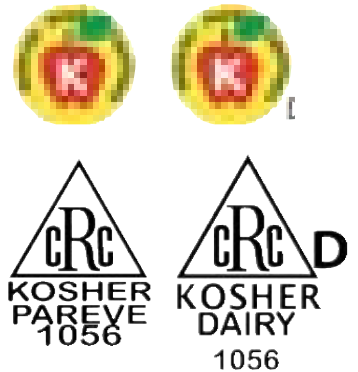
Kosher Certified

- Almond Raisin Hammer Bars

Kosher Dairy Certified

- Chocolate Chip Hammer Bars
- Cashew Coconut Chocolate Chip Hammer Bars

Look for the following logos on all of our fuel labels!



Horchata at home

A Hammer-fied version of this tasty Mexican drink!

SUBMITTED BY STEVE SUNDRA

Blend together the following:

- 8 oz water
- 8 oz vanilla rice milk
- 1 heaping scoop Unflavored Perpetuem
- 1 heaping scoop Unflavored or Vanilla Hammer Whey protein
- 2 Tbsp Apple-Cinnamon Hammer Gel
- Extra cinnamon to taste

*This recipe is even better if half of the water is replaced with ice.





Hammer's whey protein is heavy metal-free!

BY STEVE BORN

The nutritional products that seem to be garnering the most attention as of late are the various protein powders that are partially or solely whey-based. And there's a reason why this is getting so much press – recent testing has shown that a number of whey or whey-containing products (mainly the mass-produced ones) contain amounts of the heavy metals arsenic, lead, mercury, and cadmium that are at or above acceptable limits, when three servings (considered the average amount) are consumed daily.

We, of course, take this news very seriously. While there are heavy metals in a good portion (if not all) of the foods we eat, like you, we want to make sure those amounts are as minimal as possible, and most definitely in the fuels we use.

With this in mind, we want to alleviate your concerns and let you know that our supplier for the whey protein isolate used in Hammer Whey and Recoverite has certification showing that it meets the general Codex monograph specifications for heavy metals in whey products.

Here is a recent certificate of analysis of heavy metals for the whey protein isolate used in Hammer Nutrition fuels:
Heavy metal Result Testing Method
Arsenic < 0.01 ppm* SM3113D

Lead < 0.01 ppm* SM3113B
Mercury < 0.05 ppm* SM3112D
Cadmium < 0.01 ppm* SM3113B

* ppm = Parts Per Million

Now, take a look at the levels the U.S. Pharmacopeia (USP) has determined to be safe:

- Arsenic - 15 micrograms (mcg) per day
- Lead - 10 mcg per day
- Mercury - 15 mcg per day
- Cadmium - 5 mcg per day

To compare the values of ppm to mcg, some conversion information is needed:
• 1 microgram = 0.000001 gram

• 1 microgram/gram = 0.000001/1 = 1/1000000 = 1 ppm

Now let's revisit the test results of the whey protein isolates used in Hammer Whey and Recoverite. Using this information, here are the amounts of heavy metals in one serving of each product:

Hammer Whey – 18 grams of protein per serving

Heavy metal	Amount
Arsenic	< 0.18 mcg/serving
Lead	< 0.18 mcg/serving
Mercury	< 0.90 mcg/serving
Cadmium	< 0.18 mcg/serving

"My wife is an Olympic drug pool athlete - USA Track and Field elite racewalker - who only uses Hammer products (since they stand behind their stuff) and she always passes all tests. So when they say it's safe, it's safe! She would not be doing as well as she is doing without Hammer supplements, and not having to worry when USADA shows up at our house is important." - Mike Randall

- Continue reading about the safety of Hammer's whey protein on page 62!

Adrian Brennwald

International Austrian
Double Ultra Triathlon
Champion

Though the swim portion was canceled due to bad weather, Adrian convincingly won the redesigned race (Run - 0.8 miles, Bike - 223 miles, Run - 52.3 miles) beating second place by over an hour, with a time of 18:36:41.

Photo : Krzysztof Gabrzycki



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W/5	\$16.75
W/24	\$36.95

- Minimize post-exercise soreness
- Protect lean muscle tissue
- Immune system support



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Recoverite – 10 grams of protein per serving

Heavy metal	Amount
Arsenic	< 0.10 mcg/serving
Lead	< 0.10 mcg/serving
Mercury	< 0.50 mcg/serving
Cadmium	< 0.10 mcg/serving

As you can see, these are almost non-existent amounts; all are less—and the overwhelming majority substantially so—than one mere (1) microgram, and even more so than the 5 – 15 micrograms that are considered USP-safe daily levels (the amount dependent on the heavy metal).

Just as an example, to reach the USP maximum daily safe level for arsenic and mercury (both 15 mcg/day), you'd have to consume 150 2-scoop servings of Recoverite in one day. That is obviously a tremendous amount, much more than one would ever conceive of consuming. That's important to keep in mind, given that the products that tested at or above USP safe daily levels did so in only three servings.

CONCLUSIONS

1) Unlike many of the mass-produced protein powders available, the whey protein isolate that is used in Hammer Whey and Recoverite is virtually free of heavy metals.

2) When using a dairy-based protein supplement, we recommend avoiding:

- Casein protein: see the article "Casein – Quality protein choice?" in Endurance News #57 for more information.

- Whey protein concentrate: Whey protein concentrate contains anywhere from 70% to 80% actual protein (and, sadly, sometimes even less); the remainder being fat and lactose.

Instead, for the highest quality whey protein available, use whey protein isolate, which is 97-98+% protein. Simply put, whey protein isolate—which is all we use in Hammer Whey and Recoverite is a purer protein.

3) When you use Hammer Whey or Recoverite (or any Hammer Nutrition supplements or fuels for that matter), you can rest assured that they are of the highest quality available.



Photo : Joseph Shrader

An assault on Mt. Mitchell

I am just writing to offer a testimonial; this is quite a war story, so please bear with me. I was participating in the annual Assault on Mt. Mitchell here in the NC mountains, 102 miles and 11,000+ feet of climbing. I was 65 miles in and rolling proudly in my Hammer kit with full pockets of Hammer Gel and Endurolytes. I was in a group of 30 or so and was wrecked by a careless rider. He overtook me on the right and charged across my front wheel. Before I knew it, I went down hard on the pavement and from what I can remember, my head and shoulder actually hit the ground first. It was the most violent and abrupt fall I have ever taken. My helmet cracked in three places and nearly split in half. The entire group, including the rider at fault, continued on without delay and left me for dead on a rural NC road.

Some state road workers stopped and then an official SAG wagon pulled up. I recognized the SAG guy from the night before as the guy working the Hammer booth at the pre-ride expo. I don't know if he is an employee or a rep, but he is a super nice guy and I am very thankful he was there to help. He checked my bike out while the road workers filled my water bottles and I tried my best to rinse the grime from my road rash. Miraculously, my bike was intact except for a severely warped front wheel. I hit so hard that I was sure the bike would be broken in half.

Knowing that the final 30 or so miles of the ride were all uphill,

I decided to soldier on. As I began to pedal, I was suffering severe tightening and cramping in my quads and hamstrings. I assume this was a result of the shock and adrenaline rush from the crash. I kept pedaling as a couple of small groups passed me and I was unable to hold their wheel. All the while, I was popping Endurolytes and pushing fluids in hopes of relieving the cramping. The cramps subsided after ten miles or so. I continued to push fluids, sip Hammer Gel, and take a few more Endurolytes. This allowed me to drill the final 25 miles of the climb to the top of Mt. Mitchell. The cumulative elevation gain in the final 27 or so miles of this ride is roughly 6,000 feet. I passed nearly everyone in the group that had left me on the side of the road. Nobody passed me during this climb. In my first attempt at the Assault on Mt. Mitchell, I finished in 6:05:30, 56th place out of 750, and 8th in my age group. My actual ride time was 5:58. I guess I lost about seven minutes due to the crash plus the time out on the road with cramps by myself after I was literally thrown off the back of the group.

