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Endurance News : Helping you 'FUEL RIGHT, FEEL GREAT!'® since 1992

Sugar and Testosterone

Authors : Nancy Appleton Ph.D.
and G.N. Jacobs

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Just say the words gonads, testosterone or any of the unprintable slang associated with testicles, sex and male virility and you'll get a laugh or at least amused looks. Now, say those words again, but in a context that says, "you're going to lose that capability, son" and watch what happens. The collective scream you hear is shrill enough to replace the air raid sirens America abandoned as stupid in the 1980s. Well, one way men lose that capability is to eat sugar.

New research so fresh that it hasn't yet appeared in a journal article says flat out that eating sugar reduces testosterone levels in the blood by up to 25-percent across the board. The researchers found 74 men at Massachusetts General Hospital with a range of tolerances to glucose (42 normal blood sugar, 23 impaired glucose tolerance "prediabetic" and 9 actually with Type-2 Diabetes) and gave them 75g of a glucose solution. In many cases, the effect lasted at least 2 hours after ingestion and affected all types of men in the study. Of 66 men listed as having normal testosterone levels in a fasting state before the test 10 developed a hypogonadal (low testosterone) state at some point during the two hours of the test.[i]

The actual intent of the research funded by the National Institutes of Health

and the American Diabetes Association was to refine testing methods for low testosterone levels. Current methodology says to test the man in the morning on two different days and get an average reading to see if the man is truly hypogonadal or if the low testosterone will pick up later. So far, no one has said that a man should fast before taking the blood test, until now.

The link between sugar, insulin, obesity, diabetes, the metabolic syndrome and testosterone levels had been touched on in other research that has come out recently. Only these researchers worked backwards relative to this new study, they took people with known elements of the metabolic syndrome (diabetes, obesity and heart disease) and tested their testosterone levels. Many subjects had low testosterone.

In recent research conducted in Berlin, the conclusion read in part "Lower total testosterone and sex-hormone-binding-globulin (SHBG) predict a higher incidence of the metabolic syndrome...Administration of testosterone to hypogonadal men reverses the unfavorable risk profile for the development of diabetes and atherosclerosis."[ii]

In Finland where similar research is regularly conducted the researchers came up with this gem "Low total testosterone and SHBG levels independently predict development of the metabolic syndrome and diabetes in middle-aged men. Thus,

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Real Athletes, Real Results!

First of all, I have been using your products for over a year now and can say they are SO superior to any on the market. There is so much variety in the flavors that you can literally please everyone. I have been a marathoner with goals of transitioning into ultras and know that fueling will never be an issue. In response to the recent Endurance News welcome section I would love to know who complains about the taste of HEED lemon-lime and citrus Recoverite. Please don't ever discontinue those! Thanks so much for the outstanding products and monthly literature. I feel like I have a free subscription to a magazine!

Frank Noble



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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 to be 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 myself as well



Brian and Brad Lamson share a laugh while riding up the North Fork Road. Photo - Kelly Pris

Welcome

Author : Brian Frank

I can't believe it's already the end of August and the back-to-school advertising is in full swing. Once again, in a mere 60 days we found so much content that we had to get out the shoe horn and leave out several articles even though we increased the page count to 64 for this issue. Like everything here, this publication just seems to keep growing. We continue to be thrilled with all of the race reports and great stories that come in from you. As always, thank you for sending them and keep 'em coming! Speaking of growth, we continue to see strong growth in our retail and direct sales channels and we owe you all a huge debt of gratitude for your support. We'll never forget that you come first and are the reason for whatever success we may achieve.

This issue features two new articles from Dr. Nancy Appleton that I hope you will read and pass along to all of your friends. As part of our ongoing association based on a common cause, we are adding two of her books and her new DVD to our book store. See related ads elsewhere.

as professional and elite amateur athletes and other experts in the area of nutrition and exercise. In addition, Endurance News will include articles highlighting new and existing Hammer Nutrition products and how to get the maximum benefits from them.

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 there are no short cuts, and success can only come from hard work.

Back issues are available at www.hammernutrition.com

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Over the years we've had many clients and more than a few nutritionists accuse us of using the anti-sugar card as marketing hype or a way to "bash" other products. After you read these two articles, and hopefully, order a copy of her latest book, *Suicide by Sugar*, you'll understand why we are so adamant about the need to avoid it in your daily diet and especially while exercising. Inside you'll find many more interesting articles from our staff and regular contributors. I'd also like to highlight a first time contributor, my big sister Laura. Her article answers a question that has come up on our Endurance List on several occasions: how to fuel and supplement during swim meets.

Among all of the race reports, do take special notice of the results from Junior Nationals in Bend. Hammer/CMG rider Max Durtschi won the road race and criterium in grand style and several of our other riders from Montana and California also did very well. Also note the article from team standout, Jacob Rathe. Some of you may have seen the photo of him in *Velo News* during his stay in Belgium. Max, Jacob, and the other riders really stepped up this year and with the mentoring of team leader, Butch Martin, produced results that exceeded our expectations. Building on the success of the Hammer/CMG racing team in 2009, we are going to expand the program in 2010, continuing as the principle sponsor and main financial backer. For 2010 the team will consist of 4 elite U23, riders, 4 "B" U23 riders and 4 juniors. Due to the lack of other significant cash sponsors, the program will continue to run on a shoestring budget with the B riders campaigning an abbreviated race schedule and the junior riders having to come up with around \$5K each for their schedule.

That is unless you know of any

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companies looking to support a great junior development program, or philanthropists who like cycling, or anyone else... just give us a call. Likewise, we will be looking for all of the help we can get next year with host housing, logistics support, air miles donations, and so on. We'll report on upcoming events and team needs in successive issues of Endurance News, on our website, and on the new team web site <http://cmg.magdev.com>. Butch does not currently have the program set up as a nonprofit 501(c)(3) corp, but we are hopeful that he'll be able to achieve that for 2010. This would make all donations to the team 100% tax deductible. We'll keep you posted on the team and areas where those who are so inclined may be able to assist.

Oversize Container Update

In the last issue I discussed our mutual concern over the size of some of our larger containers such as those used for HEED 80 serving and wanted to give you an update. We have been successful in "pre-settling" the powders during bottling and have already switched to a noticeably smaller container for the Melon and Strawberry flavors of HEED 80. Mandarin and Lemon-Lime flavors will follow as soon as we exhaust our current inventory. It will likely take a few more months for the smaller size items to show up on retailer shelves, but trust us, it will happen.

Legislative Action Alert

Author : Brian Frank

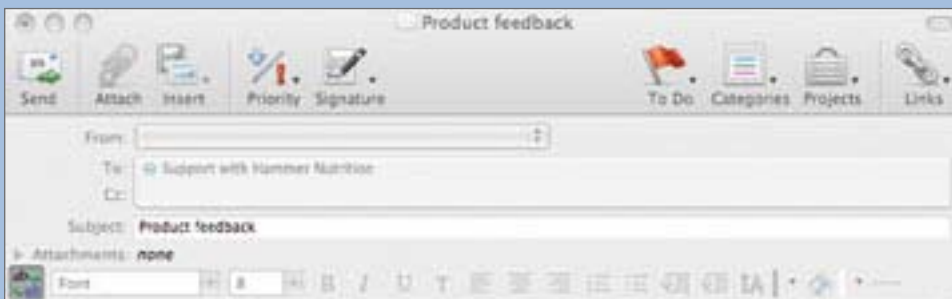
Before the August recess congress passed a scary bill called the Food Safety Enhancement Act of 2009, HR2749. While the name may sound good, the bill is anything but good news for consumers and the small independent food producers we rely on. Here is what Pete Kennedy, President of the Farm-to-Consumer Legal Defense Fund had to say about HR 2749:

"While making the agency less accountable for its actions, passage of HR 2749 into law would represent a tremendous increase in FDA's power to regulate intrastate commerce. It would amount to the federalization of food regulation in this country. FDA would have the power to establish national safety standards for the growing and harvesting of produce, subjecting even a gardener who sells vegetables at roadside stand or farmers market to the jurisdiction of the agency. FDA would have the power to issue national performance standards for different foods, in effect, enabling it to create an intrastate ban on raw milk. FDA would have the power to conduct warrantless searches of the business records of many local producers and small farmers and would have the authority to demand customer lists, violating the privacy of those consumers buying direct from producers. HR 2749 would give the agency the power to impose a quarantine of a geographic location without needing a court order. FDA would be empowered to halt of movement of all food in an entire area.

The bill addresses the issues of food safety (protecting the food supply against unintentional contamination) and food defense (protecting the food supply against intentional contamination) but does nothing to promote food security (the ability of a nation to be self-sufficient in food production). HR 2749 has a number of provisions referencing the globalization of the food supply when, instead, the focus should be on achieving food security--a goal that is best reached by promoting the growth of small diversified farms and local producers. HR 2749, instead, will subject producers of local foods to burdensome regulations that will make it more difficult for them to remain in business. Food safety problems in this country lie with large industrial food processors and food imports; local producers are part of the solution, not the problem. Any food safety bill should leave the local food movement alone; there should not be a one-size-fits-all regulatory system."

The senate still has not voted on it's version of the bill, titled S510, and will not do so until after the August recess. If this concerns you as much as it does us, please e-mail or call both of your Senators and ask that they oppose Senate Bill 510. To Find out who your Senators are and send them an e-mail, go to www.senate.gov or call the Capitol Switchboard at 202-224-3121. Next, contact your Congressional Representative at www.congress.org and find out how they voted on HR 2749. Let them too know how you feel about this issue.

The ultimate energy bar



I picked up a box of the Cashew Coconut Chocolate Chip Bars and they are awesome! Generally I do not eat solid foods on my rides but I thought that I would give them a try. They chew very easy and taste great. The size is also a big plus. These bars are not to big so they don't take up much space in the jersey pockets and they also fit in the mouth easy. No need to bite from one side and then the other like those other bars. Opening the package is also very easy to do with sweaty hands. Well thought out idea...leave it to the folks at Hammer to do their homework.

Cheers!
Anthony Parsells

This testimonial was unsolicited and has not been modified.



3 Flavors!
Almond Raisin
Cashew Coconut Chocolate Chip
Chocolate Chip

50g bar - \$2.49
12 count box - \$27.00





Bikes stand at the ready during the 2009 Highline Hammer. Photo - Kelly Pris

From the Saddle of Steve Born

Author : Steve Born

The 8th Annual Highline Hammer

Wow, what a great summer it's been, highlighted by this year's Highline Hammer, which was a smashing success. We enjoyed fabulous weather this year—warm, but not too-warm, sunny days with minimal winds—and we had some wonderful clients join us for this annual event. Of course, while the riding is always a major component of the event, the best part for me is having a few days to see old friends and the opportunity to make new ones.

Because many of the attendees were here early, the Highline Hammer kind of started a day ahead of schedule on Wednesday, July 15th. Brian led the group on the 3-or-so-hour “Columbia Falls/Tour of the Flathead Valley” loop, which is one he and I have enjoyed doing many times over the years.

Thursday

On Thursday, the 16th, the Highline officially began, with a 2+ hour out-and-back ride up the North Fork. It's been a long time since I've done that ride, though it's one I'll always remember because when Brian and I did it many, many years ago it was the ride where we decided that producing Endurolytes sample packets (for including in the goody bags of the events we sponsor) would be a good idea to help bolster the sales of that particular product. A few years later (and a few hundred thousand Endurolytes sample packets later), we found ourselves enjoying this

ride once again.

Friday

Friday was the big day, the 136-mile, mega-climbing (15,000') Highline Hammer ride. I have to admit that even though this is just an awesome



The crew gathers for a photo in West Glacier before the 136-mile ride. Photo - Angela Nock

ride, one filled with so much beautiful scenery, I was still a little nervous. You see, even though I have been riding with more consistency this year (in spite of my self-imposed work-related travel during May and June), I had only done one ride over 100 miles all year and certainly not one with this much climbing. At any rate, while there was no way I could hang with the super-fast, “metabolism-like-hummingbird” climbers (the last time I did was many years ago when I was training for the Double Furnace Creek 508 record attempt), I

figured that as long as I rode within my current capabilities and kept taking my “epic ride” supplements (see my article regarding that), I would get through it in halfway decent shape.

The scenery while climbing Logan Pass, a.k.a. the “Going to the Sun Road,” is so breathtakingly beautiful that it makes you forget (though not entirely) that you're going up hill for a good 12 or so miles. I really enjoyed that climb because for once I stayed mostly within myself and didn't go out too hard (I was still breathing pretty heavy though!). After a ripper of a descent into St. Mary's, the next climb, Hudson Divide, was ready

to do its usual “let's put the hurt on Steve” number on me. I left St. Mary's with the “A” (fast) group but within the first couple of miles I got dropped (no surprise) and just grinded it out up the pass, which I now refer to as “Kick My *ss Pass.” I really can't explain why this one works me over so much but it does, even when I'm in really good shape. The descent and accompanying scenery once the summit is reached is worth it, however.

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STEVE from page 4

After reaching Kiowa Junction, the climb up Looking Glass Pass is next and, though it looks hard “on paper,” it’s really quite pleasant, especially when the wind isn’t howling, which it wasn’t this day. It’s so scenic and peaceful on that climb, and the road is usually devoid of motorized vehicles... it’s definitely one of my favorite climbs of all. The initial descent into East Glacier is a screamer, though the sections of road where there’s no pavement, just hard-packed dirt, can be a bit challenging to negotiate, especially if you aren’t aware that they’re coming up.

Once in East Glacier, we all have a chance to chill for a little bit, if desired, and sit and enjoy some lunch. I opted to stay only briefly and I decided to forego any solid food. The Caffé Latte Perpetuem “paste” mix I had made was working marvelously, as were my hourly doses of “epic ride” supplements, so I saw no reason to change the game plan.

If there is a not-so-great portion of the Highline Hammer ride, it’s the 25+ mile section between East Glacier and the summit of Marias Pass. It’s on Hwy 2, a fairly major highway with lots of fast driving trucks, RVs, and cars, and in spots there’s not much of a shoulder. It’s also usually quite warm, there’s almost always a headwind, and the climb up to the Continental Divide is more of a nuisance (because it’s kind of imperceptible) than a bona-fide climb. This year, however, both the

temperatures and heat were at very tolerable levels, which I definitely appreciated. Not too far from the summit I broke a spoke and got sagged up to the summit where I met my wife, Cassie, for the first time since the start (she had been riding with the “A” group all day). She had punctured a tire so while the rest of the group kept riding, she was fixing the flat. The impeccable timing of our mechanicals allowed us to ride together once we got them fixed (a mega “THANK YOU!” to all the great sag support). I think she enjoyed that, at least partly because I’m significantly wider than she is, so I’m good to draft behind. Along the way we caught up with Matt McCormick and the three of us enjoyed the remaining miles back to West Glacier together. Once there, I gulped down a 4-scoop serving of Recoverite along with a handful of recovery-specific Hammer supplements. Another Highline Hammer loop in the bag!

All in all, what with the scenery and the riders I had the opportunity to ride with during portions of the route, I’d have to say this was one of my favorite Highline Hammer rides of all. That evening, along with massages, “Active Recovery” Globus sessions (or both!), we all feasted on the usual five-star cuisine food that is one of the noted features of the Highline Hammer event.

Saturday

The next day, while not as long or arduous a ride as the Highline, was still



Steve makes his way up Looking Glass Pass.
Photo - Angela Nock

a pretty tough ride – the 75-mile ride around Flathead Lake. And because I knew the terrain would be challenging at times (the pace as well... I was in the company of some pretty fit and fast riders!), and because it came right on the heels of the 8+ hour Highline Hammer ride, I once again supplemented hourly with the higher dose of my “epic ride” supplements.

Fortunately, as it was since the Highline started, the weather this particular day was magnificent, unlike the many times when the wind is howling during the second half of the ride, which can make for a longer, tougher day. For the most part, we rode as a group down to Polson where we stopped to refill fuel/water bottles. We then started heading north on the west side of the lake. The climb out of Polson is usually long and hard enough to break up a pack of riders and that was the case this time as well. By the top of the climb it was just Mike Lewis, Bill Nicolai, and me, with some riders ahead of us and some behind us. Mike is obviously coming back quite nicely from his bike accident (and that’s putting it mildly), because his pace—at least from my perspective—was pretty zippy when he was at the front, a good



Two cyclists make their way towards St. Mary’s Lake.
Photo - Kelly Pris

see STEVE on page 11



*Erika Osborn celebrates her 2nd overall female award at the Capital View Triathlon in Madison, Wisconsin.
Photo - courtesy Erika Osborn*

Product Spotlight : Endurance Amino

Amino ammunition for your muscles

Author : Steve Born

Ever since its introduction just a short couple of months ago, we have received rave reviews on this product. Athletes are noticing that both their endurance and recovery is significantly enhanced from consistent use of Endurance Amino. Considering that amino acids foster protein synthesis after exercise, as well as delaying protein degradation during exercise, our newest product is recommended before, during, and after exercise.

During prolonged bouts of exercise (more than two hours), some amount of fatigue is expected. Although maltodextrin-rich carbohydrate drinks are the primary sources of fuel for meeting energy and fluid requirements during exercise, Endurance Amino plays an important role in energy production, glycogen resynthesis, and the postponement

of fatigue. Taking hourly doses of Endurance Amino, along with Anti-Fatigue Caps, proves to be the ideal combination for athletes hoping to maximize performance. In reference to one of the plausible culprits of fatigue, Anti-Fatigue Caps scavenge excess

When you take Endurance Amino along with Sustained Energy or Perpetuem, you're bolstering the amounts of highly beneficial, exercise-specific amino acids that your body receives.

plasma ammonia, which contributes to a reduction of lactic acid during exercise.

Although Endurance Amino is consumed in capsule form, the same performance-enhancing amino acids (l-leucine, l-isoleucine, l-valine, and l-alanine) naturally occur in the soy protein found in Sustained Energy and Perpetuem...

when you take Endurance Amino along with Sustained Energy or Perpetuem, you're bolstering the amounts of these highly beneficial, exercise-specific amino acids that your body receives (one athlete told me that taking Endurance Amino "supercharges" the benefits received from Perpetuem). Additionally, amino acids play a significant role in providing antioxidant support (via the reduced glutathione component) in Endurance Amino.