By the way, I am doing another mountainous century in a month- Blood, Sweat, & Gears in Boone, NC. I love your products and I always talk up your company to my friends. After this experience, I might start approaching people on the street to talk about Hammer Nutrition!

-Tony Zaffino

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Men's cycling shorts	SC	\$59
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www.hammernutrition.com / 1.800.236.1

Can running technique be taught?

BY COACH AL LYMAN, CSCS, FMS

*Hammer sponsored runner, Jason Wolfe.
Photo : Aerie Wolfe.*

Recently a colleague of mine who has a good knowledge of running mechanics, asked me if I had seen a recent article by a well known author in a recent issue of a popular triathlon magazine. He asked: “There was an excerpt from this new book, that basically says that running technique cannot be taught, that you can’t try to emulate other runners, and that everyone has to find their own best way to run. That sounds similar to your philosophy, doesn’t it?”

I admitted I hadn’t read the article, but being somewhat familiar with the authors philosophy, I imagined the point he was trying to convey is what I have believed all along: we move (run) the way we move, because of what is happening on the INSIDE of our bodies, NOT because of what is happening on the outside! It is an inside-out thing! To put it another way, our own relative level of “good” or “less than optimal” running specific functional strength, ankle and hip mobility, muscle elasticity, and other similar factors, all end up “creating” our

running movements – or the unique way in which we run.

By the same token, while the unique way in which we ourselves run is an inside-out thing, I do also believe that some elements of running technique can be taught, and thus learned and improved upon. Running technique is “taught” every day, at many schools and universities across the country and around the world, by well qualified coaches who know what efficient running is. As one example, a big part of what can be learned and what greatly impacts running technique, is posture. Our posture is something we adapt over time, and which can be altered with improved awareness and learning.

What can’t be taught or arbitrarily removed from a person’s normal movement patterns is less than optimal movement that is negatively affected or limited by a lack of functional strength, stability, or mobility. Despite this, it is also important to acknowledge that our understanding and/or our ability to learn

and practice and apply good running mechanics, also contributes to how well and efficiently we run.

The question I’m often asking myself: how effectively (that which results in long term improvement) can someone be “taught” to run differently, if they DON’T also change or improve their mobility, flexibility, and/or run specific functional strength?

While I think there’s much less chance that real change can be achieved IF one doesn’t also change how their bodies move and function (mobility/stability/strength), I have also learned something recently, or been reminded of it, if nothing else:

Over the last two weeks or so, in our Pursuit Athletic Performance Gait Lab (pursuit-athletic-performance.com), we’ve done about 7 or 8 gait analyses. As a part of each, I have also done a (FMS) Functional Movement Screen. I’ve discovered that it’s quite possible and even common (?), for someone to perform

fairly well on the FMS, yet lack good or efficient movement skills when they are actually running. That's significant! In other words, they display decent mobility and core control in quasi-static positions in the FMS, yet don't display that same control or mobility when they are actually running! What I believe may be happening is that less than optimal running mechanics (or simply a lack of knowledge about what is efficient run mechanics) ends up resulting in some undoing of the good mobility or stability they displayed in the screen. Perhaps the poor mechanics, in many instances, are the cause for an injury or poor performance potential, not necessarily just the lack of mobility or stability, per se.

Just like in many other sports (most notably, swimming!), there are specific elements that "most" experts identify as good mechanics (skill). While the entirety of the running world might not agree 100% as to exactly what they are, those key skill components do exist. I have my opinions as to what they are, and it is what I teach when working one on one with a runner. My opinions are always evolving. I'm open to change and to learning new things. I think of the process of improving technique this way: first, you are unconsciously incompetent, then consciously incompetent, then consciously competent, and then finally, unconsciously competent. It's a process of learning and applying knowledge with increased awareness.

The research and my experience tell me that poor mechanics DO result in a higher risk of injury. One simple example is over-striding, which depending on the severity, places a great

deal more strain on the ITB and hips, as the tissue and affected leg has to work harder to decelerate a leg that is braking and absorbing greater ground impact stress. This is made even worse in any runner who has poor core control and stability. Anyone can be taught NOT to over stride. That is a run technique issue, and is only one example....

On the flip side, am I a believer that someone can "arbitrarily" decide to change their technique by changing the kind of shoe they wear, or simply by trying to emulate their favorite runner? In most instances, I am not. Those kinds of changes are rarely permanent, and can end up creating other compensations, that often result in other, different injuries. I'm pretty sure there is no "one size fits all rule," that applies to every runner. We're all an experiment of one!

Our Gait Lab exists in large part because I and my partner, Dr. Kurt Strecker, DC., do believe that in addition to some very real dysfunctional issues which do need to be addressed and relate to joint mobility, stability, and elasticity, there also are very "teachable" elements to good run mechanics. The bottom line: Neural programming is neural programming. If you want to be a faster, more efficient and injury resistant runner, take a look and learn about the ways in which you can IMPROVE your running technique! Avoid any approach which appears faddish. Rely upon good science and the advice of experts, when considering what changes you might want to make. Begin with your foundation, first! Best of luck!

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Hammer Nutrition Sponsors "The World's Toughest Bicycle Race" Again!

By the time you read this, the 29th annual Race Across America (RAAM), an epic event that Hammer Nutrition has enthusiastically sponsored for several years, will have long been concluded (the race started right after this issue went to the printers). Hammer Nutrition is once again honored to be a major sponsor of this amazing race, and we'll have a full recap of this year's edition of RAAM in Endurance News #71.



I just got this new bike and rode it up Haleakala Crater this past weekend (10,000ft!). I would have completely bonked were it not for the gels - love'em!

Thanks again!
Tommy Callan

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Hannah, Moriah, and Richard at mile 82, after 9,000 feet of climbing and completing the crux of Pine Creek. Photo: Mike Angelos/AdventureCORPS.com

A Family Century

BY RICHARD SWAN

There are century rides. There are hard century rides. Then, there are hard, epic-adventure century rides. When Chris Kostman, founder of AdventureCORPS, Inc., the Furnace Creek 508, and the 135 mile Badwater Ultramarathon announced a new century ride, I knew it would fall into the third category. The first Mt. Laguna Bicycle Classic, a 101 mile ride with 10,800 feet of climbing was to be held on April 17th, 2010, starting just 15 miles from my home. Reading that the event included two of my favorite climbs, Kitchen Creek and Pine Creek, I had to do it. These two crudely-paved Fire Service roads are long, steep climbs that ascend 6,000 foot Mt. Laguna in beautiful San Diego County via remote, breath-taking routes.

When my two daughters, Moriah and Hannah, who were respectively 10 and 13 at the time, saw the event write up, they said, "Dad, may we please do this event." Both girls were fairly accomplished cyclists, having already completed numerous fun events and their first century ride, which had 3,800 feet of climbing. In addition, they had tackled these two tough climbs before in our weekend rides. However, this event was far more extreme than anything they had ever done before, as Pine Creek, the most vicious of the climbs,

was slotted at the very end of the ride. This brutal but magnificent ascent has 2,000 feet of climbing in seven miles, sustained 18% grades and numerous 20% corners.

As I contemplated hitting the 20% crux of Pine Creek at mile 82 with 9,000 feet of climbing already brewing in my cooked legs, my daughters pushed again, . . . "Dad, we can do this? Please, Please, Please?" Moriah, who was 4' 1" and a mere 58 pounds, looked me in the eye with excited determination and said, "Dad, I promise I will not DNF, please let us do this ride." With a long sigh, I gave in and after a few emails to Chris, he graciously changed the minimum age requirement of the event to 11, which Moriah would make by a matter of weeks.

After months of faithful training, the girls were ready. The day had come. After praying for safety and strength, we headed to the starting line and began our epic adventure. It was a glorious day for a bike ride and the AdventureCORPS support staff was amazing. All day long the girls received encouragement from other cyclists and staff who were stunned that these two young girls were doing this event. As we made the turn on to Pine Creek Road at mile 77, I turned to the girls and asked them, "Are you ready?" In perfect unison, with sheer raw determination in their

voices, they both grunted back in their lowest voices, "YAAAA!" Then Moriah added a confident, "Bring it on!" for good measure.

As the girls climbed through the toughest seven miles of their lives, they passed over 20 cyclists from the event who were painfully walking their bikes up the relentless grades of Pine Creek. In their minds, un-clipping was not an option as they were resolute on finishing strong, which they did in just over 9 hours. They crossed the finish line to the tune of cheering cyclists and event staff. As the ovation continued to rise in volume, I sat on my bike astounded with warm fuzzy tingles, so humbly proud of my two girls. I finally un-clipped and gave them both a big hug. They were beaming with joy!

Of the 200 cyclists that entered the event, only 131 completed it and only 17 of those were female. At age 11 and 13, Moriah and Hannah were 2 of those 17 women. They trained for and completed the event by fueling on Heed, Sustained Energy, and Hammer Bars. Hammer products were served at each rest stop. The picture was taken at mile 82, after 9,000 feet of climbing and completing the crux of Pine Creek.

Richard Swan is an average cyclist with five kids and a healthy passion for great rides.

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WHAT ATHLETES ARE SAYING ABOUT THE AUTOSHIP PROGRAM

"I am an autoship member of your great organization. I have been receiving supplements from you for quite some time. I sure wish all of the businesses in the U.S. had the great customer service that you exhibit. Your associates project a family-like atmosphere; they are always kind, willing to answer questions, help me with explanations, and are just downright friendly." - Walt W.

"Thanks for being so easy to work with and producing such great products. I fly the "Hammer" flag at all of my races!" - Brent G.

"I want to tell you how ecstatic I am with Hammer Nutrition. Your products are superior to anything I have ever used. My first IM

training is going extremely well; I always feel very recovered and strong and I can only attribute that to your products because I use them exclusively. I would also like to comment on your customer service as well. I spoke with Max yesterday and he was excellent to deal with and I must say that this is par for the course at your company with everyone I have dealt with. Not only was the service excellent, but your prices and quality can't be beat (even on your clothing). I ordered a few softgoods on Monday morning and received them Tuesday (with my one-free-shipment option because of the autoship program, not express!) and I live on the East Coast! Excellent stuff! Thank you all so much." - Angela C.

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* If you cancel the autoship program before taking delivery of 4 consecutive shipments, we will bill your credit card for the cost of the clothing. If you discontinue the program and rejoin within 1 year, you are not eligible for more free clothing until your 4th consecutive shipment after resuming. Aside from this stipulation, you are free to cancel your participation in this program at any time. Quarterly shipments must total \$150 each.

A brief visit with

Micah Buzianis

We recently caught up with professional windsurfer and Hammer Ambassador, Micah Buzianis, to see how his season is going. Here's what he had to say:

I was just in Costa Brava, Spain at the second PWA(Professional Windsurfers Association) World Tour event of this season. The first was in May at Jinha Beach, Korea where I finished in 4th place. I also finished in 4th place in Spain where, due to lack of winds, we were only able to complete two rounds of racing. After a crash in the first round, this made it hard to make up any ground in the second round, so to be able to finish in 4th still makes me happy. Currently with these two finishes, I am now in a solid 3rd place overall for the year.

I am now on my way back home to Maui where I will have a one-month training block to prepare for the next two events in Canary Islands, Spain and Alacati, Turkey. While back in Maui there will be three training races at the Maui race series. These, combined with a lot more on-the-water training, gym time, and bike time, will give me a good base to go into the second half of the season.

I really feel like my equipment is up to speed this year to have a solid year and finish strong. My program with Hammer Nutrition has also given my physical preparation, and on-the-water time, a huge boost. The quality of all of the products that I use in my training and racing has allowed me to give that extra effort needed to reach the next level every time!

How does a windsurfer use Hammer products? Here's how:

Hammer Gel - When I am working out or racing and I need a quick boost of energy to get my mind focused and my body back to full power, I use Hammer Gel.

HEED - I usually spend about eight hours at the beach on a race day and HEED keeps me hydrated and helps to stop any cramping that I may have due to dehydration.

Sustained Energy - A typical race day is about eight hours long and there is not a lot of time to eat right during the day so I mix up Sustained

Energy, HEED, and some Hammer Gel, and drink it all day.

Hammer Whey - This is by far the best whey protein I have ever had. I usually do 2-3 shakes per day during racing and intense training periods.

Endurolytes - I use both the capsules and the powder regularly during training and competition. I take four caps at the start of a training session or a race and then another two every hour. If I feel any sort of muscle fatigue or cramping coming on, I immediately take

2-3 scoops of Endurolytes Powder directly in my mouth and wash it down with water. I can feel the relief instantly and can go right back to my session feeling 110%!

Recoverite - After an intense training session, or a long day at the beach racing, I always do two scoops of Recoverite and two scoops of Hammer Whey. Most of our races last about seven days so recovery is very important and I have found this combo to give me maximum energy and focus for a long event.

Hammer Bars - The Hammer Bars are a great energy food. I eat these constantly while training, racing, and traveling on long airplane flights. I don't go anywhere without a couple of bars in my bag.

Tissue Rejuvenator - I use this during pre-season training and during race season to help with recovery and small aches and pains. Long days of intense training or racing are hard on my body and I want to be able to come back as quickly as possible and be able to push it as hard as I need to.



Amazing results with Hammer!

Dear Hammer Nutrition,

My name is Keith Decker. I am 49 years old and I am this year's overall Gold's Gym 12-week Fitness Challenge winner for the two Gold's Gyms in Grand Junction, CO. There were 1,400 participants this year. The objective of the 12-week challenge is to see who can achieve the greatest physical transformation in 12 weeks (84 days). I started the Challenge at 210 pounds and finished at 165 pounds (a loss of 45 pounds).

Additionally, my workout partner, Clint Janowitz, was the winner in his age division (50-59), and lost 36 pounds.

During the last six weeks of the Challenge, we decided to significantly increase the frequency and intensity of our workouts so as to finish as strong as possible. At that time, we began taking Hammer Nutrition products to help us maximize our training efforts. We used HEED to fuel our weightlifting and cardio workouts, Recoverite to help us recuperate more quickly, and Hammer's Boron supplement to help keep our strength up. With four weeks left,

we were amazed at how easily we were losing weight and gaining strength and endurance . . . all while not feeling tired and sore all the time. The Hammer Nutrition products were clearly the reason we were able to increase our cardio workouts to 3-4 hours per day, seven days a week for the last four weeks.

Hammer Nutrition products are the American Express Card® of fitness fuels . . . "Don't leave home without them."