BCAAs – The heart of the Endurance Amino formula

Without taking anything away whatsoever from the l-alanine and reduced glutathione components in Endurance Amino (because they most definitely have an important place in the formula), the undeniable "heart" of the product is the branched chain amino acids (BCAAs) – L-leucine, L-isoleucine, and L-valine. Here is some information on these all-important amino acids:

- The BCAAs are considered "essential" amino acids because the body cannot manufacture them on its own. Therefore,

the 9 essential amino acids, including the BCAAs, must be obtained from the dietary sources.

- Exogenous protein sources are required in the diet, either through supplements or food, in order to provide essential amino acids necessary for protein synthesis.

- Approximately 1/3 of muscle protein is comprised of BCAAs.

- Unlike the other 17 nonessential and essential amino acids, BCAAs are oxidized in the muscle as opposed to the liver. Therefore, BCAAs are used as a fuel source during strenuous, intense, or prolonged activity.

- BCAAs help fulfill 5-15% of the body's protein-derived energy requirements

see ENDURANCE AMINO on page 7



How to use Endurance Amino

2-4 capsules prior to and after exercise. For prolonged exercise, 1-2 capsules may also be taken every hour during exercise.

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in an effort to spare glycogen stores, prevent the breakdown of lean muscle tissue, and postpone fatigue.

- According to the central fatigue theory (Bloomstrand, 2006), research suggests that BCAA supplementation plays a significant role in reducing perceived exertion and mental fatigue during exercise. Due to the natural decrease in plasma BCAAs during exercise, the ratio of free tryptophan to BCAAs increases, with a subsequent feeling of lethargy or fatigue. Through BCAA supplementation, tryptophan transport to the brain is inhibited, thus decreasing the buildup of tryptophan in the brain (tryptophan being a precursor to serotonin).

- BCAAs promote anabolism post exercise. Due to a natural catabolic state after exercise, BCAAs help increase protein synthesis and repair micro tears in order to promote an increase in lean muscle mass.

- BCAAs are a precursor for alanine and glutamine, both of which are depleted in large amounts during prolonged exercise. Supplementation with BCAAs helps to restore levels of alanine and glutamine. Maclean et al. (1996) states: "BCAA administration results in significantly greater muscle alanine and glutamine production."

- L-Leucine appears to play a significant role in protein metabolism. Mediated by intracellular signaling pathways (mTOR), L-leucine encourages protein synthesis in the skin, liver, and muscle while stimulating the secretion of pancreatic insulin.

- Although all three BCAAs are metabolized in the liver, L-leucine has the highest oxidation rate, which contributes to protein synthesis. During exercise when glycogen stores diminish and carbohydrate administration is not meeting energy demands, L-leucine is rapidly broken down into glucose, thus demonstrating its effectiveness for averting muscle loss.

NOTE: Though L-leucine has the highest oxidation rate of the three BCAAs in contributing to protein synthesis, supplementation solely with L-leucine is not recommended because it may lead

to an amino acid imbalance. All three BCAAs work together and synergistically; high L-leucine intake is purported to decrease blood and muscle tissue concentrations of both L-isoleucine and L-valine.

Why BCAAs are at the heart of Endurance Amino is summarized nicely by nutritional scientists Bill Misner and Antti Mero.

Misner writes:

"Amino acids provide from 5-15% of the energy moiety (portion) for the glucose fraction recruited for energy during exercise. Branched chain amino acids support endurance performance, improve immune system reaction, and enhance recovery. Physiologists often use BCAAs in various formulations to decrease central nervous system fatigue in athletes. Intake of BCAAs during or prior to exercise may delay exercise-induced or central nervous system-induced fatigue."

"BCAAs (L-leucine, L-isoleucine, and L-valine), particularly leucine, have anabolic effects on protein metabolism by increasing the rate of protein synthesis and decreasing the rate of protein degradation in resting human muscle. During recovery from endurance exercise, BCAAs were found to have anabolic effects in human muscle. These effects are likely to be mediated through changes in signaling


pathways controlling protein synthesis. Intake of BCAA supplements and/or BCAA-enriched energy gel or drinks enhances endurance performance. BCAA administration results in enhanced endurance performance. Research dramatically supports each of these statements."

Mero writes:

"Consumption of BCAA (30-35% leucine) before or during endurance exercise may prevent or decrease the net rate of protein degradation, may improve both mental and physical performance and may have a sparing effect on muscle glycogen degradation and depletion of muscle glycogen stores."

If Endurance Amino is not yet a part of your supplement "arsenal," it's time to put this powerful product to work for you! It really does deliver the results we say it will, and it's cost-effective as well (unlike those "everything-and-the-kitchen-sink" amino acid products).

Note: Special thanks to Hammer Nutrition sponsored athlete Marni Rakes—who holds a Master of Science in Exercise Physiology and is a Certified Sports Nutritionist (CISSN)—for her contributions to this article.




Amino acid power!

- Decrease perception of fatigue and increase cognitive performance
- Help build, maintain, and repair lean muscle mass
- Powerful immune system support

Endurance Amino is ideal to use after all workouts and races but really shines (and is the perfect complement to Anti-Fatigue Caps) when taken hourly during training sessions and races that extend beyond two hours. Endurance Amino gives you a wide range of powerful amino acid benefits, without breaking the bank.

120 capsules \$29.95
240 capsules \$49.95

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Sugar and the Mind

By: Nancy Appleton Ph.D. and G.N. Jacobs

(Source: <http://nancyappletonbooks.wordpress.com> - Reprinted with permission from the authors)

Does sugar impair memory? According to rat studies conducted at Georgia State University, apparently so. Adult rats were given diets of either 0-percent or 60-percent fructose and ran through a water maze to test performance. The short version: the fructose impaired the rats' ability to remember the location of the target platform.

First, all the rats were put into a maze sunk into a tank and set free to find a platform on which a lever or other device to get the rodents out of the water had been placed. Then, a few days later, the rats were put in the same maze only without the platform. The differences between the high fructose diet and the zero fructose diet were recorded.

"What we discovered is that the fructose diet doesn't affect their ability to learn," said Marise Parent, the head researcher.

"But, they can't seem to remember as well where the platform was when you take it away. They swam more randomly than rats fed a control diet." [i]

The researchers didn't find any effect on the first time trial and error learning process that enabled the rats to find the platform, just the ability to employ the abstract spatial memory that says, "the platform should be here based on yesterday's results." If a rat or person, for that matter, learns a task, but can't prove they learned the task by reproducing it at some point in the future, is it really learning?

Other studies have indicated that sugar affects other aspects of the mind, which typically shows up in the classroom. The knowledge that bad diet and lower test scores have gone hand in hand has existed for some time. [ii] Some of the reasons why sugar consumption have an inverse relationship, sugar goes up and scores go down, may have to do with behavioral changes, which are also linked to sugar.


In our article 141 Reasons Why Sugar is Ruining Your Health, we have made statements that "sugar can cause hyperactivity, anxiety, inability to concentrate and crankiness in children." [iii] We also said flat out that "sugar can cause juvenile delinquency in children." [iv]

Apparently, a child will suffer a variety of mental effects in a high-sugar environment that will feed each on other. Decreased memory retention leads to lower scores leads to acting out behavior and so the chicken and egg cycle continues until someone changes the diet.

Our recommendation at this point is some form of a whole food diet to arrest the mental decline with sugar and the modern diet. Allergies play a part in this process. It's quite simple: stop hurting your mind and you too will find your way through the maze.

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Powerful protein

Now available in Chocolate!

"I am excited that you have added to your line of Hammer Whey products. I use my whey in smoothies (vanilla) or milk (chocolate), and I am certain my legs are given the opportunity to recover properly. I did a half-ironman in Kansas in June. For the first time at a race, I finished, got to my car, and took two scoops of whey protein. I felt awesome the next day." - Adam Brown

Single serve - \$2.99
24 servings - \$32.95

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"I got my order today and I am thoroughly impressed with the packing and samples. The customer card and nutrition guide are very nice touches. You guys do an awesome job and I'm happy there is a company using stevia and keeping the artificial ingredients in check."

Kevin Davenport

SUGAR from page 1

hypoandrogenism (hypogonadal) is an early marker for disturbances in insulin and glucose metabolism that may progress to the metabolic syndrome or frank diabetes.”[iii]

It seems that these previous studies were waiting for someone else to have a The Emperor Seems Naked moment and try out the inverse of their results in which you give sugar to mostly healthy people and see what happens. No longer should low testosterone be considered just a symptom of the metabolic syndrome, but as what both are... a result of too much sugar in our diet.

We at Nancy Appleton Books have already touched on sugar causing the metabolic syndrome in previous articles like 140 Reasons Why Sugar Ruins Your Health (<http://nancyappletonbooks.wordpress.com/2009/05/23/140-reasons-sugar-ruins-your-health/>). In it we make simple declarative statements about many of sugar's ill effects.

- Sugar can increase fasting levels of glucose.[iv]
- Sugar can cause hypoglycemia.[v]
- Sugar can lead to obesity.[vi]
- Sugar can cause heart disease.[vii]
- Sugar can cause metabolic syndrome.[viii]

One method how sugar lowers testosterone is its effect on the adrenal glands. Sugar taxes the adrenal glands and these glands interrelate with the sex hormone glands (testes and ovaries) that produce testosterone and estrogen.[ix]

These ailments listed above are elements of and highly associated with the metabolic syndrome, which we have linked to the excessive intake of sugar. The research in Massachusetts says that sugar causes low testosterone. Similar research around the world says that low testosterone is highly associated with the various elements of the metabolic syndrome. So how many times do we have to enjoy the circular logic before we

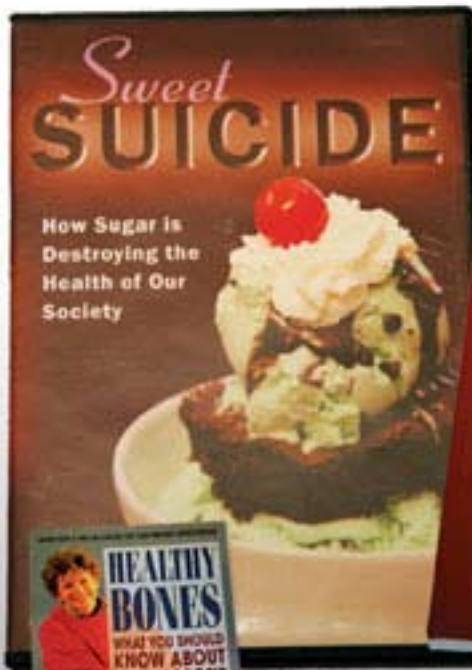
simply say that sugar causes both the low testosterone and the ailments in the metabolic syndrome? Put more simply, sugar kills in a multitude of ways and this one affects men where they really live, in the bedroom.

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Dr. Ryan Iverach atop one of Colorado's 14-ers (peaks above 14,000 feet).
Photo - courtesy Dr. Ryan Iverach



Article Rebuttal

Our response to "LIQUID ASSETS - Cyclists and Engineered Sports Foods"

Author : Bill Misner, Ph.D. and Steve Born

Nancy Clark's recent article in the June 2009 Adventure Cyclist issue entitled, "LIQUID ASSETS - Cyclists and Engineered Sports Foods," pages 28-29, deserves a review comment.

As I watched the Tour-"day"-France, I saw no riders consuming solid foods except for energy bars early in the flat stages. Most of the nutrients were laced in soluble form on the bikes in common water bottles. Not one rider was eating pizza, milk, or peanut butter and jelly sandwiches. No, not one. Nancy Clark's precise analysis of the nutrient profile in these foods must be for sedentary activities. Why? Take a look at the digestion times, in the table on the facing page, required to break down and absorb each nutrient in these foods. Coupled with one athlete needing more or less electrolytes than the other, I question whether Ms. Clark is proposing one size now fits all. Can you imagine being on lap 7 of a 15-lap criterium, feeling a cramp coming on and reaching back into your jersey pocket for a PB&J sandwich or a slice of pizza to relieve your cramps? The Endurolytes product is rapidly absorbed and can be dosed with or in the energy drink/gel that fits individual athletes' requirements, instead of making you fit a food designed by a dietician in a food laboratory.

Steve's comments

I submitted this review/rebuttal to the editorial staff at Adventure Cyclist. I received a prompt reply from Michael

Deme, the Publications Director/Editor at the magazine, who wrote: "Interesting points but, as stated by Nancy in the fourth paragraph of the column, her advice is aimed at touring cyclists, not Tour de France cyclists. Our readers aren't typically pushing their bodies to the borderline insane degree that Tour de France racers are (due to the high intensity exercise that limits intestinal

bike may be weighed down a bit with panniers or a trailer stuffed with clothing and other gear, the "effort/intensity quotient" increases even if the pace is of lesser intensity as compared to a racing cyclist. That increase in effort and intensity due to increased weight would make the process of digesting solid food even more challenging.

3) Even high quality solid food always takes the body more time, fluid, electrolytes, and energy to process. When solid food is consumed sparingly, as a reward of sorts, no digestive-related problems usually occur. However, when solid food—and especially food that's loaded with refined sugars and saturated fats—is consumed too frequently, it can make one feel lethargic, even sleepy (I learned that the hard way in a couple

The reason why products like Hammer Gel, HEED, Sustained Energy, and Perpetuem exist is to provide the body with precisely what it needs calorie-wise during exercise, in a form that is remarkably easy to digest.

function), which may be why they can't eat food. Your take Nancy?"

Ms. Clark replied: "Yes, my article is for touring cyclists, not bike racers."

Here are my thoughts regarding that particular comment

1) Are the nutrition needs of touring cyclists similar-to-identical to those of bike racers? For the most part the answer is "no," though the ability to comfortably process solid food can be challenging even for cyclists riding at lower intensities (who can afford to wait several hours for pizza's absorption to be complete?).

2) Assuming that a touring cyclist's

of my ultra distance races). Believe me, that's no fun whether you're out there on a casual ride or involved in a high-intensity race.

4) The reason why products like Hammer Gel, HEED, Sustained Energy, and Perpetuem exist is to provide the body with precisely what it needs calorie-wise during exercise and in a form that is remarkably easy to digest. That's just not the case with a PB&J sandwich or pizza. Endurolytes capsules, unlike a PB&J sandwich or a slice of pizza, allows each individual athlete to fulfill their unique and all-important electrolyte requirements with great precision. This reminds me of an email we received from

see LIQUID ASSETS on page 11

STEVE from page 5

notch or two above my comfort level (I felt the screws tightening a little too much a few times). Eventually, though, we decided to mellow out the pace a bit and before we knew it we had reached the beach/park at Lakeside, where lunch was waiting for us. I really enjoyed riding with both Mike and Bill; they're both super good guys and great riders, and I had a blast (a sometimes gasping-for-air blast, but a blast nonetheless). That evening, we all enjoyed another feast-of-a-meal at City Beach in Whitefish, with many of us enjoying

multiple "Active Recovery" sessions on the Globus while we ate.

Sunday

Sunday was the final day of riding and while some of the riders chose to do the 55-mile ride up to Star Meadow and back, many other riders (including me) decided to do a more leisurely and flatter recovery ride. The weather was stellar again this day and the riding & company was fabulous. Once completed, we had yet another superb meal, after which we lingered and enjoyed each others'

company until it was time to head home. As you can probably tell, I really enjoyed this year's Highline Hammer immensely. As mentioned earlier, the riding is always a central part of the entire festivities but what I enjoy the most is interacting with the people who attend... we really do have some great clients! With that in mind, I want to thank everyone who made my Highline experience this year a terrific one. I hope to see you, as well as meet some new Highline attendees, at next year's event!

LIQUID ASSETS from page 10

a touring-specific cyclist, one that we included in Endurance News #48 (see the article by Dave Dillon "Confessions : I sacrificed performance to save a buck or two!" on page 15 at www.hammernutrition.com/downloads/ENews/ENissue48.pdf).

Summary

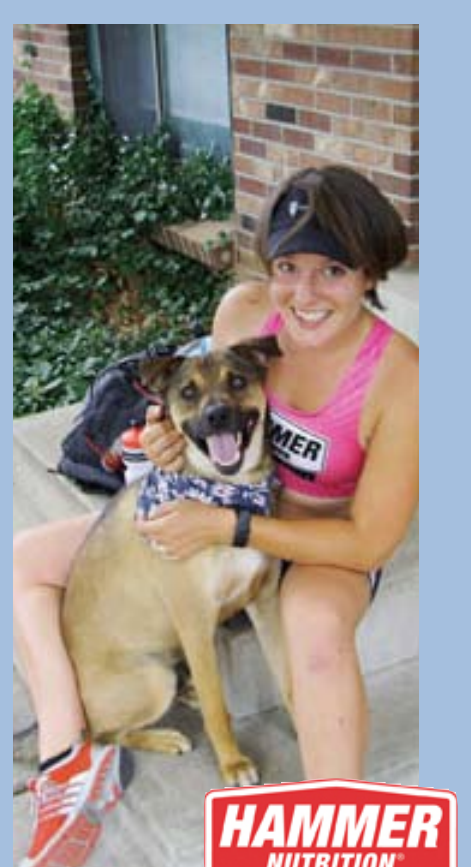
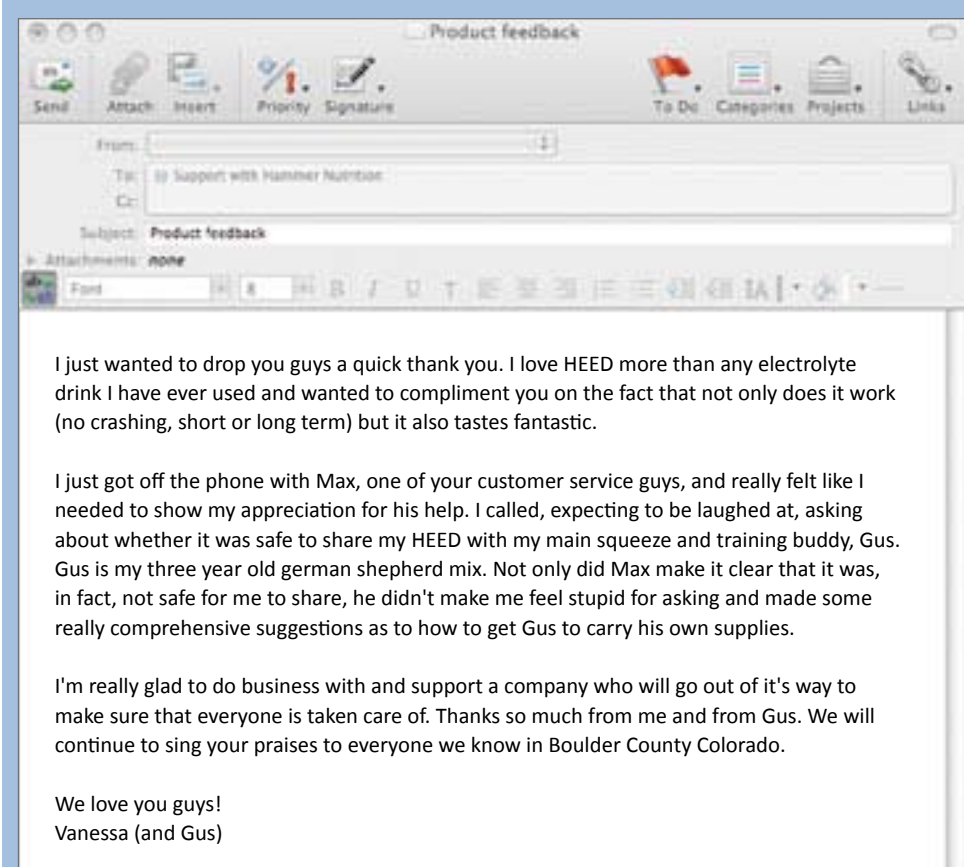
We believe that whether one is a touring cyclist or a racer, they deserve to put

high quality fuel sources in their body, which is precisely why we produce the fuels we do. And, as illustrated in Mr. Dillon's letter/article, cyclists using Hammer products find them to be as cost-effective, if not more so, than "real" food, with the added benefit of simply feeling better when using them while riding. We believe that the old computer adage "garbage in, garbage out" - meaning what you put in your body determines the quality of energy you're going to get out of it - is applicable for

ALL athletes and active people.