Attached to this email are the before and after pictures of me and Clint. Hammer Nutrition products are not just for cyclists and runners, they are also definitely a must for people wanting to workout longer and harder to achieve their physical fitness and weight loss goals.

Sincerely,

Keith Decker
Grand Junction, CO



HAMMER PREMIUM INSURANCE CAPS
MULTI-ESSENTIALS
30
120 Capsules

"I take PICs year round to keep me healthy and my diet balanced. My schedule keeps me going with long trips to Europe and Asia from Maui and I need the Premium Insurance Caps to give me what I need to keep from getting sick and to keep my energy levels up so that I can perform at my peak." - Micah Buzianis

www.hammernutrition.com / 1.800.336.1977

5Kil	MSRP
PIC5	\$19.95
PIC120	\$31.95

HAMMER NUTRITION

"Reading the article "The Hammer Nutrition Fuels - What they are & how to use them" was superb and incredibly helpful." - Daniel A.



The race get underway at the 24 Hours of Round and Round. Photo : Brian Frank

EVENT CALENDAR

There is no doubt that we're firmly ensconced in the heart of our busy season when it comes to the number of events we're sponsoring in the next two months. Case in point: We are providing product support for nearly 120 triathlons/duathlons solely in the month of July. Now that's a lot of races in one sport and for one month only!

As I write this article in mid-May, we currently have 2211 events on our 2010 calendar, in a wide variety of endurance sports, and with more coming in regularly, I believe we'll have another record-breaking year. That's for a topic for another issue of Endurance News, however. For now, let's see what we've got coming up for July and August, keeping in mind that this represents just a fraction of the events happening in these two months.

We're constantly adding more events to our calendar and updating our website, so make sure to check out the current list of 2010 Hammer Nutrition-sponsored events at www.hammernutrition.com/events/

MOUNTAIN BIKING

7/11 – Falls Challenge

(West Virginia) – www.wvmba.com/races.php

7/17 – 12 Hours at Night

(Arizona) – www.go-ar.com/12han.html

7/17 – Boggs 8 & 24 Hour Race

(California) – www.globalbiorhythmevents.com

7/17 – Big Bear 12 Hour Trail Race/Relay

(West Virginia) – www.iplayoutside.com

7/17 – Levis/Trow 100

(Wisconsin) – www.wemseries.com

7/17 – Breckenridge 100

(Colorado) – warriorscycling.com

7/17 – 12 & 24 Hours of Boyne

(Michigan) – www.funpromotions.com

7/18 – WV State Mountain Bike Championships

(West Virginia) – www.wvmba.com/races.php

7/24 – 12 & 6 Hours of Humboldt

(California) – www.teambigfoot.net

7/25 – Off Road Assault on Mt Mitchell

(North Carolina) – www.blueridgeadventures.net

7/31 – Laramie Enduro

(Wyoming) – laramieenduro.org

8/1 – Buck Hill Birch Bump

(Minnesota) – www.mnscs.com

8/7 – High Cascades 100

(Oregon) – www.mudslingerevents.com

8/7 – San Dieguito

(California) – www.racersandchasers.com

8/14 – Ring of Fire

(Texas) – www.redlicoriceevents.com

8/14 – 24 Hours of Great Glen

(New Hampshire) – www.24hoursofgreatglen.com

8/14 – 12 Hours of Blue Mounds

(Wisconsin) – www.wemseries.com

8/14 – 6 & 12 Hours of Pando

(Michigan) – www.funpromotions.com

8/21 – Rubber City Meltdown

(Ohio) – www.331racing.com/entry.html

8/21 – Boggs 50

(California) – www.globalbiorhythmevents.com

8/21 – All Shook Up Weekend

(Pennsylvania) – www.highspeedcycling.com

8/22 – Great Hawk Chase

(Minnesota) – www.mnscs.com

8/28 – Tsali Challenge

(North Carolina) – www.goneriding.com

8/28 – Kirkwood Nine to Five/24 Hours of Kirkwood

(California) – www.teambigfoot.net

8/29 – Stampede on Horseshoe

(Virginia) – www.horseshoemountaintrails.com

TRIATHLON

7/9 – 7/11 – Musselman Triathlon

(New York) – www.musselmantri.com

7/10 – USAT Course Duathlon National Championship

(Oklahoma) – www.usatriathlon.org/events

7/10 – Muncie Endurathon

(Indiana) – www.muncieendurathon.com

7/11 – Caesar Creek Triathlon & Duathlon

(Ohio) – www.hfpracing.com

7/11 – Waterfront Tri

(Tennessee) – www.team-magic.com

7/11 – Valley Girl Triathlon

(Washington) – www.valleygirltri.com

7/17 – Scofield Triathlon

(Utah) – bbsctri.com/scofield/

7/17 – ChelanMan Multisport Weekend

(Washington) – www.chelanman.com

7/18 – Strawberry Fields Triathlon

(California) – www.strawberryfieldstri.com

7/24 – My Way or the Tri Way

(Colorado) – www.racingunderground.com

7/24 – New Jersey State Triathlon

(New Jersey) – www.cgiracing.com

7/25 – Solana Beach Triathlon

(California) – www.kozenterprises.com

7/25 – Chicago Half Iron & Sprint Triathlon

(Minnesota) – midwestsportsevents.com

8/1 – Pittsburgh Triathlon & Adventure Race

(Pennsylvania) – www.piranha-sports.com

8/1 – Omaha Triathlon

(Nebraska) – www.omahatriathlon.com

8/1 – Brewhouse Tri

(Minnesota) – www.brewhousetriathlon.com

8/6 - 8/7 – Battle at Midway

(Utah) – www.bamtriathlon.com

8/7 – Santa Cruz International & Sprint Triathlons

(California) – www.finishlineproduction.com

8/7 – Lansing Legislator Tri & Du

(Michigan) – www.3disciplines.com

8/8 – MedExpress Mountaineer Triathlon

(West Virginia) – www.mountaineertriathlon.com

8/8 – Mountain Man Olympic & Half Iron Triathlons

(Arizona) – www.mountainmaneevents.com

8/14 – Mayo Triathlon

(North Carolina) – www.fsseries.com

8/14 – Bear Lake Classic Triathlon

(Utah) – www.bearlakeclassic.com

8/14 – Mountain Lakes Tri

(Alabama) – www.team-magic.com

8/15 – RUSH Triathlon

(Idaho) – www.rushtriathlon.com

8/15 – Tri Fall Creek Falls Triathlon

(Tennessee) – www.racedayevents.net

8/15 – Oshkosh Olympic Triathlon

(Wisconsin) – midwestsportsevents.com

8/21 – Jordanelle Triathlon

(Utah) – www.triutah.com

8/21 – Finish Strong Triathlon

(Washington) – finishstrongevents.com

8/22 – Iron Girl Columbia Women's Triathlon

(Maryland) – www.tricolumbia.org

8/22 – Portland Triathlon

(Oregon) – www.portlandtri.com

8/28 – Cranberry Trifest

(Massachusetts) – www.sunmultisportevents.com

8/28 – Utah Half

(Utah) – racetri.com

8/28 – Clear Lake Triathlon

(Texas) – www.out-loud.org

8/29 – Half Vermont Journey

(Vermont) – www.vermontsun.com/triathlon

8/29 – Miami Nice Triathlon

(Florida) – www.miaminicetri.com

8/29 – Keystone State Triathlon

(Pennsylvania) – www.trimaxendurancesports.com

8/29 – South Carolina Half

(South Carolina) – www.setupevents.com

RUNNING/ULTRA RUNNING

7/10 – Siskiyou Outback Trail Runs (SOB)