NUTRIENT SOURCE	COMPLETE ABSORPTION TIME
PB&J	240 minutes
Milk	120 minutes
Pizza	360-480 minutes
Endurolytes	3-15 minutes

References available upon request



This testimonial was unsolicited and has not been modified.



Zach Lipana goes all out at the 2008 Rimrock Grand Prix.
Photo - Justin Lipana

Boron's Testosterone-Specific Benefits

Author : Bill Misner, Ph.D.

Boron is reported to raise testosterone levels to normal physiological values in older men, similar to those that they had in their 20-30's. Supplementation with 10 mg of boron per day for 28 days increased testosterone levels in healthy males [1]. This level of testosterone is good for lean muscle mass progression during training. Boron deficiency is quite common.

Human study in females also

demonstrates that boron taken at a 3 mg per day rate significantly increases testosterone levels in postmenopausal women. This increase is most pronounced in women with low dietary magnesium intake [2]. Females appear to not require as much boron as do males to attain optimal testosterone levels.

Nielsen [1998] stated: "An analysis of both human and animal data suggests that an acceptable safe range of population mean intakes of B for adults could well be 1-13 mg/d. Recent findings

indicate that a significant number of people do not consistently consume more than 1 mg Boron/d; this suggests that B could be a practical nutritional or clinical concern [3]." The implication is that 1-13 mg is safe and that the bolus testosterone ranges expected are also within safe normal range. The abstract-level statements are pasted below for individual interpretation.

Testosterone within normal healthy range is a welcome performance and health-benefitting hormone effect for master's training that may advance muscle growth rate post-exercise.

STEVE'S NOTE: For more on this amazing mineral, check out the "Product Spotlight" article in EN#56 at www.hammernutrition.com/downloads/ENews/ENIssue56.pdf

REFERENCES:

[1] MALE BORON DOSE

EFFECTS: Boron is an essential trace element for plants and its interrelationship with mineral and bone metabolism and endocrine function in humans has been proposed. Relatively little is known about the occurrence of boron in the food chain and hence a biomarker which reflects its intake is required. Naghii & Samman [1997] concluded 2-studies were carried out to quantify the urinary boron concentration of subjects consuming their habitual diet and the effect of supplementation. 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 0.35-3.53 mg/day, with no significant difference between the two occasions. Supplementation with 10 mg boron per day for 4 wk 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. However, there was no difference in plasma lipids or the oxidizability of low-density lipoprotein. Naghii MR, Samman S. The effect of boron supplementation on its urinary excretion and selected cardiovascular risk factors in healthy male subjects. *Biol Trace Elem Res.* 1997 Mar;56(3):273-86.

[2] FEMALE BORON DOSE

EFFECTS: Nielson [1987] 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. Nielson, F. H., et al. Effect of dietary boron on mineral, estrogen, and testosterone metabolism in postmenopausal women. *FASEB J.* 1(5):394-397, 1987.

[3] SUMMARY STATEMENT: Nielson [1998] stated: "An analysis of both human and animal data suggests that an acceptable safe range of population mean intakes of B for adults could well be 1-13 mg/d. Recent findings indicate that a significant number of people do not consistently consume more than 1 mg Boron/d; this suggests that B could be a practical nutritional or clinical concern." Nielson FH. The justification for providing dietary guidance for the nutritional intake of boron. *Biol Trace Elem Res.* 1998 Winter;66(1-3):319-30.

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Marcie Bochman takes to the water during the 2009 Summit Solstice Triathlon.
Photo - Angela Nock

Hammer Supplementation for Swimming

Author : Laura Labelle

I have a long-time affiliation with Hammer Nutrition. My late father and younger brother started the company 22 years ago with a mere 2 products. My brother, Brian Frank, has since grown the company, intensely researching and developing the impressive product line that is available today.

As a child, my father had us take LOTS of vitamins whenever we were with him, usually daily. I was always very upset by this, as they made me nauseous. (As an adult, I have learned that I am somewhat over sensitive to all B complex vitamins, hence the nausea). Now that I'm training for the strenuous activity of swimming, I am grateful to have the knowledge of smart supplementation to guide me along the way.

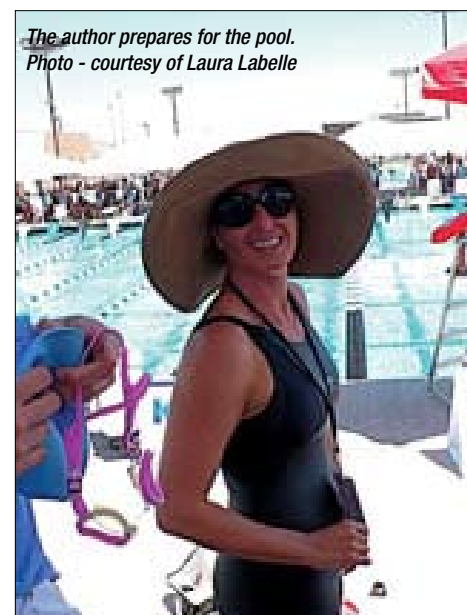
My daily regimen currently looks like this: After breakfast (always with food because my tummy is quite sensitive) I take 3 Premium Insurance Caps, 2 Race

Caps Supreme, 2 Phytomax, 3 Tissue Rejuvenator (in cycles, 2 months on/off), 1Boron, and 1iFlora. Depending on the day, I also use Anti-Fatigue caps. If I am feeling run-down or like I am fighting a cold, I also use some various immunity boosters.

On the days that I have a swim meet, I change it up somewhat, as I tend to experience the symptoms of a nervous stomach and find it hard to consume anything with consistency. So with breakfast I will have 4 Race Caps Supreme, 2 Phytomax, and 3 Anti-Fatigue Caps. At the meet, I will have Hammer Gel 20-30 minutes before my event for a sprint (100 yards/meters or less) and if it is a longer swim (200 and up), I will add a couple of Energy Surge (ATP 100) tabs. Mid-day I will have a Hammer Bar and/or something small like a banana or toasted whole grain bread with almond butter and an all-fruit preserve. I follow this small amount of food with 3 more Race Caps Supreme and 2 Anti-Fatigue Caps. I drink Heed

throughout the day along with extra water, because living in California, it is easy to get dehydrated. Immediately after finishing my cooldown I will have a full serving of Recoverite. In addition to this, for large meets, like Regionals, Nationals, or Worlds, I start loading with Race Day Boost 4 days prior to my event.

I have now grown very fond of vitamin supplementation, as I can feel a marked difference when I take them!



The author prepares for the pool.
Photo - courtesy of Laura Labelle

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Willy Zellmer cools off after placing 3rd in the Elite U23 Junior Road National Championships.
Photo - Steve Zellmer

Heat Adaptation/ Toleration & Salt Stains

Author : Bill Misner, Ph.D.

Here's a question that we receive with a fair amount of frequency during the summer months: "I began my workout early in the morning and the temperature was already quite warm. As the day progressed the temperature rose even higher, topping off above 100 degrees F. I drank plenty of water and supplemented with Endurolytes every hour. I still had salt stains everywhere. Is this just what happens and not a problem or should I do something a little different?"

Dr. Bill Misner responds:

Generally, salt stains are an indication of (1) profuse fluid loss response to hyperthermia, (2) excessive dietary sodium intake above needs, or (3) a combination of 1 & 2. The average American diet packs in 6000-8000 mg of sodium when the body requires only 500 mg each day, with a high-upper recommendation of 2400 mg. Sodium is stored in extracellular spaces withholding fluids proportionate to dietary intake, though the kidneys filter out some of the serum circulating levels. If you notice, in a pace-line early on, some riders tend to sweat heavily while others seem relatively dry. The more profuse one perspires, the higher the rate of sodium excreted, hence salt stains relative to diet or rate of fluid loss. There are other mineral salts lost in sweat, but sodium and chloride are the two most lost, with magnesium and potassium in lesser amounts.

As a rule of thumb, the 70-70 rule states that when the heat is above 70 degrees F and 70% humidity, physiological adaptations occur within 8-14 days exposure at an aerobic pace for 90 minutes or more each. Above 80 degrees, without attention to humidity, heat has an inhibiting effect on endurance performance for each degree beyond 80. You can prepare only so much for high heat, then deteriorated performance is bound to occur. The leaner the athlete, the more fit the athlete, the more

Generally, salt stains are an indication of (1) profuse fluid loss response to hyperthermia, (2) excessive dietary sodium intake above needs, or (3) a combination of 1 & 2

acclimated the athlete, and the slower the pace rate-effort attempted, the better heat will be tolerated. Fluid loss and electrolyte loss is observed to be maximally efficient up to a point if the person possesses a combination of all of the former mentioned traits.

Once core temperature reaches 102 degrees F, perspiration begins in an attempt to lower body temperature to 98.6 degrees F. Temperatures of 107+ degrees F have been recorded during extreme heat stress. Pace rate, multiplied by duration in temperatures not adapted to [by necessary 8-14 day exposure incidences], tends to elevate heart rate, perspiration rate, and electrolyte loss and communicates to the body to begin developing more efficient distal capillary beds to cool the body,

which reduces core temperatures and fluid, and electrolyte losses.

As you know, we recommend 16-24 fluid ounces with 3-6 Endurolytes per hour in anticipation of loss. During adaptation to heat, the fluid and electrolyte loss may be at such a high rate that the deficiency is too much for the body to overcome. I am not sure that human metabolism can "efficiently perform" quality aerobic exercise in temperatures above 105 degrees. Keeping the skin wet, increasing fluids, electrolytes, and relatively small amounts of long chain carbohydrates, while lowering your pace effort, may be your only choice until those adaptations occur. The temperatures you rode in are very hot ones indeed, and even with time exposures and training in hot conditions,

your physiology will adapt as far as it will within an 8-14 day heat-training exposure.

"The week before a big race you should feel restless, like an animal locked up in a cage. Then, on the day of the race, let this stored energy out for the race."

Pearls of Wisdom from Dr. Bill



Participants at the first annual Pipestem Creek Off-Road Triathlon and Trail Run gather together for a pre-race group shot. Photo : Steven Aesoph

Whole Grains vs. Refined Processed Grains

Is there an advantage?

Author : Bill Misner, Ph.D.

Inconsistencies in epidemiologic findings relating grain fiber to chronic disease may be explained by differentiating nutrient-rich fiber derived from whole grain versus nutrient-poor fiber derived from refined grain. Given that phytochemicals are most varied and abundant in the outer layers of grains, researchers [1] tested the hypothesis that whole grain fiber consumption is associated with a reduced mortality risk in comparison to a similar amount of refined grain fiber.

Postmenopausal (N=11,040) women enrolled in the Iowa Women's Health Study, matched on total grain fiber intake, but differing in the proportion of fiber consumed from whole vs. refined grain, were followed from baseline in 1986 through 31 December, 1997, during which time 1,341 deaths occurred in 124,823 observed woman-years.

After multivariate adjustment in proportional hazards regression, women who consumed on average 1.9 g refined grain fiber/2,000 kcal and 4.7 g whole grain fiber/2,000 kcal had a 17% lower mortality rate (RR=0.83, 95% CI=0.73-

0.94) than women who consumed predominantly refined grain fiber: 4.5 g/2,000 kcal, but only 1.3 g whole grain fiber/2,000 kcal.

Inferences from studies that have reported associations between grain fiber intake and morbidity or mortality may be limited by not differentiating fiber sources. Future studies should distinguish fiber from whole vs. refined grains. Public health policy should differentiate whole grains from refined, and recommend increased consumption of the former (favoring whole grains).

COMMENT: It is not just the fiber, but numerous phytonutrients extracted from the outer shell of the whole grain food that may contribute to longevity. We all should consider adding the high-protein whole cereal grains such as amaranth, spelt, quinoa, kamut, and whole wheat to the training table.

References available upon request.

Product feedback

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From: [redacted]
 To: Support with Hammer Nutrition
 Subject: Product feedback
 Attachments: none

I LOVE your referral program features! I'm a personal trainer at a local gym, and I train a lot of cyclists, runners and hikers who talk to me about their nutrition needs. I have already referred 4 clients to buy your supplements - explaining to them that they receive 15% off their initial order- and I'm happy to get my 25% credit toward future purchases! **It's a win-win situation for everyone.** They have already given me feedback about how much they are impressed with your products, service, fast delivery, magazines, and free samples that you included in their shipments! I'm happy to be able to provide such a reliable & quality company for my clients to consider for their sports nutrition needs.

Thanks again Hammer Team! I'm just another satisfied customer happy to have found a great source for my sports nutrition supplements.

Cycling strong, Rita Coutu

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Brian Suttle pulls ahead of Ted Burnham for 3rd at the Summit Solstice Triathlon.
Photo - Angela Nock

From the Archives

Ask Dr. Bill about stevia

Author : Bill Misner, Ph.D.

Q: I found this link—<http://www.food.gov.uk/multimedia/webpage/stevia--> concerning the stevia ban in Europe. In the article it states, "As a result of the outcome of safety assessments which have been carried out, stevia and stevioside are not permitted for sale as food or food ingredients in the UK or elsewhere within the EU." Bottom line: Is stevia safe?

A: Too much of any substance, solid or liquid, may be toxic if too much is consumed. The term, LD50, describes the oral dose required to kill 50% of the lab animals.

in Hammer Nutrition products should not be of any concern.

Additional information/research

First, it's important to mention that any metabolic sequence is always possible when dose is exaggerated and all conditions met. In other words, a variety of chemical conditions must be imposed before natural metabolites in stevioside may impose mutagenic effects. To reproduce mutagenic effects, you would first need to generate aglycone from stevioside. Next, the human enzymatic system would need to activate a number of bioactivities with certain microbes such as salmonella.

plant pigments, the anthraquinones and the flavonols, contain many members mutagenic in the Salmonella/mammalian microsome assay."(A review of the genetic effects of naturally occurring flavonoids, anthraquinones and related compounds. Mutat Res. 1980 May;75(3):243-77. Review. PMID: 6770263 - PubMed - indexed for MEDLINE).

There are several classes of natural compounds that can, in extreme overdose in the presence of certain chemical reactions from human enzymes on certain microbes, create a mutagenic reaction.

Stevioside is a natural sweetener extracted from the leaves of *Stevia rebaudiana* Bertoni. The literature about stevia, the occurrence of its sweeteners, their biosynthetic pathway, and toxicological aspects are discussed. Injection experiments or perfusion experiments of organs are considered as not relevant for the use of stevia or stevioside as food, and therefore these studies are not included in this review. The metabolism of stevioside is discussed in relation with the possible formation of steviol. Different mutagenicity studies as well as studies on carcinogenicity are discussed.

Acute and subacute toxicity studies revealed a very low toxicity of stevia and stevioside.

Fertility and teratogenicity studies are discussed as well as the effects on the bio-availability of other nutrients in the diet. The conclusion is that stevia and stevioside are safe when used as a sweetener. It is suited for both diabetics and PKU patients, as well as for obese persons intending to lose weight by avoiding sugar supplements in the diet. No allergic reactions to it seem to exist.

Let's compare the LD50 of these common substances:

Substance	LD50 Grams Per Kilogram Bodyweight
Water	180.0 grams/kilogram
Stevioside	15.0 grams/kilogram
Vitamin C	12.0 grams/kilogram
Sodium Chloride	3.0 grams/kilogram
Arsenic	0.76 gram/kilogram

Note: 15g/kg means 15 grams of stevioside for every 1 kg (2.2 lbs) of body weight. For a 165-lb/75-kg athlete that translates to 1125 grams (1,125,000 mg) of steviosides.

REFERENCE: 1) Akashi and Yamamoto reported a Stevia-LD50 was 15g/kg in oral administration (1975).

Summary

Considering the safety record of stevia, plus the fact that its LD50 is 5x higher than salt, and even higher than vitamin C, the tincture of stevioside formulated

of the rats with Aroclor 1254 and the addition of NADPH; unmetabolized steviol was not active.

That said, in 1980 Brown reported, "Two classes of common phenolic

Steviol, the aglycone of stevioside, was found to be highly mutagenic when evaluated in the presence of a 9000 X g supernatant (floating above or on the surface) fraction derived from the livers of Aroclor 1254-pretreated rats. Expression of mutagenic activity was dependent on both pretreatment

see STEVIA on page 17

STEVIA from page 16

Four steviol (ent-kaurene-type diterpenoid) glycosides, stevioside, rebaudiosides A and C, and dulcoside A have been isolated from *Stevia rebaudiana* Berton. These compounds showed strong inhibitory activity against 12-O-tetradecanoylphorbol-13-acetate (TPA)-induced inflammation in mice. The 50% inhibitory dose of these compounds for TPA-induced inflammation was 54.1-291.6 micro g/ear. Furthermore, at 1.0 and 0.1 mg/mouse of stevioside mixture, the mixture of these compounds markedly inhibited the promoting effect of TPA (1 micro g/mouse) on skin tumor formation initiated with 7,12-dimethylbenz[a]anthracene (50 micro g/mouse) .

Stevioside, a constituent of *Stevia rebaudiana*, is commonly used as a non-caloric sugar substitute in Japan. Consistent with reports in the literature, we have found that stevioside is not mutagenic as judged by utilization of *Salmonella typhimurium* strain TM677, either in the presence or in the absence of a metabolic activating system. Similar negative results were obtained with several structurally related sweet-tasting glycosides.

However, steviol, the aglycone of stevioside, was found to be highly mutagenic when evaluated in the presence of a 9000 X g supernatant fraction derived from the livers of Aroclor 1254-pretreated rats.

Expression of mutagenic activity was dependent on the pretreatment of the rats with Aroclor 1254 and the addition of NADPH; unmetabolized steviol was not active. The structurally related species, isosteviol, was not active regardless of metabolic activation. Similarly, chemical reduction of the unsaturated bond linking the carbon-16 and -17 positions of steviol resulted in the generation of two isomeric products, dihydrosteviol A and B, that were not mutagenic. In addition, ent-kaurenoic acid was found to be inactive.

It is therefore clear that a metabolite of an integral component of stevioside is mutagenic; structural features of requisite importance for the expression of mutagenic activity include a hydroxy group at position 13 and an unsaturated bond joining the carbon atoms at positions 16 and 17. A potential metabolite of steviol, steviol-16 alpha,17-epoxide, was synthesized chemically and found to be ineffective as a direct-acting mutagen.

Thus, although stevioside itself appears innocuous, it would seem prudent to expeditiously and unequivocally establish the human metabolic disposition of this substance.

Summary

Am I saying you can get cancer from a stevia sweetener? No, not likely, and certainly it is not established in the literature's mixed results. In my opinion

it is a completely safe natural nutrient and is a much better choice than sugar to sweeten foods. I can find 688 references on Medline to imply a carcinogenic relationship of cancer to dietary sugar, yet the FDA considers sugar GRAS (Generally Recognized As Safe). Go figure.

STEVE'S NOTE: Klaus Ferlow, HMH (Honorary Master Herbalist) once wrote: "Sugar is an addiction far stronger than what we see with heroin. It is the basic additive substance from which all other addictions flow. Refined sugar and all refined foods such as polished rice, white flour, and the like are nothing more than legalized poisons."

Dr. Daniel Mourey reported: "More elaborate safety tests were performed by the Japanese during their evaluation of stevia as a possible sweetening agent. Few substances have ever yielded such consistently negative results in toxicity trial as have stevia. Almost every toxicity test imaginable has been performed on stevia extract (concentrate) or stevioside at one time or another. The results are always negative. No abnormalities in weight change, food intake, cell or membrane characteristics, enzyme and substrate utilization, or chromosome characteristics. No cancer, no birth defects, no acute and no chronic untoward effects. Nothing." Something to think about, especially when comparing stevia to sugar."

References available upon request.

Product feedback

Send Attach Insert Priority Signature To Do Categories Projects Links

From: [redacted]
To: Support with Hammer Nutrition
Cc: [redacted]
Subject: Product feedback
Attachments: none

Font [redacted]

To the folks at Hammer,
I just wanted to say how much I am loving your products. I ordered my first shipment about a month ago and honestly loved everything I ordered. I was completely blown away when you guys sent me all the samples and The Endurance Athletes GUIDE to SUCCESS (which is easily the best book on nutrition I've ever read).

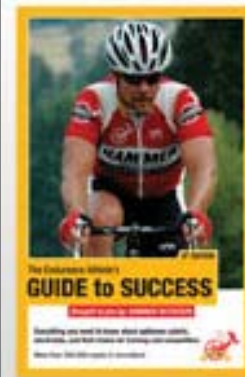
Being so impressed with your products and your customer service I decided to research your company a little bit more (thanks Google) and was even able to listen to an interview with Brian Frank. While I really like your products, I truly love what Hammer Nutrition is all about. You guys rock!!

Rich Scott

This testimonial was unsolicited and only modified for length.

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Greg Ostrin, Stephen Armes, and John Hatala - the top military finishers at the Camp Pendleton Sprint Tri. / Photo - Karla Armes

Vitamin E Overload?

Author : Steve Born

The debate as to how much intake of a particular nutrient is necessary (in this case vitamin E) is an ongoing one, with many believing that "you can get all the vitamins you need from your food." These are also pretty much the same group of people who believe that the Recommended Daily Allowance (RDA) standard, which is now called the Referenced Daily Intake (RDI)—both of which we believe are archaic and inadequate standards—is sufficient if one does take a multivitamin/mineral supplement.

This is a topic that we address in the article "Supplementation - A necessity for athletes" which you'll find in the "KNOWLEDGE" section on the Hammer Nutrition website. I would encourage you to read that article because I think it will help clear the air and alleviate any concerns you may have regarding vitamin E and the number of Hammer Nutrition products that contain vitamin E. The entire article is definitely worthwhile, but I am particularly fond of the two sections: "The Recommended Daily Allowance: Recommended for what?" and "Supplements are dangerous? Antioxidants shorten life span? Be careful what you read!"

Specifically regarding vitamin E, Dr. Bill Misner writes, "The only warning for limiting Vitamin E intake is if you are taking a prescription anticoagulant. In that case, you should follow your physician's counsel. The therapeutic dosage of Vitamin E commonly used by athletes seeking to prevent free radical damage during and following exercise is

1,200 IU per day. Dosages of up to 3,200 IU of Vitamin E have been used daily in a wide variety of subjects for periods of

Vitamin E Benefits

- Maintaining membrane integrity and reducing cellular aging
- Acting as a free radical scavenger of lipids
- Maintaining healthy platelet aggregation
- Protecting nervous system and retina
- Delaying cognitive decline
- Enhancing immune function

up to two years without any unfavorable side effects occurring."

All of the earlier-listed reasons are why this important vitamin exists in a few of our products. The second one listed above, "acting as a free radical scavenger of lipids," is arguably the primary reason for vitamin E's inclusion in Premium Insurance Caps, Race Caps Supreme, Mito Caps, and AO Booster. Vitamin E is a very powerful antioxidant, which helps neutralize specific free radicals that are produced at all times, but especially during exercise. It also works synergistically with several other antioxidants (including the Coenzyme Q10 and Idebenone in Race Caps Supreme, the r-Alpha Lipoic Acid and Ascorbyl Palmitate in Mito Caps, and all of the nutrients in AO Booster) to help quench free radicals before they can do their cellular damage.

Keep in mind that your body will be depleting vitamin E as it neutralizes free radicals, which means that you're not storing everything you're ingesting,

but rather using it up as it utilizes its antioxidant properties (donating part of its molecular structure) in counteracting the negative effect caused by free radical production.

Each capsule of Premium Insurance Caps supplies approximately 57 IU of vitamin E (d-alpha tocopherol), each capsule of Race Caps Supreme supplies 133 IU, each capsule of Mito Caps supplies 12.5 IU, and each capsule of AO Booster supplies approximately 10 IU (plus the other tocopherols and tocotrienols).

On a daily basis, if you are consuming (for example) 7 Premium Insurance Caps, 2 Race Caps Supreme, 2 Mito Caps, and 1 AO Booster you are consuming approximately 701 IU per day. The Optimal Daily Intake (ODI) for vitamin E is 400 - 1200 IU daily. I believe that 400 - 800 IU daily is a sufficient amount for general health purposes, with the lower amount being adequate for sedentary people. For athletes, however, because they are generating several times more free radicals than sedentary people do, an amount upwards of 1200 IU daily, perhaps even as high as 2000 IU daily, is rational.

References available upon request.



The 'official' time sheet at the 2009 Race Across Oregon.

Race Across Oregon

Philbrick, Armstrong, and Kohan win in 2009!

Author : Steve Born

A new course was unveiled for the 2009 Race Across Oregon (or RAO, as it's commonly referred to), which began on July 11th in Hood River, OR, and, after 527 tough miles, finished at the Cooper Spur Ski Area, about 23 miles south of Hood River. According to race directors George Thomas and Terri Gooch, "Though 8 miles shorter than last year, the route kept its climbing. We'd been toying with a significant course change for a few years but last year during camp, we decided this was it. The 2009 route feels incredibly remote. In some ways we think the course is now more difficult for a solo racer – there are more rolling hills, steeper grades, and a greater sense of isolation throughout the route."

Men's winner, Hammer Nutrition client Kenneth Philbrick, seemed to agree. In an email I received from him he wrote: "This year the old course, which we all had grown to love, was deemed just too wimpy for the 21st century and was tossed into the ultra-shredder. Out came a vicious new course. The new one took the world famous RAO hardness factor and just turned it up to eleven. Unknown to George and Terri but come race day, race weather, heat (high 104 F), and head winds galore would combine to make finishing legendary." Philbrick's statement is hardly a stretch as this year's RAO took a toll on the riders: 16 male solo riders started but only 7 finished officially (within 48 hours). 4 women solo riders started but only 2 finished. Philbrick, the 2005 RAO champion,

was riding in second place after passing Time Station #2 in Moro, 121.4 miles into the race. However, by the time he passed Time Station #3 in Heppner, 207.5 miles into the race, Philbrick had an hour-plus lead, which he never relinquished. In fact, he increased his lead over eventual second place finisher Chad Swanson, and the rest of the field, winning by over six hours in a time of 32 hours, 46 minutes.

In his email to me, Kenneth mentioned that he was "sucking down the HEED like it was going out of style. I really can't speak highly enough about how well HEED worked. Bottle after bottle the stuff was like magic. Not too sweet, just enough. In addition to the HEED, we of course also used Sustained Energy, Endurolytes, and Espresso Hammer Gel."

Karen Armstrong, the 2007 Furnace Creek 508 women's division champion, claimed the victory in the women's field in this year's RAO. Coached by Marla Emde of Emde Sports, a Hammer Nutrition retailer and whose races Hammer Nutrition sponsors, Armstrong took the lead at the first time station (Tygh Valley, 73.4 miles into the race) and gradually increased it throughout the race, finishing approximately 2.5 hours ahead of ultracycling veteran Sandy Earl, in a time of 45 hours, 18 minutes.

Keith Kohan took first place in the Solo Recumbent division, posting an outstanding time of 44 hours, 32 minutes, which would have placed him 4th overall in the Men's Solo division.

This is a remarkable feat, given the extreme difficulty of the RAO course, especially for a recumbent.

Congratulations to "The Incredible 'K's'" - Kenneth, Karen, and Keith - on their races!

Photos by Terri Gooch



Scott Gaiser makes his way toward East Glacier, Montana.
Photo - Angela Nock



Epic Ride Supplement Suggestions

Author : Steve Born

I put this article together prior to this year's Highline Hammer event, in response to the question, "What supplements do you personally take before, during, and after a long, hard ride, an 'epic' ride?" Before I go into the details of my supplement program, let me first mention a couple of things:

1) Most of these supplements are ones that I take on a daily basis for general health benefits, though not usually in the same amounts that I take for an "epic" ride such as the 130+ mile, mega-climbing Highline Hammer loop through Glacier Park.

2) I take the higher dose of all the supplements on a significantly long ride, such as the Highline Hammer, and I'll take the lower dose for less intense, less mountainous, shorter-duration rides (say, 3-5 hours).

3) These products, and the amounts listed, are what I use. I'm a pretty big guy (190+ lbs) so the amounts you should consider may be less than that, depending on your weight and activity level. Refer to the updated Product Usage Manual (a.k.a. "The Little Red Book") at www.hammernutrition.com/downloads/PUM.pdf for suggested dosages.

4) The information I've provided in this article—in essence, the rationale for why I take these particular products—is but a sliver of what is available on the products and the nutrients they contain.

Consider this information the "Reader's Digest" version and refer to the Hammer Nutrition website for more detailed information about each of these products.

5) Carrying and consuming lots of pills during a long bike ride is, to some extent, an acquired skill and it may take awhile for your body to "learn" how to take a number of pills on an hourly basis. Additionally, it may be more challenging if you're doing a more "digestively challenging" type of exercise such as running. If this is the case, simply start slow and increase the number of products you take—and the amounts of each product—gradually.

6) My hourly intake of each of these supplements, with the exception of Endurolytes, doesn't change. Therefore, I'll make "X" number of baggies of these supplements, each baggie containing the identical amounts of each product. I use the small, zip lock bags that are available on the Hammer Nutrition website to carry the pills, and the amount of baggies I make will, of course, be dependent on how many hours I'll be out there. Every hour I'll open up a bag and consume the pills.

7) My dose of Endurolytes oftentimes changes hourly (for example, what I need at 2 p.m. may be higher than what I need at 8 a.m., if only because the weather may be hotter). Therefore, I'll keep my Endurolytes separate from my zip lock bags of the other supplements. I use the plastic capsule dispenser that is sold on the Hammer Nutrition website to carry Endurolytes, and I'll dose them as

needed.

30-120 minutes prior to the ride

• **1-2 Race Caps Supreme** – This product contains CoQ10 and ibenone, which are key substrates in the Electron Transport Chain (ETC) process of energy production. Race Caps Supreme also supplies the minerals calcium, magnesium, and potassium. These minerals are chelated to malic acid, citric acid, aspartic acid, lysine, and glycine, most-to-all of which are involved in the Krebs Cycle process of energy production.

CoQ10 and idebenone are also tremendous antioxidants (as is the vitamin E in the product), and I consider taking this product prior to exercise as giving the body a head start on free radical neutralization.

• **1-2 Mito Caps** – The "mitochondrial support product" provides, among other nutrients, acetyl l-carnitine (ALC) and r-alpha lipoic acid (r-ALA).

A.) Acetyl l-carnitine (ALC) provides l-carnitine, which is the key nutrient involved in the shuttling of fatty acids into the mitochondria for energy production. It also provides acetyl groups, which may be used in the formation of the neurotransmitter, acetylcholine, which is involved in cognitive function (think: increased focus, awareness, etc).

In addition to its crucial role in how the body uses fatty acids for fuels, ALC directly impacts energy production and the health of the mitochondria in other ways. One is via an increase of a phospholipid called cardiolopin, which plays a vital role in the activity of Cytochrome C oxidase, a key enzyme

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complex in mitochondrial energy production. When researchers gave the rats doses of acetyl l-carnitine they found an increase in cardiolipin levels (which are depleted during the aging process) and that the activity of the Cytochrome c oxidase enzyme system was restored to that of the younger rats.

Scientists also discovered that the activity of another enzyme—adenine nucleotide translocase (ANT)—also decreases with age. When ANT activity decreases it results in reduced ATP available for cellular energy production. When the aged rats were fed acetyl l-carnitine the activity of ANT was increased and thus energy production was increased.

In a nutshell, ALC helps the body use the calories from fatty acids as fuel more efficiently, while also increasing the volume/amounts/activity of key substances that are involved in the complex process of producing energy from your food and oxygen intake.

B.) R-alpha lipoic acid (r-ALA) is also intimately involved in the complex process of energy production. R-ALA is an essential cofactor for several multi-enzyme complexes (primarily the dehydrogenase complexes) that catalyze (increase the speed of a chemical reaction) critical energy metabolism reactions inside the mitochondria.

In addition, a portion of r-ALA is reduced to a substance called Alpha-dihydrolipoic acid (DHLA), which functions directly as an antioxidant, helping to neutralize reactive oxygen species (ROS) and nitrogen oxygen species (NOS) free radicals. In addition, DHLA helps

to regenerate “used up” or oxidized antioxidants such as vitamins C & E, CoQ10, and glutathione.

So by taking r-ALA, energy production is optimized (especially when combined with acetyl l-carnitine) and the enormous amounts of free radicals produced from mitochondrial energy production are effectively neutralized, via both r-ALA itself as well as through the other antioxidants that r-ALA regenerates.

R-ALA is also believed to be involved in maintaining proper glucose metabolism by improving insulin sensitivity.

In a nutshell, r-ALA plays a role in specific energy-producing functions within the mitochondria. It is a superb antioxidant, with the unique ability to neutralize both water- and fat-soluble-based free radicals. It is also able to regenerate “used up” antioxidants, thus extending their activity (“shelf life”) in the body. Lastly, r-ALA assists in maintaining proper glucose metabolism.

BOTTOM LINE: When you take Mito Caps you are providing two key nutrients that will help maintain optimal mitochondrial function, which is vital for energy production and overall health. When I take the product I oftentimes think of what Dr. Bill Misner once wrote: “The longer you can stimulate the lifespan or health of the mitochondria, the longer you will live and the better you will perform in endurance events. Endurance athletes should realize how incredibly important it is to effect mitochondria and that everything formulated in this compound influences mitochondria cell biochemistry function synergistically and remarkably.”

• **2-4 Anti-Fatigue Caps** – Provides

three nutrients—potassium/magnesium aspartate, OKG, and l-citrulline—that will help neutralize the negative effects of excess ammonia accumulation, which is arguably the primary culprit in premature fatigue.

PERSONAL NOTE: In many ways, this is my favorite product in the entire Hammer Nutrition line. I have tested each of these nutrients alone and in combination for so many years that I've lost track. After all that time, and after consuming literally hundreds of doses, I can honestly say that this little product is amazing in how well it works.

• **2-4 Endurance Amino** – Provides the primary amino acids—the three branched chain amino acids (a.k.a. BCAAs – l-leucine, l-isoleucine, l-valine) and alanine—that are used in the energy cycle during exercise. Plus, the BCAAs in Endurance Amino assist in replenishing depleted glutamine stores while also aiding in the prevention of muscle tissue breakdown. The latter helps to prevent excess fatigue-causing ammonia from being produced and accumulating. Additionally, research has shown that the intake of BCAAs prior to and during exercise may delay exercise-induced or central nervous system-induced fatigue. It is also believed that BCAAs may improve mood and cognitive performance.