(Oregon) – www.siskiyououtback.com

7/10 – Skyline Challenge

(Virginia) – www.theskylinechallenge.com

7/12 – Badwater Ultramarathon

(California) – www.badwater.com

7/17 – Vermont 100

(Vermont) – www.vermont100.com

7/17 – North Fork 50M/50K Trail Run

(Colorado) – site.northfork50.com

7/24 – The Lake 60K/30K/10K

(Texas) – www.tejatrails.com

7/24 – Wakely Dam Ultra

(New York) – www.wakelydam.com

7/24 – Grand Mesa 100

(Colorado) – www.grandmesa100.com

7/25 – El Scorcho Cuatro

(Texas) – www.elscorchorun.com

7/29 – Swan Crest 100

(Montana) – swancrest100.com

7/30 – 24 Hour Around the Lake

(Massachusetts) – www.srr.org/events/annual_events/24hour/2010/

7/31 – Burning River 100

(Ohio) – www.burningriver100.org

7/31 – USATF 15k Trail Running National Championships

(Washington) – www.spokanesports.org

8/14 – The Falls 60K/30K/10K

(Texas) – www.tejatrails.com/

8/14 – Wildest Run in the West

(California) – www.wildestrun.com/index.html

8/21 – Bulldog 50K/25K Trail Runs

(California) – www.trailrunevents.com

8/28 – Lean Horse 100

(South Dakota) – www.leanhorsehundred.com

8/29 – Mountain RATS

(Colorado) – www.geminiadventures.com

8/29 – Green Lakes Endurance Runs

(New York) – www.gleruns.org

ROAD CYCLING/ ULTRA CYCLING

7/9 – 7/10 – Fireweed 400

(Alaska) – www.fireweed400.com

7/10 – Newton's Revenge

(New Hampshire) – www.newtonsrevenge.com

7/11 – Terrain Challenge

(Wisconsin) – www.vikingbikingclub.com

7/17 – Capitol Reef Classic Stage Race

(Utah) – www.capitolreefclassic.com

7/17 – One Helena Hundred

(Montana) – www.helenabicycleclub.org

7/17 – Tour of Trinidad

(California) – www.teambigfoot.net

7/23 – 7/25 – Rough Riders Rally

(California) – www.adventurecorps.com/rrr

7/24- 7/25 – Race Across Oregon

(Oregon) – www.raceacrossoregon.com

7/24 – Seattle Century

(Washington) – www.goodsportpromotion.com

7/25 – Auburn Oldtown Crit

(California) – www.globalbiorhythmevents.com

7/31 – Tour de Park City

(Utah) – www.tourdeparkcity.com

8/7 – Kirkwood Road Race

(Pennsylvania) – www.proamcycling.com/events

8/7 – Marin Century & Mt Tam Double Century

(California) – www.marincyclists.com

8/8 – Mount Agamenticus Time Trial

(Maine) – www.noreastcycling.com

8/14 – Appalachia Visited Road Race

(West Virginia) – www.abracing.com

8/15 – Portland Century

(Oregon) – www.goodsportpromotion.com

8/21 – Hot Hundred Century

(Alabama) – www.bikehothundred.com

8/21 – HOT 100

(Tennessee) – mborobike.com/ridecalendar/hot100

8/21 – Raisin Hope Classic

(Colorado) – www.americancycling.org

8/28 – Strasburg Road Race

(Pennsylvania) – www.proamcycling.com/events

8/28 – Hoodoo 500

(Utah) – www.planetultra.com

8/29 – San Clemente Criterium

(California) – www.sccriterium.com

ADVENTURE RACING

7/11 – Cochiti Tri & Adventure Race

(New Mexico) – www.nmsportssystem.com

7/17 – No ORDinary Adventure Race

(Nebraska) – www.angrycowadventures.com

7/17 – Moraine Adventure Dash (MAD)

(Pennsylvania) – www.rootsrace.com

7/17 – Desert Winds 12 Hour Night Race

(Nevada) – desertwindsadventureseries.com

7/24 – Baton Rouge Urban Adventure Race

(Louisiana) – www.gulfcoastadventure.com

7/31 – Krista Griesacker Memorial Adventure Race

(Pennsylvania) – www.goalsara.org

7/31 – Summer Groove 15 Hr Adventure Race

(Michigan) – www.apexoutdoorgear.com/events

8/7 – RunBikePaddle Sprint Adventure Race #1

(Texas) – www.houstonadventureracing.com

8/7 – Cedar Mountain Adventure Experience

(Utah) – milestoneadventure.com

8/7 – Wild Hare 12 Hour Adventure Race

(Nebraska) – www.wildharesracing.com/hares

8/14 – Planet Adventure Urban Sprint Adventure Race

(Indiana) – planetadventurerace.com/tw/urban

8/14 – BreakOut 24 Hour

(Michigan) – www.apexoutdoorgear.com/events

8/21 – Summer Quest 4 HR Sprint Adventure Race

(Michigan) – www.infiterraspports.com

8/28 – Ozark Extreme Adventure Sprints

(Arkansas) – www.adventuresprints.com

8/28 – Ramapo Rampage

(New York) – www.nyara.org

Amy Rappaport

Hello Hammer,

I took 1st place in the 50-54 women at Ironman Florida 70.3 last weekend! I was very surprised to win. Like always, my supply of Hammer fuels helped me power by 13 women on the run to win by just 40 seconds as I passed the last of my competition within the last 1/4 mile. (I had no idea at the time, I was just running as fast as I could!) I had Perpetuem in my bottle during the bike and pounded the Hammer Gel, Endurance Amino, and Endurolytes on both the bike and the run. As usual in FL, it was hot, but I didn't feel it and was able to hold my eight minute pace on the run while many of the other competitors faded in the heat. Once again, I was lucky to have all the great Hammer fuels to get me to the finish line in style and take home the hardware!



Team Vadas

Jim Vadas (70 yrs. - swim & bike) and grandson, James Vadas (16 yrs. - run), took 1st place in the male relay division of the inaugural Havre de Grace Triathlon in r de Grace, MD on May 2, 2010. Photo provided by Dee Dee Barnhill.



Bruce Balch

Here is a photo from my recent win at the Rage Tri. I took 1st overall. Photo : Bryce Jones.



Reduce ammonia, increase endurance

Hey guys, I tried your Anti-Fatigue Caps during a half marathon this weekend and while I'm sure this distance is rather short for most of your clients, it is my sweet-spot for racing. Long story short, on a cold and windy half marathon in Indianapolis, I was able to PR by nearly three minutes - finishing in 1:35:45. Great product that I will add to my arsenal for races. Thanks! - Dan Elddine

ORDER TODAY! www.hammernutrition.com / 1.800.336.1977





A win at her first 100!