On top of that, the reduced (metabolically active) glutathione component in Endurance Amino provides a number of benefits, primarily powerful antioxidant support.

• **3 Endurolytes** – Provides a balanced

see EPIC on page 22

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supply of necessary electrolytes. Taking this product prior to a lengthy workout or race provides what I call a “pre-emptive strike dose,” meaning that you’re taking care of electrolyte requirements prior to them truly becoming a necessity. This frees you from having to take the product during the first 30-60 minutes of the ride. The dose will be dependent on a variety of factors (weather, fitness levels, acclimatization levels, body weight, etc.), and what you’ve already tested in training.

Every hour during the ride, starting at hour #2

- **1-2 Race Caps Supreme** – By taking this product hourly during prolonged exercise you will be “replacing the spark plugs” in the body, helping to ensure more consistent energy production throughout the workout. In addition, you will also be providing the body with powerful protection (via the CoQ10, idebenone, and vitamin E components) against fat-soluble-based free radicals.
- **1-2 Mito Caps** – By taking this product hourly you will be maintaining optimal mitochondrial function, which translates into more efficient energy production and free radical neutralization (the latter, as is the case with the antioxidants in Race Caps Supreme, being especially important for recovery as well). Plus, the r-ALA component in the product helps maintain proper glucose metabolism, which is undoubtedly beneficial during exercise.
- **2-4 Anti-Fatigue Caps** – By taking this product hourly you supply the body with potassium/magnesium aspartate, l-citrulline, and OKG, all of which help to neutralize the negative effects of fatigue-causing excess ammonia accumulation.
- **2-4 Endurance Amino** – By taking this product hourly you provide the primary “used-in-the-energy-cycle” amino acids (the BCAAs). The BCAAs in Endurance Amino, along with the BCAAs that naturally occur in the soy protein component in Sustained Energy and Perpetuem, helps prevent the muscle tissue from being broken down to satisfy the 5% - 15% of the body’s energy requirements. The result is less fatigue-causing ammonia to accumulate and less

muscle tissue that will be broken down and needing to be repaired during the recovery process.

You also supply the body with l-alanine. The liver can convert l-alanine into

cramping.

SPECIAL NOTE: Race Caps Supreme, Mito Caps, and Anti-Fatigue Caps also contain the patented Enzyme Enhancement System™, which helps



L to R : Kiefer Hahn, Brad Lamson, Jim Bruskewitz, Jennie Phillips, Mike Freeman, Cassie Lowe, and Tom Morris ride the epic 136-mile Highline Hammer. Photo - Vince Arnone

glucose as needed (I like to think of it as an “emergency” energy supply), which the bloodstream transports to the muscles for energy. L-alanine also aids in the synthesis of pantothenic acid (vitamin B-5), which is needed for protein, fat, and carbohydrate metabolism.

Lastly, you provide the body with glutathione, which is one of the most potent antioxidants there is, with an Oxygen Radical Absorbency Capacity (ORAC) rating of 12,000+. Dr. Misner writes, “Decline in endurance performance may parallel decline in glutathione concentrations imposed by the aging process.” That alone makes taking glutathione during exercise sound like a very rational idea to me.

Glutathione also facilitates the transport of amino acids which, hypothetically, will assist in directing the amino acids in Sustained Energy and Perpetuem to wherever they’re needed (as I mention in the Product Spotlight article in this issue of EN, one athlete told me that taking Endurance Amino is like “supercharging” Perpetuem).

- **3 Endurolytes** (higher amount if weather dictates its necessity) – To keep the body’s “oil reservoir” topped off, which helps maintain the optimal performance of many important bodily functions, in addition to helping prevent

with the absorption of the nutrients and may also aid in the absorption of the carbohydrate and protein components in the Hammer Nutrition fuels.

After the ride is over (with Recoverite)

- **Premium Insurance Caps** – My dose after an “epic” ride is 7 capsules with Recoverite, with 7 capsules taken later with a meal. My typical suggested dose for lighter weight athletes after an “epic” workout is 4-5 capsules with Recoverite and 3-4 capsules taken later with a meal. Premium insurance Caps re-supplies the body with the vitamins and minerals that have been depleted during exercise, including some key antioxidants such as beta-carotene, vitamins C and E, and the minerals manganese, selenium, and zinc.
- **1-2 Race Caps Supreme** – For the antioxidant support from CoQ10, idebenone, and vitamin E, all three of which are also tremendous “heart health” nutrients.
- **1-2 Mito Caps** – The r-ALA component provides significant antioxidant support while also helping to increase endogenous supplies of the key antioxidant glutathione. For additional antioxidant support, Mito Caps also contains ascorbyl palmitate, the fat-soluble form of vitamin C, and a small

see EPIC on page 23

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amount of vitamin E.

- **1-2 Super Antioxidant** – Provides a variety of antioxidant nutrients, some of which also have circulation-enhancing benefits, which will help accelerate the clearance of metabolic waste by-products accumulated during prolonged exercise.

- **1 AO Booster** (with another capsule taken with a later meal) – Provides a wide range of fat-soluble antioxidants – the entire vitamin E “family” (the 4 tocopherols and 4 tocotrienols), lutein (which also has eye-specific benefits), and astaxanthin, which is suggested to be up to 50 times more potent in its antioxidant capabilities than vitamin E.

During prolonged events you’re burning a lot of fat (utilizing the calories to satisfy nearly two-thirds of your energy requirements), which means you’re also producing a massive amount of fat-soluble free radicals. AO Booster is designed to neutralize the negative effects of excess fat-soluble free radicals, similar to how Super Antioxidant helps to neutralize primarily water-soluble free radicals. Anti-inflammation is an additional benefit provided from the tocopherol/tocotrienol blend and the astaxanthin.

- **2-4 Endurance Amino** – Even though the body is getting a significant bolus of BCAAs via the whey protein isolate component in Recoverite, I firmly believe that additional amounts of these specific “ideal-for-recovery” amino acids is merited and beneficial. Additionally, I believe that providing the body with more glutathione at this critical time is also highly beneficial (in my opinion, any steps you can take to improve glutathione “status” in the body should be taken, especially after exercise). With Endurance Amino the body receives a nice dose of BCAAs and glutathione, complementing the BCAAs and the glutathione precursor amino acids in Recoverite.

- **1 Chromemate** – Research suggests that athletes who consume chromium polynicotinate (Chromemate) along with ample carbohydrates within two hours of completion of exercise will experience a significant increase in the rate of glycogen synthesis compared to no supplementation.

I am a firm believer in the saying, “How well you recover today determines how well you perform tomorrow.” Taking a capsule of ChromeMate with Recoverite is such a simple and inexpensive way to help maximize glycogen synthesis/storage, which is an undeniably vital component in the recovery process.

- **1 Kobaline** – Space limits me from listing all of the benefits that vitamin B12 and folic acid provide, though they are arguably best known for their role in the production of red blood cells. B12 and folic acid are also intimately involved in protein utilization and RNA and DNA synthesis, both of which have enhanced recovery implications.

Dr. Misner writes, “There are virtually 100’s of papers demonstrating the health benefits from folic acid and vitamin B12 in the cells, digestion, vision, hair, skin, immune system, musculoskeletal system, nervous system, oral health, and sexual system. It is a supplement I enthusiastically recommend and take every day.”

- **1 Boron** – Boron is reported to raise testosterone levels to normal physiological values in older men to normal levels that they had in their 20-30’s. Supplementation with 10 mg of boron per day for 28-days increased testosterone levels in healthy males. Note that Premium Insurance Caps

contains 2.5 mg of boron per 7 capsules. Also note that females appear to not require as much boron as do males to attain optimal testosterone levels (3 mg/day is suggested as being adequate).

There you have it, my “epic ride” supplement program. I hope it helps you as you put together your supplement program. More information about all of these products can be found on the Hammer Nutrition website, or just call or email us... we’ll be glad to help!

"My tri coach Adam Brown (who is sponsored by your company) recommended you to me. I started with your daily essentials supplements (Premium Insurance Caps, Race Caps Supreme, and Mito Caps) about one month ago and I just set an new PR on a 1/2 marathon today by 10 minutes!!! Your stuff is amazing! Thanks a million."

- Mike Jones

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Hammer Nutrition Supplements During Pregnancy or Lactation?

Author : Bill Misner, Ph.D. & Steve Born

One of the questions we frequently field is "Which Hammer Nutrition products are safe to use during pregnancy or lactation?" Before we address that question, we must first stress that all dietary supplements are required to first be confirmed "safe" by one's physician. It is necessary for us to state this because dietary supplements taken during pregnancy and/or lactation are typically not evaluated. (Note: This is why the list below is incomplete; the maximum safe dose for many nutrients and most herbal supplements for pregnant or nursing women is largely not scientifically determined).

Additionally, the physician is privy to the female patient's medical history to which we have no access. Therefore, the rule for supplement use during pregnancy & lactation is: "When in doubt, don't."

With that in mind, the following substances should not be consumed during pregnancy: yohimbine, acetyl-l-carnitine, vinpocetine, melatonin, alfalfa, andrographis, excess caffeine, angelica, barberry, bearberry, blue cohosh, bugleweed, chaste berry, coltsfoot, goldenseal, juniper, ephedra, passion flower, pennyroyal, saint john's wort, yohimbe, schizandra, and indole-3-carbinol .

Here are the Hammer Nutrition supplements that contain any of the above-listed substances or other nutrients that are not recommended

for consumption during pregnancy or lactation. We recommend avoiding the use of these products during pregnancy or while breastfeeding:

- Mito Caps - The Acetyl-l-carnitine (ALC) component in Mito Caps should be avoided, not because of any known toxicity, but because of the fact that the effect of ALC on women during pregnancy has not been scientifically investigated at this time.

- Race Caps Supreme - Idebenone is one of the components in this product, and although numerous studies have shown this nutrient to be remarkably safe (its LD50 in both sexes of mice is 10,000mg/kg), no research has been done on idebenone when taken during pregnancy or lactation.

- REM Caps - Contains the hormone melatonin

- Super Antioxidant - Contains vinpocetine. Vinpocetine use during pregnancy or lactation should be avoided due to lack of clinical studies.

- PSA Caps - This is, of course, a male-specific product, which contains nettles and saw palmetto extract. Because of possible hormonal activity, nettles and saw palmetto extract from any supplements are not recommended for women who are pregnant or breastfeeding.

- Caffeinated Hammer Gel (espresso, tropical)

Other substances to avoid

- Toxic substances to be avoided during pregnancy are alcohol (ethanol), aspirin, marijuana, tobacco, fluoride, mercury, and trans-fatty acids.

- During pregnancy, excess linoleic acid (dietary omega-6 oils such as safflower oil, maize oil, and sunflower seed oil) may impede the growth of the fetus due to interfering with omega-3 fatty acids absorption.

- Retinol (vitamin A) in amount above 5000 IU should not be taken. However, 12,500-25000 IU of beta carotene is fine because the body splits what it needs out of beta carotene selectively, discards what it does not need, and avoids toxicity hypervitaminosis.

Our supplement suggestions

- Premium Insurance Caps - limited to 7 capsules per day.

- Carlson Norwegian Salmon Oil 2-3 capsules per day is suggested, primarily for the DHA component, which will help contribute to babies' brain development. Note that the Carlson Norwegian Salmon Oil product that Hammer Nutrition sells is not a Cod Liver Oil product and contains no vitamin A.

Summary

Again, before taking or continuing to take any supplements, please consult with your physician. The reason we always recommend you check with your health care professional prior to starting a supplement program (and especially if you're pregnant, lactating, have any medical condition, or are on any medications) is simply because it is the responsible thing for any company to do. We always want to err on the cautious/conservative side, which is why we defer to your doctor for final approval.



Support Organic Farming

Author : Brian Frank

Some of you may have seen those green bumper stickers that say "Who's Your Farmer?" - they are all over up here in Montana. That's probably because Community Supported Agriculture (CSA) is pretty popular in the Flathead Valley. The bumper sticker is intended to get the reader to give some real thought to where the food they put on the table comes from. Did that broccoli travel 1,500 miles in a truck before you bought it at the supermarket? Did it come from a massive industrial farm that uses pesticides? Is there a local alternative like a farmers market or local producers in your area who sell direct? These are just a few of the questions that come to my mind when we shop for food for our family and issues that I believe are of vital importance to all of us for our health and yes, achieving peak athletic performance.

A few years ago, because of my interest and concern about losing access to locally grown food supplies, I registered the domain www.whosyourfarmer.com. My

intention was to create a nationwide clearing house to connect consumers with all of the CSA's (Community Supported Agriculture - aka subscription farms), raw dairy producers, hormone free/grass fed meat producers, etc. in the country who would be able to list their farm, dairy, or whatever for free on the site. Being somewhat busy with other duties, this project went unattended. However, in May, I was contacted by Cathy Raymond who had the same idea and the time and resources to make it happen. I gladly gave her the url and look forward to the launch of the website. I will announce it here and on the Endurance List when it goes live. In the meantime, in the table are a few links to sites that are already up and running for you to peruse if you are inclined.

Not more than a couple of weeks after I donated the url to Cathy and her group, I was contacted by Jim Ahearne on behalf of the Maine Organic Farmers & Gardeners Association, the originators

of the "Who's Your Farmer?" bumper sticker campaign. He was looking to put the domain to good use too. I felt bad because I had already agreed to donate the domain to Cathy, but Jim was easygoing about it and just wanted to make sure it would be used wisely. I assured him it would. In the meantime, I'd like to encourage all of you to go to their web site and order a bumper sticker, or a dozen, maybe a t-shirt, and consider subscribing to their magazine or just making a donation. www.mofga.org

Organic Farming Links

www.saveafarm.blogspot.com

www.farmtoconsumer.org

www.farmtoconsumerfoundation.org

www.mofga.org

Late breaking update: I just spoke with Cathy in preparation for this article and her organization is not sure that they can build and host the www.whosyourfarmer.com website. If the board does not approve it at their meeting on 8/17/09, they will return the domain so that I can give it to MOFGA. Watch for the update on this future site in the next issue of Endurance News.



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Chuck Luddeke uses the Globus during the Highline Hammer weekend.
Photo - Kadidja Sierra

EMS Users Chime In

Author : Jim Bruskwitz

This season of event specific training and racing is waning. There's still a lot to look forward to for most of us and even the biggest races loom for many, but I still find myself reflecting on what I've run across on the road to the season finale from all the conversations I've had with Electromuscular Stimulator – EMS - users. If I sort through the conversations it's easy to categorize them from the most common to the somewhat unusual.

I speak with many first timers, those that are just opening up the case, pulling out there Globus, and trying a program or two for the first time. They have a lot of questions. Although the Globus isn't big nor are there any moving parts but for the muscles that jump when stimulated, there are quite a few programs and a whole bunch of muscle groups that can benefit from EMS use. Figuring out where to place the electrode pads, how much current to send through those pads to elicit the desired degree of muscular contraction, and when to use the various programs are common questions. There is a relationship between the number of features and programs that a Globus unit offers, particularly the more top of the line models, and the time it takes to become familiar with those features. Besides being able to share ideas with other EMS practitioners on the E-stim Endurance List, there is information on pad placements, training plans using E-stim for running, cycling, and triathlon, as well as PDF's on EMS technology in the free knowledge –E-stim resources section

of the Hammer Nutrition website. Of course there are always live bodies – Hammer staff - to discuss the best use and practices of EMS training by phone.

Those that have climbed that first hurdle of charging the unit up and turning it on have a favorite program-at least the one they use the most. The active recovery program is so popular because it is so effective. I have the pleasure of attending the Hammer Camps/ Hammer Highline and helping people get started with the Globus units we have at the camps. I won't say that any fights break out between campers that want there Globus active recovery session after the ride, but I've noticed certain strategies employed by the campers to be first in line. It's not uncommon after a particularly hard ride for campers to try and squeeze out two active recovery sessions back to back. Luckily we have enough units available so that everyone can get there fix.

One conversation that sticks out involves an athlete that serviced his EMS unit and was without it for a week. This athlete uses active recovery daily, mainly when at his desk working. He knew that the active recovery was very helpful, but didn't realize to what extent until he was without it. It's a big deal for him. I don't think he is an unusual case. We all search for effective ways to speed our recovery. How long it takes us to recover from training has a lot to do with how much training we'll be able to absorb over time. The more quickly we recover, the more quality training fits into a week or month of training. The ability to recover more quickly makes the Globus

EMS unit a very powerful tool.

EMS users commonly use the massage and stretch and relax programs. Like the active recovery programs, these programs can be used at any time. They don't wear you out, they help you recover from being worn out in ways similar to the active recovery. We don't have access to the entourages of therapists that follow top professional athletes around, keeping them in top form while they train and compete. One athlete I spoke with considers his Globus EMS unit as a poor man's answer to the professional's entourage. I've spoken with and observed those with low and mid-back trouble that manage their condition with the stretch and relax program. For those that suffer from a tight and sore neck and shoulders from riding, the massage and the stretch and relax program gives them comfort and prepares them for their next ride. I've spoken with individuals that suffer from headaches that find relief from these programs used on the neck and shoulders-my wife being one of those individuals. And for those that groused about investing the money to purchase a unit, they quickly find that the number of massages they get drops and more than offsets the cost of the unit (not to mention the time saved and the hassles associated with meeting up with a massage therapist). For all those massage therapists out there, I still enjoy a good massage on occasion.

The aforementioned programs are the most popular partly because they fit on any day for any training plan. Most of the programs you'll find in the Globus menu are designed to build specific kinds of strength. The muscle fibers we use for sprinting differ from those used for ultra-endurance events. The strength programs address the full gamut of strength required for efforts

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GLOBUS from page 26

lasting various amounts of time. Since these programs deliver a training load in order to build strength, they also require recovery time. Fitting these programs in to one's training schedule is the topic of many conversations I have. Some of the individuals I train have EMS training incorporated into their plan. For those that make room in their training schedule for EMS strength building, they notice appreciable gains in strength. Climbing is easier, muscular endurance is improved, strength in the water increases and these gains are noticed on the order of weeks. Individuals are not waiting for months to enjoy the benefits.