Jennifer Brunet

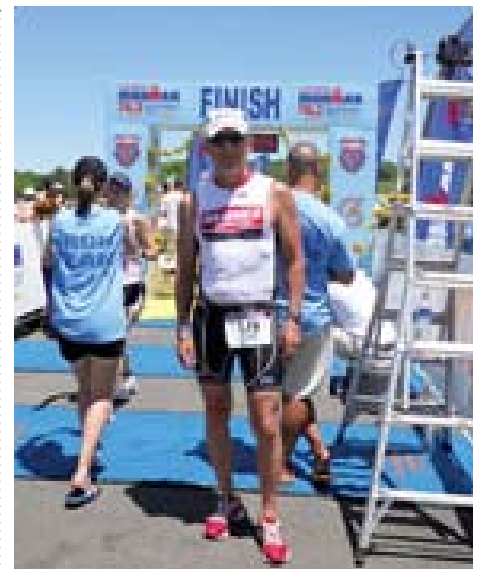
I just wanted to let you know that I ran my first 100-mile marathon this past weekend, the Massanutten 100-Mile Ultramarathon. I used your products throughout the entire race: 1 Hammer Gel per hour, 1 Endurolytes per hour then with increase in heat and perspiration increased the electrolytes to 1 per 1/2, and carried a flask of Perpetuem in my skirt. Needless to say, your products played a huge part in my success. Not only did I finish this ultramarathon that consisted of over 18,000 feet of cumulative climbs within 36 hours, I placed 1st female in the Stonewall Jackson Division, finishing in 25 hrs and 52 minutes. (Stonewall Jackson division requires you to run without a crew and without a pacer so it's you and nature). I'm still in shock and have been talking about your products to EVERYONE. I am a high school teacher as well as a fitness instructor teaching at five different gyms in Bergen County, NJ. Right after the 100-miler, I mixed Recoverite with water and went on a hike. The following morning, I drove right to a spin class. My recovery is minimal. I attribute the quick recovery to Recoverite. No one can believe I am right back after a first 100 - it is DEFINITELY due to Recoverite. I've told everyone about that product - it's one of my favorites! Thank you!

Jennifer Brunet



Beverly Enslow

Congratulations to Beverly Enslow on her recent 2nd place finish in the W50-54 age group at Ironman 70.3 Kansas. Beverly is pictured with 3rd place finisher, Kathy Gagnier (L), and 5th place finisher, Teresa Telford (R). Photo : Shevaun Fennell



Steve Smith

Please find attached a photo taken at the Kansas 70 Triathlon on June 6th in Lawrence, Kansas. I was the age group winner in the men's 60 -64 division. Time was 4:47.00; new course (age group) record by six minutes.

Photo : Tim Legge.

Thanks,
Steve Smith



Jeri Delys

Peak Triathlon-Missoula, Montana - May 22nd. I love Hammer and wear the clothing all of the time!
Photo : Scott Jones.

**Stacey Sell writes:
"Thanks to HEED, I placed
2nd 40-44 cat 2 XC at
Sea Otter!"**

Hayley Benson

I raced at the Sahuarita Lake Triathlon today, a qualifier for the 'Best of the US National Championship', an event where the three best amateur triathletes from each of the 50 states get to race for the coveted title of 'Best of the US'. I earned my invitation today as 2nd place qualifier, so I'll be competing individually and representing the state of Arizona on October 2nd in Orange County. I am so excited! And, of course, I'm proud to be taking Hammer Nutrition along with me.

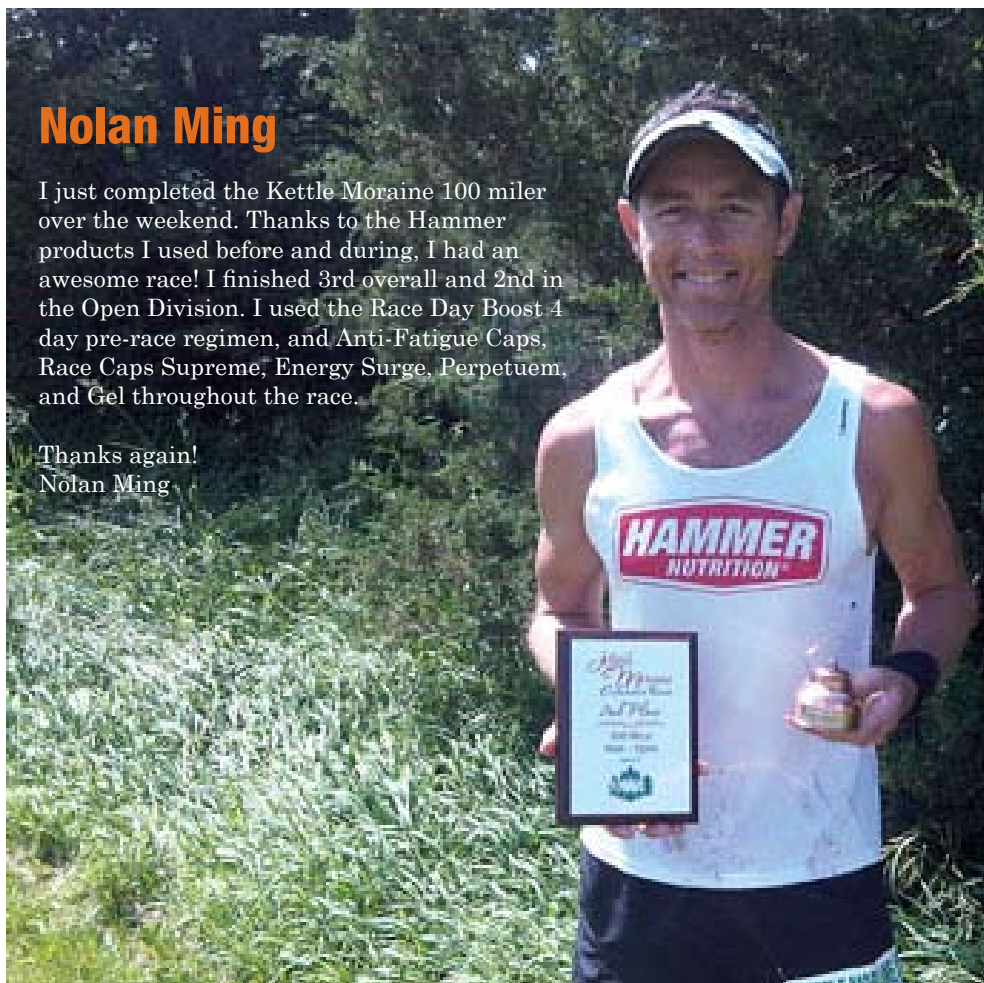


I wanted to send you a "thank you" for your support of the 50K Superior Trail Race this year. It was a challenging and terrific event, and your support is certainly appreciated. The Hammer Nutrition products available at the aid stations, along with those I used in the months of training prior were an invaluable part of successfully completing the race. - Jeff C.

Nolan Ming

I just completed the Kettle Moraine 100 miler over the weekend. Thanks to the Hammer products I used before and during, I had an awesome race! I finished 3rd overall and 2nd in the Open Division. I used the Race Day Boost 4 day pre-race regimen, and Anti-Fatigue Caps, Race Caps Supreme, Energy Surge, Perpetuem, and Gel throughout the race.

Thanks again!
Nolan Ming



Sean Lewis

Had a great race at the Texas Ironman 70.3, thanks to Hammer Nutrition fueling the way. Here is a photo for my 1st place age group win (M40-44) at the Memorial Herman (Lonestar) Ironman 70.3 Texas with a time of 4:24:26. I would prefer to have a credit to my account with Hammer Bucks for future fueling needs! Thank you!



Kent Loganbill

I came in 2nd place in the 2009 Tour of the White Mountains masters 35-mile and came in 3rd place in the 2010 25 proof Whiskey Off Road Men's masters. Being a Type 1 diabetic, fueling for a race can be difficult, but HEED and Hammer Gel seems to do the trick. The quick acting insulins that diabetics use today can deplete potassium so Endurolytes are always with me while I race.

Kent Loganbill

Eric Model

I just won the 2nd race in my local NY/ NJ series. So far, I have won the first two races. I am talking up a storm about Hammer products at the races, drawing much attention from the gear and from my performances. I should be driving new business to the website. I am going to have some business cards printed to distribute with my customer number and email address. I think the "Hammer Bucks" should more than pay for the cards and then some. I hope all is well with y'all in Montana. Off to the Mohican 100 next weekend in Ohio; supposed to be the best race of all the 100-milers in the NUE series. It's mostly rolling single track versus all the fire roads you get at some of the other ones. Here's a pic of me on the podium.



Amanda MacIntosh

Just got back from Costa Rica. Hammer sponsored this Q50 event. Crazy hot conditions 110 degrees and 80-90% humidity. Toughest 50 mile race I have ever done. Was able to hold on for the womens title and 2nd overall.

Thanks for all your support!
Amanda

Tom Liebl

Had a successful outing this last weekend at a six hour mountain bike race called the Bonebender, which takes place in Smithville, MO. I won my age division in the 6-hour solo, 50+ and ended up placing 15th overall (90 racers in the 6-hour solo class). I raced with HEED in the water bottles, hourly Endurolytes and Anti-Fatigue Caps, an occasional shot of Hammer Gel, and six hours of fine dining on unflavored Perpetuem made as a batter with gel added for flavor. I had a good race at the Quachita Challenge (60 mile mountain bike race) the month before using the same fueling strategy. Dialed in like a clock! Both races had Hammer Nutrition as sponsors so it was nice to see the product at the aid stations and the name on the race shirts.

Thanks for your help,
Tom Liebl



Steve Muller

I recently competed in the Bigfork Triathlon, a 4-mile kayak, 14-mile road bike, and 4-mile run. My paddling skills, and a strong bike leg, helped me stay ahead of some fast runners to take the overall win (not too bad for an 'old' guy). My pre-race fuel was Hammer Gel with water and two Energy Surge tablets with Caffé Latte Perpetuem on the bike.

Thanks again for your great products and continued support.

Steve Muller
Kalispell, MT



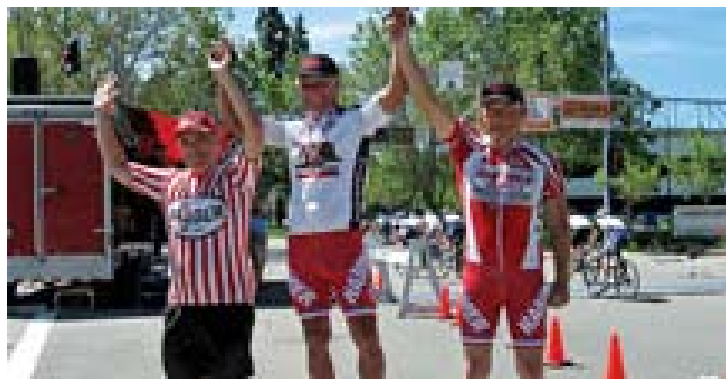
Ann Gilbert

I love Hammer products and am so proud everywhere I race that Hammer is a Montana company. Thanks for the great customer service and awesome products. It's taken me awhile to learn to listen to your advice 100% but last year at Ironman France I spent a day with nothing but Perpetuem, Hammer Gel, Race Caps Supreme, Endurolytes, and one teeny ginger chew as a reward at the top of the 42-mile climb (or was it longer?). I had an awesome day ending on the podium. Thanks to Hammer for your continued commitment to quality endurance products and your support of triathlons, not only in Montana but throughout the country. It makes a hometown girl proud. Let me know when you are looking for a rep in France . . . I was the only Hammer shirt there, a first at a race for me! It was a perfect day, thanks to Hammer.

Mike Freeman & Richard Shields

Richard Shields and I took 1st and 2nd in the 65+ USA/NCNCA District Criterium Championships on May 2nd.

Have a great rest of the day!
Mike Freeman



Eric Sullivan

Just wanted to send a pic that I had got from IM St. George this past Saturday. I got the race kit from you on Friday, and just in time for the race on Saturday. I love the white jersey as that thing was perfect for the heat on the run.

I had a great race and was able to finish in 9:35, posting the fastest amateur bike (5:08) and 3rd fastest run (3:15) for the day to win the Overall Amateur Title, and would have been 15th in the men's pro field. I used Vanilla Hammer Gel all day, Melon HEED on the bike, and four Endurolytes and three Endurance Aminos every hour and felt strong the whole time. I couldn't have done it without your great products and am looking forward to representing Hammer in Kona this Oct. Thanks Hammer!

Eric "Sully" Sullivan



ATHLETES . . . do you want the Hammer Nutrition community to know what you're up to? Have a great, copyright-free photo you want to share? Send a short email to athleteupdates@hammernutrition.com (please put Race Report in the subject line) about your recent accomplishments and we'll try to include it in our Race Report. *Photo note: please ensure that all photos submitted are high resolution at 300 dpi or at least 500KB in size.*



Paul Comesanas

Just wanted to drop you guys a line and let you know how awesome your products are. This past weekend 11 of my friends and I competed in the Ragnar Relay. Our race went from New Haven, CT to Boston, MA. We stepped off at 12:30 on Friday afternoon and ran through the night. My team, Full Metal Sneakers #108, completed the race in 27 hours and 12 minutes. We finished in 2nd place in our division, Sub-Masters Mixed. We also finished 45th out of 190 teams. For the race I packed Sustained Energy, HEED, Endurolytes, Hammer Gel, Hammer Whey, Race Caps Supreme, and Xobaline. I used all of them at some point before, during, and after each one of my three legs. I can say without any reservation that without your products I probably would not have been able to perform the way that I did. So, I just wanted to send you guys a big "thank you."

Paul Comesanas
U.S. Army Triathlon Club



Lois Waite

Congratulations to Lois Waite who completed the 2010 Boston Marathon in 3:05:20, securing a top 20 spot in the 40-44 age group.

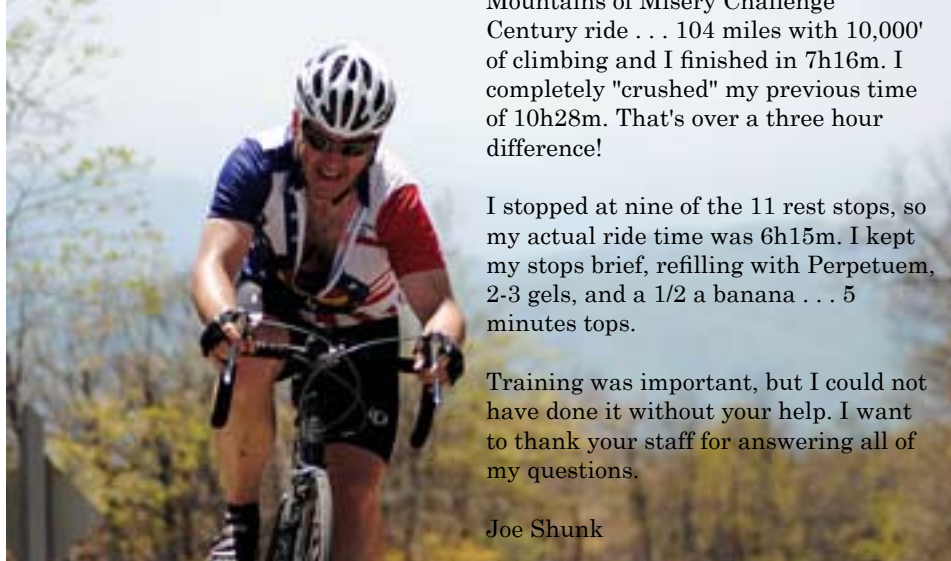
Lois wrote to tell us that she had a great race and loved hearing the cries of "Go Hammah!" all of the way in to the Boston finishline!