On par with reports of strength gains from EMS training are reports of improved performance from the warm up programs. Warming up is well-researched and the benefits are great. One of those benefits is speeding up the cascade of chemical reactions that in total result in the contraction of the muscle. For those that feel like their muscles aren't as fresh as they could be, they report that the short warm up programs cut way back on the time it takes for the muscles to come around after exercise begins, the quality of their training sessions thus improve. A common conversation I have with those that have used a warm up program minutes before a race find themselves in race mode at the onset firing on all cylinders. They spare themselves the time it normally takes to work into the race.

The feedback on EMS training has been very positive. As a technology that is embraced by the athletic community, EMS is in its infancy in the US. Given the technology and the trial and error by many athletes that has occurred to date, my feeling is that as more athletes become familiar with EMS, it will become very popular because of the results it can deliver. I have one last report I'll leave you with. I confess that I just finished active recovery sessions on four major muscle groups while writing this article. I think I should go and train now. See you out there.

Jim is a multiple-time World and National Age Group Triathlon champion, a coach (www.enduranceperformance.com), and former lecturer at UW-Madison-Department of Kinesiology. He recently left teaching at UW to study and teach EMS training.

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Ultrarunner Jamie Donaldson is the first woman to cross the finish line at the 2009 Badwater Ultramarathon. Photo - Chris Kostman

Runners : Should You Stretch?

One coach's perspective

Author : Coach Al Lyman, CSCS

Discussions about the pros and cons of stretching always elicit many opinions, especially in training forums like the endurance list! Most runners, at some point in their run training progression, will seek to find out whether they should be stretching, and if so, how much and for how long. In this article I'll summarize some of the ways in which I present stretching and flexibility training to the runners I work with, and then offer a few tips. This isn't intended to be a comprehensive guide or review on stretching. Rather, I'd like to throw out a few points that perhaps you hadn't considered before to get you thinking. I'll focus on running because of its unique demands of eccentric loading on the body due to gravity, momentum, and ground impact forces, all of which mean that a thoughtful approach to both flexibility training and strength training is required.

First, let's establish a basic and, in my opinion, under appreciated concept to base this discussion: to run well and progress to be able to run faster and easier while minimizing risk of injury,

you need these three things to be in balance: 1. mobile hips and ankles, 2. a stabile and strong core, 3. a high degree of muscle elasticity. That's fine, you say, but where does stretching fit in?

Stiffness and Flexibility: Are They Compatible?



Mobility or range-of-motion (ROM) around a joint and the ability to run with EASE and in a RELAXED MANNER is often facilitated by increased flexibility. In other words, if for example, your hips are tight (mobility around your hips is limited due to too much time in a chair or driving), stretching properly can be one way to increase that mobility and make running easier and more fluid, and allow your body to better absorb impact forces. And, while you need muscles that

can move through their range-of-motion with ease (mobility), you may need stability and stiffness even more!

Each time your feet hit the ground (approximately 1000 times in only 1-mile of running) your body needs to be strong and stiff to resist ground forces and transfer deceleration into acceleration. If it is unable to do that efficiently, your body will “collapse” and energy will be lost, e.g. you will run slower and use lots of energy while running slowly. To summarize, the problem becomes – when our daily stretching COUNTERACTS our strength and stiffness, to resist those ground forces and transfer energy.

To put it another way, generally speaking and in my opinion, “stiffness” (how well your body resists impact forces and transitions from force reduction to force production) is more important than flexibility. If you are functionally strong, you will run faster and easier than if you have great levels of flexibility. If you are spending MORE TIME stretching than you are spending getting stronger, you may want to reconsider how you spend your time! More to the point, and perhaps the main reason for this piece:

To summarize, stretching, if done incorrectly or at the wrong times, can actually counteract the work you may be doing to get strong and become “stiffer,” to ultimately run easier and faster. Here are a few tips to again summarize what I want to share with you today:

1. In nearly every instance, you should avoid performing a “static” stretch of a muscle BEFORE you run. Static stretching is an attempt to lengthen muscle at a time when you should be preparing dynamically to run! You need a warm up, not a cool down, beforehand. A long stretched out muscle is a weak

see RUNNER on page 29

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muscle! After long stretching periods, you will see reduced strength levels for up to 1-2 hrs afterward. Is that what you want before you run or train?

2. If you are feeling a twinge of pain or the onset of an injury during running, DO NOT start to stretch. Why is it that we always attempt to “stretch out” a painful muscle? It never works. Stretching or pulling on a muscle that is tender or painful or stressed, will usually only add more stress to the muscle, and won't help it.

3. As a general rule, FOCUS your stretching (after running or at the end of the day, including myofascial release) on the muscles that are tight due to the sedentary part of your day or because of poor posture: These are hip flexors and hip rotators (from sitting too long), low back, traps and your chest area. Note that these are usually the areas that are MOST TIGHT and uncomfortable after a day off from training, and can often be the source of issues related to injury risk.

4. As a general rule, avoid stretching muscles which are tight because they are better conditioned due to your strength training and run training: if you are getting stronger by doing the right kinds of workouts in the right way, some muscles will become tighter due to increases in strength.

- Yes, low-level continuous tightness of certain muscles does hamper proper movement and compromises running biomechanics. However, forced stretching of some muscles to return them to greater resting length, could essentially work to undo strength gains, turning the muscle into its pre-strength weaker state. The key issue here is WHERE the muscle is, and WHY it is tight. The question becomes, how can you differentiate between what is tight due to training and what is tight due to life style and posture factors, e.g. such as sitting for too long?

- If you DO have abnormally high levels of chronic tightness due to repetitive lifestyle stressors or compensation/ anatomical issues you are aware of, you should spend some extra time smartly stretching those muscles.

- To consider what might be tightness from either source, the next time you have more than two days off from running, evaluate your muscle tightness. The muscles that still feel tight are likely due to lifestyle factors. These are the muscles that you should spend more time stretching.

- Again, those are most likely to be the HIP FLEXORS (and HIP ROTATORS and quads to some degree also), Back AND spinal stabilizers (low back and upper trap region), chest area.

5. I am a believer in the benefits of Yoga, but if done in a manner where the primary goal is extreme levels of flexibility just for flexibility's sake, then it could be counterproductive for your run training: The real benefit to yoga are the hip openers (rotation and flexion) that are SO OFTEN a limiter for most runners, and make us more prone to injury. Most runners NEED MORE hip mobility! But be careful how far you take Yoga and what you do with it, is my point. Think!

6. None of what I am saying means that MOBILITY (related to flexibility, but different!) is any LESS important! It is still among THE MOST IMPORTANT things you must have to run well and is a sign of youthfulness: the way you achieve higher levels of MOBILITY is to do the exercises and the sport specific movements which enhance it, and to make those movements DYNAMIC! This includes running FAST some of the time, which in and of itself can increase mobility.

(Go here: <http://www.coach-al.com/videos/clinicmobilityseries.html> to download a video of 10 dynamic hip-mobility warm-up exercises that will help you improve your mobility to run easier and faster)

Lastly, while it doesn't strictly relate to flexibility, the ability for you to benefit from any movement, exercise, or drill, comes about because of one primary reason: Your ability to consciously and

purposefully engage your BRAIN in the proper execution of the exercise, consistently, using the right amount of resistance, speed, and timing.

For example, take the 1-leg squat that is part of my program, Runner-CORE: you can perform this all day long poorly, because your brain, out of habit, will naturally contract the strongest muscles you have to perform the exercise even if it means you are compensating and performing it incorrectly, in essence reinforcing

that compensation and reinforcing poor adaptation.

However, to really IMPROVE and have it impact your running in a positive way, to make it powerful, you need to focus on bringing the inhibited muscles into action by THINKING and forcing your leg abductors (side of your leg) and glute medius (deep in your butt) to do their share and rotate your femur so your knee comes back over your foot and your posture returns to truly upright and balanced over your hips and pelvis.

To summarize, to run well and progress as a runner without being injured, you need the right amounts of mobility, stability, elasticity, AND flexibility! The right amounts of each depend upon your lifestyle, how much sitting you do, as well as how much strength you possess. The right balance should help you achieve the synergistic effect of improved run performance. Best of luck!

“The body is (simply) a chain of stabile segments connected to mobile joints. When there's a break in that chain, problems usually ensue.”

- Gray Cook

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*Dinner at the
Highline Hammer.
Photo - Stephan Rosen*

A Plea For Eating With A Purpose

Author : Chris Kostman

When I was 11, I shot a lizard at point blank range with a pellet gun. I stood transfixed, then in horror, then in disgust with myself, as that innocent creature's guts spilled out onto the rock on which it had been sunning itself. My heart spilled out just as fast.

At the university, I used to pick up a big donut, euphemistically called an apple fritter, on the way to campus a few days a week. Within an hour, sitting in the lecture hall, I would be fast asleep.

At age 20, I competed in the Race Across America (RAAM), a 3,127-mile, non-stop bicycle race from San Francisco, CA, to Washington, D.C. Along the way, I consumed daily up to 12,000 carefully considered calories that my brother Keith prescribed for me. Exact proportions of carbohydrates, fat, and protein were followed and most of the food was liquid and pre-digested, totally "bio-available," as they say. To make sure it was well balanced and adequate to support the rigors of pedaling 300 miles a day, I also took over 100 supplement pills daily: amino acids, multi-vitamins, and anti-oxidants. By the finish line, I had lost only four pounds and had dropped my body fat percentage from eleven to four. I was also the only competitor in the race who actually increased his lean muscle mass during the event.

But after finishing the race, I switched right back to my normal diet. In fact, I

overindulged on burgers, fries, shakes, ice cream, steak, and more. The result: My brain went completely out of whack from the influx of heavy doses of "less than ideal" foods. Instead of being thrilled at my cycling accomplishment and thankful to my support team, I was a rude, angry jerk.

Somewhere along the way, I started to wake up to the profound effect food made upon me, my body, my mind, my mood, and, ultimately, my heart. I began to notice that what I consumed had both an immediate, and long-term, effect on everything about me, my lifestyle, and my environment. So my diet got "better," but still, I indulged. I made rules for myself like, "OK, I won't cook meat or eggs at home, but I'll still eat them in restaurants or when invited to eat with friends or family."

At age 23 in 1990, I was saddled up in a van as assistant race director of the RAAM. My partner for the ten days in a motor vehicle was fellow RAAM



staffer Joe Heil, an anarchist vegan who thought life was far superior prior to the Neolithic Revolution which led to cities, agriculture, and animal domestication. Joe brought along a book that detailed the location of every health food store and natural market in America, along with a giant cooler full of fruits and vegetables (this was pre-Internet). His car battery-operated blender would whip up organic smoothies for us during the entire trip.

But once in a while, I'd want a milk shake. Joe would argue with me, tell me not to eat it, explain how terrible it was for the environment, but eventually I'd prevail and insist he pull into a fast-food drive-through. He'd pull up to the order-placing window, but make me shout my order across him. The same would happen when we'd pull up to pick up my shake; he'd lean back and make me stretch across him to pay for and get my animal-derived food. There was no way he was going to contribute to my eating the ghastly stuff.

By the end of the year, I'd read John Robbins' Diet for a New America, France Moore Lappé's Diet for a Small Planet, David Steinman's Diet for a Poisoned Planet, and Roy Walford's The 120 Year Diet, among many others.

As an assignment for a nutrition and

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anthropology seminar, as well as out of personal interest, I wrote down everything I ate and did for a month. That was an eye-opener.

But most importantly, I started to consider my feelings relative to food: How did eating, in general, make me feel? How did I feel about this type of food, that source of energy? How did what I ate affect how I felt about myself as a human being, as an athlete, as an inhabitant of this planet?

Trusting my feelings, I became a

vegetarian and I began a formal relationship with food. I began to eat with a purpose.

No longer would my attitude be "food is fuel." No longer would I victimize myself, shorten my life, and diminish my athletic potential with my food choices. No longer would animals live tragic lives punctuated only by their death in order to feed me. No longer would I abuse the environment, contribute to the growth of global agribusiness, or hasten global warming, topsoil depletion, and the destruction of rainforests.

Every bite, every trip to the market, every perusal of a restaurant menu is a vote, an exercise in democracy, a political act. My vote counts. It counts for me, it counts for the animals, and it counts for the planet. It counts.

So does yours.

Chris Kostman has lived on the endurance path since 1982. Besides competing in races as diverse as the Race Across America, the Triple Ironman, and the 100-mile Iditasport Snowshoe Race, he also organizes endurance events such as the Badwater Ultramarathon and Furnace Creek 508 and a series of five day cycling and yoga camps in Death Valley and Mt. Shasta. This is his tenth article for Endurance News. Learn more at www.adventurecorps.com.

Eating with a purpose : Ideas to get you started

-If you can't kill it yourself, maybe you shouldn't eat it. Nowadays, we are so far removed from the killing of animals when we go to the market or to the restaurant. Next time you're at the deli section, remember: those are corpses.

-Avoid ruts. Even if it's the healthiest, purest, best food imaginable, nothing should be eaten every day at the same time.

-Consider how recently your food was alive. How long ago was the food you are about to eat killed? Picked? Dug up? Harvested? The more recently, the better. Freshness is paramount to health.

-Avoid foods that require a knife at the table. If it takes a knife to cut them, imagine what your intestines must go through when you eat them.

-Eat polychromatic meals. The more bright, contrasting colors on your plate, the better.

-Eat with the seasons. It's a very recent and decidedly weird situation that we can essentially eat any food at any time of the year, thanks to the global economy and fast jet delivery of foreign foods. But the body expects to be in tune with the seasons and its own local climate, so don't stray too far from what would have been natural as recently as fifty years ago.

- Too many athletes falsely believe they are so "in tune with their body," that they "know" when it's OK to eat junk food, or fat, or high-sodium snacks. "My body's telling me it needs this," they say. This is an excuse to eat whatever junk their weak-willed, reward-driven mind wants.

-We don't "earn" the right to eat or drink something unhealthy by exercising. If you want to put something into your body that's unhealthy for you and the environment, don't delude yourself into thinking that you earned it just because you ran a 10km or put in

some extra reps at the gym.

-Eat a low calorie, nutrient-dense diet. Be truthful about it, for it's a spiritual and logistical challenge to eat this way. However, Dr. Roy Walford explains that this will increase your life span and quality of life better than most anything else you can do.

-Avoid processed foods high in refined flour and sugar. Remember the wholeness principle. Processed foods are hardly whole anymore.

-Realize that the label "organic" on food does make the food healthier for both the body and the environment. Generally speaking, "organic" food is free of synthetic chemicals and may not be genetically modified. Organic foods are worth their extra cost.

-I am often asked "but where do you get your protein?" This may come as a shock, but meat is not the only available protein source! For example, rice is 8% protein, wheat is 17% protein, and broccoli is 45% protein. Develop a consistently nutrient-rich diet primarily made up of grains, fresh vegetables, legumes, and fruit.

-Grow something! Plants, fruits, vegetables, they'll grow just about anywhere: on the roof, in the bathroom, on a windowsill, on a fence. Growing something brings some green into your life and space, produces more oxygen for the world, puts one in touch with the natural rhythm of things, and can even fill a dinner plate or two.

-Lastly, enjoy the process of growing, buying, choosing, preparing, slicing, baking, cooking, and, finally, eating your food. Get a big grin on your face when you open your refrigerator or your pantry. Having a meaningful relationship with food will allow your quality of life to improve exponentially, in ways for which there are no words, only appreciation and satisfaction.



The author relaxes after his 6th place finish at the Butte 100.
Photo - Dustin Phillips

The Butte 100

aka : A lesson in perserverance

Author : Jason Keister

Saturday, August 1st started entirely too early with the alarm I set on my cell phone belting out Survivor's classic "Eye of the Tiger" at 4 am. With a groan I silenced the alarm and opened my groggy eyes to survey the room. I wondered what the heck I was doing in a hotel room in Butte, MT with three other guys, full of bikes and Hammer fuels, when I could be at home sleeping in. This was all Matty's fault. Less than two weeks ago teammate and friend, Matt Butterfield, called me up and enticed me with promises of epic single track awaiting me if I participated in this 100-mile mountain bike race. In the first of many moments of stupidity, I agreed to go. Never mind the fact that I had barely ridden my bike in the six weeks prior to this race. Work, moving, climbing, and other obligations had interfered with training and racing over and over again this year. Despite this fact, I decided to give it a go.

We rolled out of Whitefish Friday evening with a good crew. Clint Muhlfeld, local pro, was gunning for the win. Fellow Hammer employee, Dustin Phillips, was in the same boat I was in in regards to fitness, which made me feel a little bit better about the effort ahead. Matt Butterfield, the instigator, had raced this race last year, so Clint grilled Matty about the course all the way to Butte. After arriving in Butte and checking into the hotel, we all made up our bottles and aid station bags for the next morning and crashed out for the night. Although the morning came earlier

than I cared for, once I was up and out of bed I started to get stoked for the race. With my goal in mind simply to finish, I had none of the normal pre-race jitters I usually experience on race day. Although I hadn't raced much this year, I fell easily into the familiar pre-race routines. Grab gear, make sure you have warm clothes for the early start, make sure aid station bags are complete and labeled, lots of Endurolytes, etc. We all loaded our gear and piled into the Hammer van to grab coffee and drive the 15 minutes to the race start.

Changing into race clothing in the chilly pre-dawn start got me even more stoked for the race. I was a bit apprehensive, and was still wondering what I was doing here, but I felt pretty confident that I would be able to finish. I took Clint's advice to heart and did not think of how far I would have to ride that day. Just take it from aid station to aid station, ten miles at a time. There were some familiar faces in the lineup as the riders meeting came to a close and the countdown to the start began. I ran over one final mental checklist to be sure I had everything, then clicked into my pedals to begin the long ride.

The pace out of the start was a couple of notches below what would normally occur during a xc race. Although my fitness was lacking, I was well rested and felt good jumping on the back of the train. The first few miles of dirt road went by quickly. There were about 10-12 of us in the lead, including all of the crew that came down from Whitefish. As we pulled off the dirt road and started climbing the first section of single track

I brought myself in check and allowed the rest of the group to pull away. "I'm racing my own race today," I thought to myself. I glanced down at my HRM and slowed it down a bit until my heart rate dropped under 180 again. I was pretty confident that I could finish the race as long as I didn't allow my ego to determine the effort. I knew that I needed to focus on staying aerobic, and being consistent with my fueling. I had a six scoop bottle of Caffé Latte Perpetuem, which I knew would last me about five hours. I also had two capsule dispensers with Endurolytes, one with Endurance Amino, and one bottle of plain water. I had stashed more Endurolytes and Endurance Amino, as well as another six scoop bottle of Perpetuem at aid station 5. I also had a flask of Espresso Hammer Gel waiting for me at aid station 5, as well as a secret weapon at aid station 10, the last one. Every 20 minutes I took a sip of my concentrated bottle and once an hour I took 2-4 Endurolytes and 2 Endurance Amino.

Not even an hour into the race I passed Dustin with a flat on the side of the trail. I hesitated for a moment, saw that he had the tools he needed, and kept on riding knowing he would probably be catching me shortly anyway. The first couple of hours went by rather quickly as we climbed and descended some great singletrack and headed out of the Butte valley toward the bordering mountain range. I caught a couple of guys towards the bottom of the first long descent and took turns working with them on the long stretch of pavement out of the valley. Once we turned off the pavement and started climbing the steep ATV trails, they pulled away again and I was once more riding on my own. I stuck to my fueling schedule, sip of Perpetuem every 20 minutes, capsules every hour,

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water as needed. I was feeling good and trying not to think of how much farther I still had to go. Aid station 3 was my first stop for water as the cool morning temps allowed fluid intake to take a back seat. I started out of aid station 3 less than three hours into the race. "Doing well," I thought as I started the grind up the mountains. I jockeyed for position with a couple of guys over the next hour or so, getting dropped on the climbs and passing on the descents. I passed Matty taking a pit stop about four hours in. I yelled at him to catch up as I sped by and contemplated waiting so I had someone to ride with. Knowing he would probably be catching me shortly anyway, I decided to keep going.

Aid station 4 passed without much ado, and I was eager to reach aid station 5 which was about the halfway point, or so I thought. I was still feeling good and my heart rate was right where I wanted it to be. I finished off the last of my Perpetuem bottle, topped off with water, and mixed up my fresh bottle of Perpetuem. Then I was off, mobbing down the rocky ATV trail, having a grand old time pumping through all of the rhythm sections and jumping off all the whoops on the trail. After a few minutes of blissful descending, the trail turned uphill again. I climbed for what seemed like an hour; by now it was getting hot and I was starting to wonder what the hell I was doing out here. It seemed like I should have hit station 6 by now, but the trail kept climbing. I started to break it down even further, focusing only on each 20 minute increment so I could fuel. My fueling strategy became the timetable that kept me in the race. Finally, I passed station 6 but to my dismay, I found out that station 6 was only a bit over 50 miles in. I was a little over six hours in at this point and I was starting to think I would not be able to finish in ten hours as I had hoped. The only way to the finish was to keep on riding, however, so I just kept turning the pedals over, and over, and over.

The next 20 miles or so are tough to remember. I remember some amazing singletrack that I wished I could have been a little fresher to ride. I remember starting to get frustrated with the amount of climbing on the course as it never seemed to end. I remember

increasing my Endurolytes intake as my body started to rebel at the distance I was forcing it to ride and started to cramp. At one point I remember taking



Dustin and Jason get ready for the start of the race.

almost eight Endurolytes in one hour. Seems a little excessive for my 145 lbs, but considering that I was eight hours in and had only ridden three hours or more a handful of times this year, I considered myself lucky that the Endurolytes would resolve the cramping issues. I reached station 8 about nine hours from beginning the ride. I still had 25 miles to go. My energy level felt good, thanks to a sip of Perpetuem every 20 minutes, but now my knees were hurting very badly when climbing, my hands felt like they were covered with blisters (I was afraid to take my gloves off and look), and I was taking two Endurolytes every 20 minutes with my fuel to prevent cramping. As I rolled out of station 8 one of the volunteers mentioned that I was in 6th place. I didn't even care where I placed at that point, but regardless of the cramping and blisters and aching body, I was going to finish the race no matter what it took. When my knees hurt too bad to climb, I got off my bike and pushed. By now I was starting to catch some of the stragglers from the 50-mile race that started three hours after the 100-mile group. Some of these guys looked even worse than I probably did as I passed them. I handed out Endurolytes to the ones that were cramping and made sure they were properly using them.

The time started ticking by even slower. I rode the descents and pushed the climbs. The course never stopped climbing. One foot in front of the other, whether clipped into my pedals or not,

became my mantra. I thought about what great mental training this was for any arduous experience in life, especially long alpine climbs. I also thought about how great it would be to be at the lake sipping a cold one, and again wondered what I was thinking agreeing to do this race. Station 9 rolled by and more and more climbing followed. Just when I was starting to think I would not make it, I spotted the final station up the road. My secret weapon awaited. I pulled into the final station, and grabbed a Coke** out of the bag I had stashed. I

filled my bottle with Coke and ice and headed down the trail. I know, I know, not exactly a Hammer approved fuel. Nonetheless, that Coke was what got me to the finish. With only ten miles to go, I downed that Coke in the first 15 minutes back on the bike and came alive. Ignoring the pain in my knees I hammered up the climbs as fast as my tired body would allow. As I rolled through an intersection, I took a left as the painted orange arrows indicated. A few miles down the trail I ran into a couple of guys coming back towards me. Confused, I stopped, and as it turned out we were all lost. After some discussion, we turned around and rode a few miles back the way we had just come from. As we looked at a map at a trailhead, a race volunteer came driving up and explained that no one was marshalling a vital intersection. He pointed us back in the right direction. Our frustration with taking a wrong turn was soon overcome by the news that it was less than five miles to the finish. A group of us rode the last five miles to the finish together and finally crossed the line just over 12 hours after starting.

Relieved to be finished, I headed to the van to change out of my bike clothes. Clint was looking fresh and was all smiles as he high fived and congratulated me for finishing. He had finished in 1st place in less than ten hours. Matty had bailed around mile 60, and ended up riding about 20 miles

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Lorie Hutchison (third from left) and crew celebrate her third place Badwater finish. Photo - Chris Kostman

2009 AdventureCORPS Badwater Ultramarathon

Hammer athletes shine in epic race!

Author : Steve Born

According to the AdventureCORPS website (and every entrant race director Chris Kostman has ever asked), the Badwater Ultramarathon is "recognized globally as 'the world's toughest foot race,'" and it's hard to imagine anyone doubting that claim.

The race takes place smack dab in the middle of summer, beginning in Badwater, Death Valley, CA, which marks the lowest elevation in North America at 280' (85m) below sea level. 135 miles (217km) are covered in temperatures up to 130F (55C) until the finish line at Mt. Whitney Portal at 8360' (2533m) is reached (Whitney Portal is the trailhead to the Mt. Whitney summit, the highest point in the contiguous United States). The Badwater course covers three mountain ranges for a total of 13,000' (3962m) of cumulative vertical ascent and 4,700' (1433m) of cumulative descent.

No wonder Kostman states: "...it is the most demanding and extreme running race offered anywhere on the planet." And given everything that naturally makes Badwater as difficult as it is, who could argue with that?! This year's race began on July 13th and even though a forest fire near the finish line forced the evacuation of the area for nine hours (more on that in a second), Chris recently emailed me to say that this year's edition was "our smoothest and best yet."

Regarding the fire, on the Badwater webcast, Chris recounts what happened and how the race proceeded:

Two nearby campers reported "giant trees just across the creek from our campsite engulfed in flames" to us while we were stationed at the Whitney Portal finish line on Tuesday at about 9:30pm. Approximately 28 runners had completed the course when I radioed in a 911 call via our race headquarters down the mountain in Lone Pine. Within 45 minutes, an Inyo County Sheriff's deputy arrived with lights flashing and tires squealing. He pulled up with his window down, saying something to the effect of "Get out of here immediately. There's a fire. Do not stop to pick up anything. Get in your cars and LEAVE NOW!" He then raced off to alert others in the area. We scrambled to grab the bare necessities (finish line tape, medals, buckles, cameras, and computers) while rookie entrant Dennis Koors literally sprinted

around emergency vehicles and the deluge of departing cars to cross the finish line at 10:13pm. I took his photo (minus the finish line tape as there was nobody to hold it up), then jumped in my van as he jumped into his support vehicle.

We headed down the mountain, discovering a serious forest fire less than 100 yards from the road, not one mile from our finish line. Dozens of giant trees were engulfed in flames from bottom to top. Firefighters and fire trucks were everywhere and a scramble of cars was disgorging down the mountain. I raised

our mile 131 time station on the radio and they told me they were aware of the situation above them, but had been told by the authorities that they could remain at their location. We made the decision to make that location the official finish line from that point onwards. We were all lucky that the wind was blowing down the mountain, not uphill towards our finish line located at the end of a dead end road.

As a result, the traditional mile 135

finish line was closed from 10:14pm Tuesday night until 7:10am on Wednesday morning (the road was reopened at mile 131 at 7:00am after the fire department gave the "all clear" to return). Therefore, all 2009 entrants who completed either 131 miles (within 58 hours) or 135 miles (within 60 hours) are OFFICIAL FINISHERS of the race.



Overall women's winner, Jamie Donaldson, and race director, Chris Kostman. Photo - courtesy Chris Kostman

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to get back to the race start. Dustin was still out there, having suffered three flats over the course of the race. Dustin rolled in a bit after I did, also all smiles and relieve to be finished. As I nibbled on a slice of pizza and cleaned up, I reflected on the race and how it went. All in all, I was quite pleased. It was the longest time I had ever spent on my bike, and considering my lack of training, I was happy just to have finished. I also reflected upon what great products Hammer makes and how I could not have done it without them. While you experience great highs and lows during a race like this, the only real issues

I ran into were due to lack of fitness. Not one single time did my fuels let me down. My energy levels were consistent the entire day, and despite my lack of conditioning, the Endurolytes resolved all cramping issues. My legs felt great after the race, and even the next day the only real muscle soreness I had was in my lower back. Not even an hour after I was done I was already thinking about the next 100-miler. Now that is a sign of a successful race!

*** I feel it necessary to add a side note regarding my "Secret Weapon". First and foremost, I do not condone the use of simple sugars, especially high fructose syrup, during training or racing. However, if strategically*

used, they can provide a welcome boost when pushing the body to its limits. In a shorter race I would not have used this trick, but considering my lack of fitness and knowing how I would feel at the last check, I thought it would be beneficial. I purposefully waited until the very last aid station before drinking any sugar so I could be certain that I would reach the finish before my energy levels crashed. I also had an extra can stashed in my jersey pocket just in case I did crash and needed more sugar to "stay on the train", so to speak. At that point, the intensity level of my riding was not high enough to suffer any digestive issues from the use of simple sugars. I would not have made it through if I had relied on simple sugars the entire race, but they did provide a welcome spike at the end because I timed things just right!

We want you!

We are always looking for photos of our athletes to use in catalogs, mailers, newsletters, on our website, and elsewhere. Are you interested in being included? Send copyright-free photos to athleteupdates@hammernutrition.com with the name and date of the event, as well as the photographer's name, and you just might see yourself in print!



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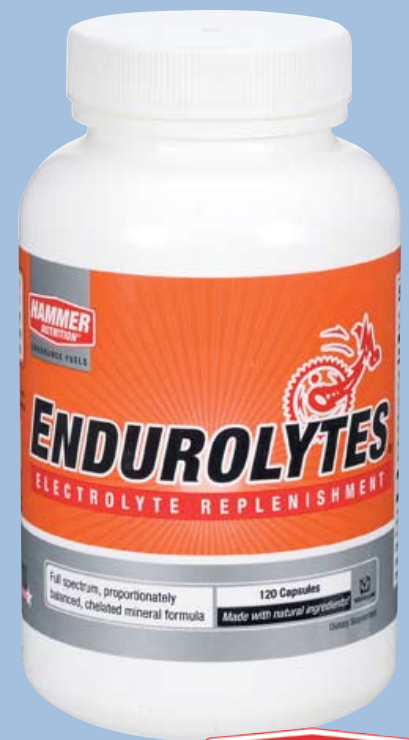
I recently finished the 2009 RAMROD - Ride Around Mt. Rainier in One Day. This was a 159 mile bike ride with about 10,000' of elevation gain.

We were riding at a pretty fast clip - about 50 miles in a little over 2 hours. But at mile 53, I started cramping in my right leg - first in the hamstrings - I had to stop and stretch, then I crawled another few yards and it hit my inner thigh; I stopped and stretched, then I crawled another few yards and it crept up toward my hip. I stopped and then crawled another few yards and it started in my left leg. I never cramped so bad...ever! I thought DNF for sure.

We asked other passing riders if they had any pills - and finally found a guy wearing a Hammer jersey. He pulled some pills out of the coin container and said I'd be good after about 30 min. I had never used Endurolytes before. What a difference!!

I just received my order of a couple of bottles of Endurolytes. I'll be using them on my next ride. Thanks again to the Hammer rider and the Endurolytes!

Thank you Hammer!
Steve Kato



120 capsules \$19.95
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This testimonial was unsolicited and was not modified.



*Navigating a trail
Photo - courtesy Roland Franks*

Shifting Gears

People, places, and things

Author : Roland Franks

My bicycle clicked effortlessly into gear as I began my descent from Qi Pan Shan back into Kunming City. After nearly three years of teaching at Kunming International Academy in Yunnan Province, Peoples Republic of China, I finally call Kunming and its surrounding hills home. However, for the twelve years prior to my arrival in China, I had lived and ridden in Whitefish, Montana and the surrounding Flathead Valley. While my transition to the Middle Kingdom had been rather painless, saying goodbyes to people, places, and things had created some anxiety. Riding partners, local cross-country routes and rural highways, even my Stumpjumper Comp: I said fair well to all of them and boarded the plane not knowing when I would return. Strangely enough, people, places, and things ultimately bridged the transition gap between The Fish and Kunming.

Giving away things had been the easiest part of my departure from Whitefish, and it was the replacing of these things, including my mountain bike, that worked their way most easily into my life. After almost six months of getting settled in the Chinese culture and the routine of teaching five different courses, five days each week, I finally found the time to price mountain bikes at the local bike shop. Xiong Brothers, the only quality bike shop listed in the Lonely Planet's guide to Kunming, displays a rather extensive array of mountain bikes, and while I still felt like I was cheating on my Stumpjumper, I forked over 6,650

yuan for a nice aluminum frame with a mixture of Deore XT/LX components. I enjoyed the fact that a comparable bike in the States would have cost me almost half again as much. However, it was not as if this replacement did not come with its own struggles. In China, most bicycles are set up with the front break lever placed on the right hand, the back brake on the left. I managed to negotiate this small obstacle with what little Mandarin I had already learned. And with relative ease, I had found a fitting substitute for the bicycle I had left behind.

While things are relatively easy to substitute, places, such as paths to ride, require a bit more effort in order to find replacements. In Montana, some people guard the whereabouts of the best riding with as much secrecy as their favorite fishing hole. In China it is a bit different. Footpaths, leading from the outskirts of town, head every direction into the hills, however, few, if any, of them can be ascended. The Chinese people herd their livestock up these trails, most of which end in a myriad of white-rock sepulchers spread out along the hillsides. Therefore, the challenges for me lie in finding a way up to the top of some of these trails. Luckily, Deborah, the fifth-grade teacher

at our academy, a five-year veteran of Kunming and a native of Colorado Springs, already knew most of these routes. She introduced me to the Xi Shan (Western Hills) highway. From this two-lane asphalt snake that reminds me of Big Mountain Road back in Whitefish, she pointed out enough descents, beginner through expert, to keep me busy. While the bike had been easier to come by, with some help I replaced rides like Pig Farm, Spencer Lake, and Haskill



*Roland and a little friend.
Photo - courtesy Roland Franks*

Basin with trails I know as Xi Shan, Qi Pan Shan, and An Ning.

Unlike places and things, when one makes a move as monumental as from Whitefish to Kunming, one does not replace friends so much as find new friends with whom to spend time. With riding friends in the States like Bear, Reid, Jake, Yvonne, Bob, Russ, Reidi, and Duie, I never desired to find replacements for such quality people. Instead, I searched for people with similar personalities and riding skills, people I viewed as better than me (in more ways than just riding) who could challenge me to become a better rider (and person). In Deborah, I had already found one. She told me she had waited

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five years for someone to come along who would join her in testing new trails. Together, we whooped and hollered our way down trails the locals had assured us no one could possibly negotiate on a bicycle. However, after only a few months of riding, Deborah informed our school's director that she would be moving to a school in La Paz, Bolivia the following year. Before she left, she introduced me to Jim, one of our school's secondary science teachers, Miss Suli (my soon-to-be wife), and the students with whom she had begun her extreme sports group. I became Jim's challenge (he really does not like going downhill) and immediately talked him into signing up for a mountain bike race that we later found out was a Regional Olympic Qualifier. As for the students, I became their mentor, much like Deborah (and all the people listed earlier) had been for me. On the weekends, Suli and I showed them various downhill routes, how to negotiate different obstacles and steep descents, and generally how to be a better person. So, over the span of two years, I found new friends to enjoy an old pastime.

People, places, and things: I left many of these behind in Whitefish when I made Kunming my new home, but with the help of a new set of each, the riding has picked up where it left off in Montana. I wish I could say moving was easy, but no move is truly effortless. However, the relative ease with which some people approach change may lie more in his or her ability to find suitable replacements for those items left behind. As I steered my Chinese mountain bike onto one of the many descents into Kunming, a handful of students following me, I realized that moving—change—is more like simply shifting gears.



Roland and Suli
Photo - Roland Franks

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This resulted in three different types of Official Finishers, all considered equal in terms of accomplishment and recognition:

- 36 finished before fire closed the last 3.5 miles of the race route: All 36 received sub-48-hour buckles.
- 9 finished after the last 3.5 miles were re-opened (not affected by the fire): 1 of those received a sub-48-hour buckle.
- 30 finished at mile 131 due to the road closure: 29 of those received sub-48-hour buckles. (Of these 30 finishers, 8 came back to the race course when it reopened and finished the full 135 mile route. THE CLOCK NEVER STOPPED for these athletes, thus their times were anywhere from several to eleven hours slower than otherwise might have been the case.)

We salute every race finisher and their tremendously positive response to a difficult situation. Thankfully, no lives were lost and the fire was contained during the night. We also salute the US Forest Service, Inyo County Sheriff's Department, and CAL Fire for their fast response and professionalism, and for allowing us to maintain the mile 131 finish line just at the periphery of the fire zone while they did their job.