Antoinette Riley

After starting to use Hammer products, my performance has gone from eight miles at a time on a bike to competitive cycling. I rode 2500 miles in 2009 as a newbie, did a Century at Big Dam Bridge Little Rock, Livestrong Challenge in Austin, Hotter N Hell, and won 3rd place Novice Female in North Texas Cup. This year I had hip surgery in January and was back on the bike in four weeks! I have been to 6 races so far this year. I always come in last, but I guarantee I am having the most fun of all!

Joe Shunk



On March 30th, I completed the Mountains of Misery Challenge Century ride . . . 104 miles with 10,000' of climbing and I finished in 7h16m. I completely "crushed" my previous time of 10h28m. That's over a three hour difference!

I stopped at nine of the 11 rest stops, so my actual ride time was 6h15m. I kept my stops brief, refilling with Perpetuem, 2-3 gels, and a 1/2 a banana . . . 5 minutes tops.

Training was important, but I could not have done it without your help. I want to thank your staff for answering all of my questions.

Joe Shunk

A marathon before 15!

Kyle Cameron

I would like to start out by saying "thank you" for your product. I recently ran in the Newport, Oregon marathon (at the age of 14) and the Hammer fuels helped me finish it. My family recently purchased a 12 pack of Montana Huckleberry gels and you sent a nice sample pack along with it. Before the marathon, I used the Perpetuem and after the marathon I used the Recoverite. I made the mistake of only bringing two Hammer Gel packets along on the marathon and had used both of them by mile 16-ish. Luckily, the next aid station was handing out more Hammer Gel and HEED. Those next gels were just about the best thing in my life during the marathon. I then went on to finish the marathon in 5:07:35, which isn't impressive (I have been struggling with an injury), but I still finished and reached my goal of finishing a marathon before the age of 15! I would like to thank you again because without your product, I would not have been able to finish.

Kyle Cameron



Jake MacGray learns the importance of proper fueling at a young age.



Thank you so much for sponsoring the 50k Superior Trail Race in Lutsen, Minnesota this past weekend. It was an absolute blast. I really needed the Hammer Gel at the aid station after the first 7.5 miles . . . lost my gel on the trail. Thanks again for your sponsorship! - Sara

Congratulations to Millie Tanner on her recent win in the 10-14 division at the Southern California/ Nevada Junior Road Race Championships.

Wildflower wins!

Congratulations to Anya Wechsler and Suzanne Endsley on winning their age groups at the 2010 Wildflower! Anya's time of 5:32:50 was good for 1st place in the 20-24 age group and 19th woman overall. Suzanne came in in a time of 5:25:32 which placed her first in the 45-49 age group, overall Masters Women, and 10th woman overall. Two strong performances by female Hammer athletes!



Lincoln Murdoch

Hey Everyone - After a week of no workouts due to travel from Omaha to Chattanooga, helping my mother-in-law for 3.5 days, eating way too much fast food, and nursing a heel bruise, - I had been limping around all week. Well, my expectations for the USAT Scenic City Tri just north of Chattanooga were not high. I felt flat, slow, and pudgy. Horrible storms last Saturday gave way to a beautiful Sunday morning though, perfect for racing.

I went out in the second wave - 40 and older males - and had a decent swim in my Barracuda goggles and very fast Xterra Vector Pro wetsuit. I was well fueled with my Hammer Nutrition products but felt just a bit rusty even though it had only been a week since working out. I tried to hammer the very hilly bike course on my Valdora PHX yet still have something left for the run. I came off the bike and headed out on the run not knowing if the heel bruise would let me run even 1/2 a mile. It hurt but was not debilitating. Right away someone tried to pass me and was flying, so I thought I'd run just off his shoulder

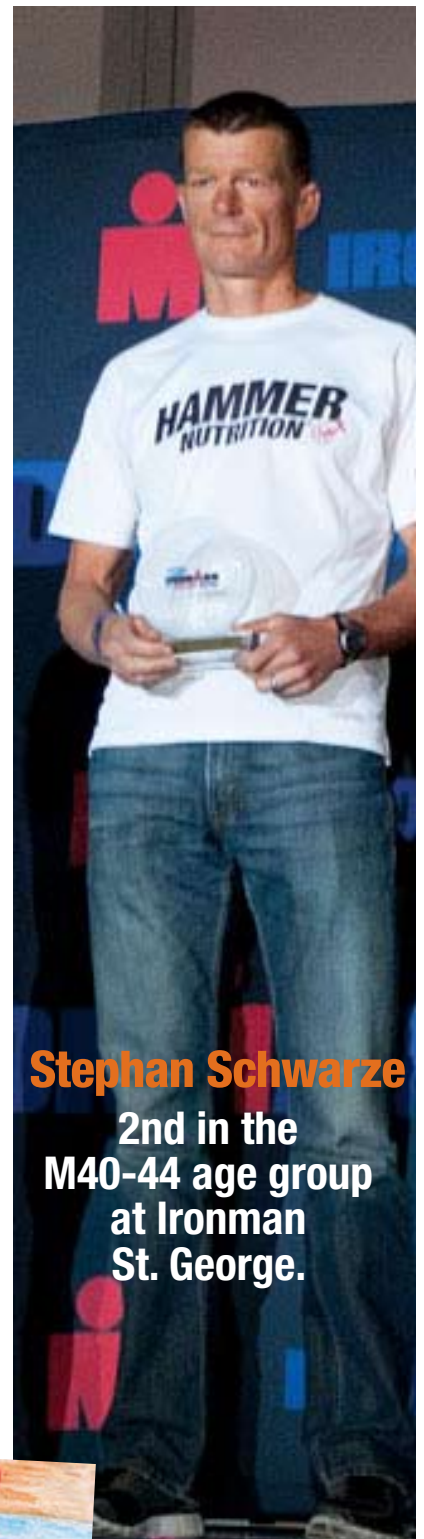
for as long as I could. We must have gone through the first mile in 5-something. I finally pulled away from him and held him off on the hilly course.

After the race, chip timing said I'd finished 4th overall, first Master over 40. So, I took that award home. Now they have another set of results posted and it shows me 6th. The guy who won is listed as 2nd; not sure what's up with that. However, I was thrilled to learn I had the 2nd fastest run split of the day. The five guys (or 3?) who beat me were between 12 and 35 years younger than me. It was truly a blessed morning and I'm very thankful to the Lord for that and give Him the glory.

So far this year, I've got a 5th overall and a 6th (or 4th?) overall in two triathlons, both age group wins, and one 1st overall in a 5K. The next race, the USAT sanctioned Holiday Lake Triathlon is in Iowa in three weeks.

Thanks again,
Lincoln

Hammer products fueled Lincoln to a 3rd place overall podium spot at the Holiday Lake Triathlon on May 16th. HEED, Hammer Gel, Endurolytes, Race Cap Supreme, Mito Caps, and Recoverite covered all of his nutritional needs. Photo : Elmer Murdoch.



Stephan Schwarze

2nd in the
M40-44 age group
at Ironman
St. George.



Dear Kendra,
Thank you so much
for supporting our
military! We appreciate
all you do! Gratefully
TRI For Our Veterans



A thank you note that we received from the 'Tri For Our Veterans' in Sea Isle City, New Jersey. The race director is also a 2nd grade teacher and has her students make cards for the sponsors.