In the end, and in spite of the difficulties of the race (both expected and unplanned), the 2009 Badwater was a smashing success, with the following Hammer Nutrition athletes having great races:

- **Jamie Donaldson** (Littleton, CO) took top honors in the Women's division again this year, and her time of 27 hours, 20 minutes, 18 seconds was good for 5th place overall. Jamie recently wrote us saying: "I just wanted to let you know this was my best-feeling Badwater ever! It was considerably hotter than last year by 5-10 degrees and I didn't have one stomach issue using only Perpetuem, Endurolytes, and Hammer Gel. Amazing! Also, I LOVED the caffè latte of Perpetuem! That flavor rocks! I placed 1st female in the second fastest time for a woman ever in 27:20 (after my 26:51 last year)."

- **Lorie Hutchison** (Salt Lake City, UT) had another great race this year,

finishing in 3rd place in the Women's division and 12th overall in a time of 30:23:48, almost an hour faster than last year, a remarkable accomplishment given that, according to Lorie, "conditions were definitely tougher this year."

- **Morgan Murri**, whose races in Pagosa Springs, CO Hammer Nutrition sponsors, finished 23rd overall in a time of 35:07:07.
- **Danny Westergaard** of Rolling Hills, CA, finished in 28th place in a time of 35:51:44.

Last, but certainly not least, "the ageless one," 67-year-old **Arthur Webb** of Santa Rosa, CA, finished his 11th Badwater, and his time of 46:35.29 placed him a fantastic 37th overall. Arthur wrote us recently and said: "I had some sort of ugly down problem during the Badwater. If it was not for the Endurolytes and HEED I probably would not have made it. But consuming these products gave me the ability to finish off the Badwater race in 46:35 and buckled for my eleventh time. Once recovered, after nine hours of down time at mile 17 (still trying to figure out what happened so early), I had to run almost the entire 118 miles to the finish. (Actually, once recovered it was my second best running time overall). I consumed a bottle of Endurolytes and plenty of HEED along the way in order to remain on the edge, but enough to complete this incredibly grueling event. Thanks to Hammer. Yeah!"

Congratulations to all of these great athletes and to race director Chris Kostman on yet another successful Badwater Ultramarathon. Hammer Nutrition is honored to help support this incredible event, and you can find more information and results at www.badwater.com.

Note: If you completed this year's Badwater and we somehow missed mentioning you, please let us know... we'll recognize your efforts in the next issue of EN!



*Kathleen McCormick gets some final training in during the 2009 Highline Hammer.
Photo - Angela Nock*

2009 California Triple Crown Stage Race

Author : Kathleen McCormick

Before I recap what evolved to become my biggest athletic endeavor to date, there are 3 things that you should know about me (if you don't already):

1) I prefer "participating" and "enjoying the journey" over "racing" and "finish results."

2) If suffering is involved (and it generally is), I prefer a slightly lesser degree of suffering but over a longer period of time.

3) I'll do anything for the jersey.

There is a series of double centuries (200 or more miles) in California called the California Triple Crown. Any cyclist who completes 3 of these doubles in a single calendar year is considered a Triple Crown Winner and can order a special bike jersey to commemorate their achievement (see #3 above).

There is also a Triple Crown Stage Race, and riders who complete all 3 designated doubles (3 of the toughest doubles in the series, ranked by elevation gain) are considered Stage Race Finishers and can order the stage race jersey (see #2 above, and, of course, #3).

All of the doubles are timed (total elapsed time including rest stops). In the stage race, the times for all 3 doubles are cumulative and awards are given to the top overall male and female finishers with the fastest total times. That was fine for everyone else, but I was just looking to finish, get that jersey and

make some new "ultra cyclist" friends along the way (see #1 above).

This year the three stage race doubles were all close to home, had minimal conflict with personal and family schedules, the first two were relatively close together (so once I had trained up for the first, I didn't need to train more for the second), and my other events during the year would keep me on track for the third. As an added bonus, all doubles would have Hammer Nutrition products (my fuel of choice) on the course. All good.

4/18 Devil Mountain Double, San Ramon – 206 miles with 18,600 ft of elevation gain

By far my favorite of all three because of my familiarity with the course and my preference for long, sustained climbs over short, steep power climbs. I rolled out with the masses before sunrise, very nervous and feeling quite alone – it was going to be a very long day. I had only completed one double prior to this but it was not as difficult of a course. I soon started making new friends and finding steady wheels to pull me along so I could conserve as much energy as possible on the flatter sections of the course. Knowing what was ahead in the later miles, I was conservative in my efforts on the early climbs of the day. I was really enjoying myself until an aid station worker at about mile 80 said, "You're the second woman and you're not that far behind the first!" I said, "Thanks but I'm not racing, I just want to finish."

I ended up catching the first woman

and riding with her for about 25 miles – a very strong and accomplished ultra cyclist. We both wanted to finish before it got too dark as there were some technical descents ahead of us that would be very tricky to navigate with only a headlamp. At some point up a long, steep climb around mile 130 we separated and I found myself in first place. I fully expected her to roll up behind me at every aid station but now that I was in 1st, I had to let go of "participating" and start "racing" - easier said than done when you still have 70 miles and a lot more climbing to go.

My goal was 16 hours - I finished with a total time of 15:46, first woman with a lead of 1:30. I was ecstatic and overwhelmed at the same time – now the next two doubles would be a race to defend my lead...not what I had intended.

5/9 Central Coast Double, Paso Robles - 218 miles, 14,000 ft of elevation gain

This was my least favorite of the three because of my lack of familiarity with the course and the adverse weather conditions of extreme heat and wind. Not to mention the fact that it was 218 miles due to last minute course revisions – that alone adds at least an extra hour of ride time. We rolled at first light—much better – but it was not my best day...I started out way too fast, suffered a mechanical at about mile 30 which would prevent me from free-wheeling (coasting) for the next 100 miles until it rectified itself and as the day heated up, my nutrition plan fell off track, resulting in reduced performance and speed. It was a day of limiting my losses and just getting to that finish line where my husband and two daughters were waiting for me. I was fortunate to have a few strong guys riding with me that did their best to protect me from the

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relentless wind and kept me going when I wanted pull back even more.

My goal was 15 hours – I finished with a total time of 15:02, second woman, still first in the stage race, but I gave up 25 minutes that day to my competition, so my lead was reduced to 1:05. Two doubles down, one to go, but I would have to wait 3 months to finish the race.

8/1 Mt. Tam Double Century, San Rafael – 200 miles, 14,500 ft of elevation gain

For me, this double was the toughest emotionally, mentally, and yes, physically. Fortunately I had the opportunity to preview much of the course so I could appreciate all of the scenery and beauty along the way because, when it came time to "race" it was heads down and no letting up. For my first two doubles I had about one hour of off-the-bike time at rest stops; I was determined to reduce that by 20 minutes at Mt. Tam so that I could finish in 14 hours. It seemed that the second place woman and I were closely matched in our tenacity and ability so I needed all the help I could get to cement my lead and overall 1st place. Entering the stage race again next year was not an option – I needed to finish it this year, win or no win.

I planned to ride with my ultra cycling training partner (who was familiar with the course) and some of his friends. It was going to be a lot of work to keep the pace and I was taking a big risk of blowing up. The official start time was 5 a.m. but they were allowing some cyclists to start at 4 a.m. or 6 a.m. depending on when they expected to finish. I requested the later start time, knowing that I would have plenty of time to finish by the cutoff and before dark.

We rolled out in daylight and the pace was high – too high. I had to let a few of the guys go, but my training partner stayed back with me. We had a good chuckle at the start because we were "last" on the double century course, but we eventually caught up to and passed riders who started earlier. The second place women started at 5 a.m. so I was "riding blind", not knowing how she was progressing on the course in front of me – anything can happen when you are out there for that long.

The first 115 miles went fast—we were right on pace—then we hit some stiff climbs that got the best of me. I was losing precious time that would have to be made up on the flats. It was a windy day and even though we had some stretches in head and/or cross wind, we



Kathleen McCormick gets ready for a ride around the Flathead Valley. Photo - Angela Nock

would turn a corner and get a glorious tail wind. My family was waiting for me at the 170 mile rest stop; getting to see them kept me moving. Unfortunately, it wasn't fast enough and when we rolled out for the last 30 miles to the finish, it didn't look as if I was going to break that 14 hour goal.

When we made the final turn back for the finish line and had about 12 miles to go, I grew a new pair of legs and felt the weight of the world lifting off my shoulders – I was going to be a Stage Race Finisher and earn that jersey...now if I could just keep from crying until we crossed the finish line and I could hug my family.

I'm not sure how we did it, but we finished in a total time of 13:53. Of course when I checked in, I had to ask how my competition did – she finished at 7:23 p.m. and I finished at 7:53 p.m. But I started an hour later so I gained 30 minutes that day and was now the overall female winner of the California Triple Crown Stage Race with a lead of 1:35.

624 miles, 47,000+ ft of elevation gain,

44:41 total time – and I couldn't have done any of it without my support network of family members, mentors, friends, teammates, training partners and team sponsors. I kicked off the year with a training camp at The Cycling House in Tucson – they really know how to whip a cyclist into shape for the season. To keep my body fueled properly during all those hours on the bike, I relied heavily on Hammer Nutrition products like yummy Caffé Latte Perpetuem, Banana Hammer Gel, Endurolytes, Anti-Fatigue Caps, and Endurance Amino (oh, and let's not forget the fabulous SEAT SAVER chamois cream!). Post ride, I always went straight for an ice cold serving of Hammer Nutrition's Recoverite to promote adequate recovery.

Many training rides ended at Yellow Wood Coffee and Tea for some down time with friends. During my double centuries, I never had to worry about dark/light conditions when wearing my Rudy Project Noyz sunglasses with photochromatic lenses that adjust in varying light. I used 2 Toms Blister Shield in my shoes to keep my feet happy and blister free and stayed comfortable and warm pre/post ride in my Cowboy's Fuzzy Duds. The doctors at the St. Francis Memorial Hospital Center for Sports Medicine were always on call for advice to help keep me injury free and on track. The guys at Pegasus Bicycle Works were always available last minute if I needed anything before a race and if I needed any other item, I could always find it at Sports Basement. And thank goodness for VASKA laundry detergent because many loads of cycling apparel needed to be washed and washed and washed. I was so proud to wear my team's colors and sport the Links for Life/emc kit for all three of the double centuries.





Team Spotlight

Team Waste Management

Author : Dustin Phillips

Each of the last two newsletters I have had the space to highlight a team that we sponsor. In this issue I want to continue the trend and highlight a team that I would call the "David against Goliath" team. Hammer has always prided itself on its support at the grassroots level of all sports and this team is no exception. The directors of Team Waste Management (Racelab U-23) have taken a small program and built it into a successful national program.

This team has ascended the ranks of cycling by first establishing themselves with a junior program in Arizona. This effort netted them 13 Arizona State Championships in the first year of existence (2001). As the riders grew out of the junior ranks, the team founders jumped at the opportunity to grow the program. Steve Cullinan and Brian Smith teamed up and put together the RaceLab U-23 Cycling Team (which is listed as 501-3c). Like any new team, the search for sponsorship began and in 2003 they were able to pair with Waste Management, the company that has been the title sponsor ever since.

The success of the team has been spearheaded by Steve, Brian, Loren Seikman, and many other volunteers, with the mission of the team being to promote and cultivate young riders and help curb the tremendous cost of racing as amateurs at the elite level. To help accomplish this, the team has

brought on board the expertise of Barney King (USA National Team Coach) to act as the teams race director, assist with rider selection, and act as overall race coordinator. Barneys excellent reputation and ability to work with young riders has enabled the team to bring together one of the best U-23 programs in the country.



A member of Team Waste Management stays hydrated with HEED.
Photo - Brian Smith

Team Waste Management is not only seen now at the national races across the country, but they have become a presence in the face of giants. Team Waste Management has had the ability to pull on several top amateur jerseys, top U-23 jerseys, and managed to podium and win against the best pro and amateur racers in the country. The teams success has spilled over into Europe as well. Currently they are supporting several riders that compete in

Europe as part of the US U-23 national team. These riders' European experience will bring them back to the US more competitive and knowledgeable in racing and training.

Even with the huge amount of success that the team has had, the goal remains the same: to maintain officers and sponsors who will continue to aid in the development of young riders in a supportive, cohesive, and competitive environment that will enable them to reach the professional level. This is a formula that is clearly working for the team.

As I am finishing up this article, Nationals has just wrapped up in Bend, OR over the weekend and once again, Waste Management showed up ready to produce results. In the U-23 road race, Scott Stewart got into a break with one of the countries biggest development teams and captured 2nd

over all. In the time trial for the U-23 category, both Kevin Soller and Carter Jones got noteworthy results. Kevin placed 7th and Carter was 10th. Well done guys!

2009 Highlights:

Carter Jones: 19 yrs old
1st Vuelta de Bisbee YOUNG RIDER
2nd Valley of the Sun Stage Race

see SPOTLIGHT on page 41

SPOTLIGHT from page 40

(stage 3)

5th San Dimas Stage Race TT

10th Redlands Stage Race TT

*Member of USA National U-23 Team

Kevin Soller: 19 yrs old

8th RR Fleche de Sud

10th TT Fleche de Sud

11th GC Fleche de Sud

Best Young rider Fleche de Sud (4 day stage race)

*Member of USA National U-23 Team

David Talbot: 19 yrs old

*Member of USA National U-23 Team

Larry Warbasse: 19 yrs old

*Member of USA National U-23 Team

Stevie Cullinan: 22 yrs old

1st Sount Mountain TT (new record)

2nd Arizona State RR Championship

Sean Mazich: 22 yrs old

5th Joe Martin Stage Race RR

1st Capitol Crit

1st Cyclo de Mayo Crit

1st Arizona Crit Championships (2008)

1st Arizona RR Championships (2008)

Scott Steward: 22 yrs old

*Member of USA National U-23 Team

Ben Bradshaw: 22 yrs old

*Member of USA National U-23 Team



Team CMG with National Champion Max Durtschi

Cycling Road National Championships

The USA Cycling Road National Championships were held in Bend, Oregon July 28 - August 2 and Hammer sponsored athletes were there in full force. Congratulations to the following juniors for their incredible showing at Nationals!

Team CMG:

Max Durtschi 1st in Road Race, 1st in Crit, Juniors

Austin Arguello 5th in Crit, Juniors

Hammer Nutrition:

Willy Zellmer 3rd in 15-16 TT, Juniors

Team Waste Management:

Scott Stewart 2nd U-23 Road Race

Kevin Soller 7th U-23 TT

Carter Jones 10th U-23 TT

Hagens Berman:

Adrian Hegyvary 2nd in Elite TT



Max Durtschi and Austin Arguello take the podium at the awards ceremony for the crit.

Save your seat!

"I wanted to let you know how much I appreciated having the Seat Saver Chamois Cream on my recent two-week bicycling tour of Italy. I've used many different kinds of chamois creams over the past 20 years but Seat Saver stands out for its effectiveness, high quality ingredients, and pleasing scent. I'm a convert now."

Sincerely,
Colleen Crane



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Willy Zellmer of Team Hammer Nutrition takes the podium in the 15-16 TT.



Wendy Skean at the 2009 Breck Epic
Photo: Jeff Wolfe

Breck Epic 2009

Six days, 40,000' of climbing, and 200 miles at 9,000'+ elevation

Author : Wendy Skean

I have been mountain biking and mountain bike racing since I was 45, which alone is not such a big deal, but that was almost 20 years ago. As I have gotten older I have continued to push myself with longer and more challenging events, and with numerous 100-mile mountain bike races and 24-hour events under my belt, I wanted to move up to the next level and try a multi-day mountain bike race. This summer that dream came true for me. I raced in the Breck Epic six-day stage race in Breckenridge, Colorado from July 5 to July 10. Three years ago I raced the Breckenridge 100 and loved the area, the event, and the trails so much that I vowed to go back and compete in the race again. Unfortunately, injuries and other commitments kept me from that goal. Last fall, when I heard of the Breck Epic stage race, I jumped at the chance to race for a week in such a great area. I was initially worried by the requirement for solo racers that you needed to be an expert or pro rider. I have always raced solo and really wanted to compete in this one solo as well. As I had never raced multiple days, I wasn't sure, at 65, how my body would hold up, but I was determined to give it a try. There was a blogging contest created by the race director to award several start spots gratis. I quickly entered, figuring if I won, they would have to let me in the race. Although I didn't win the contest, race director Mike McCormack enthusiastically welcomed me to race

solo. Now that it is all over, I can proudly say I held my own and stayed competitive even though I was the oldest racer overall to finish, and over a decade older than any of the other women. Without a doubt, Hammer products helped to make this possible.

Day 1- Prologue

I arrived in Breckenridge the morning of the race and went to check in. As I stood in line the clouds kept building and getting darker. This was supposed to be the dry time of year but the previous weeks had been very rainy. There was a 40% chance of rain. Just as I was about to go out to ride the sky opened in a torrential rain and hail storm and the temperature dropped 20 degrees. No warm up today.

The first stage was an up hill prologue that would end at 12,000+ ft and well above tree line. It started with switchbacks up a super steep hill and riders left at 30-second intervals. I told Mike, the race director, I felt it would take me about 2 hours as I didn't want to push too hard the first day. Always plan on the plan not working. The rain and hail kept coming and it was my time to start. Racing steep hills, at high altitude, with no warm up is certainly not ideal. I really didn't want to be passed on the switchbacks so I went harder than I should have. Within minutes I was gasping for my breath and my heart was pounding through my chest. When I got to the slightly mellower single track I tried to slow my

breathing. Since the trail kept going up I wasn't very successful. The rain made the rocks and roots very slippery. Coming from Southern California I don't get much practice with slippery on any type of terrain. Numerous racers passed me, which was fine with me since sometimes I stopped and tried to catch my breath a little. I was able to climb all the hills until I came to Nightmare. It was exceptionally steep, loose, and rocky. Half way up, there was Mike, the director, telling us one-quarter mile more to the end. I breathed a sigh of relief. They had shortened the day almost 2 miles because of lightning and hypothermia concerns. I think everyone was perfectly fine with this. For such a frenzied start to a week of racing, it wasn't too bad; my time was 1:18 and I wasn't last. One stage down, and five to go. For such a short stage, it was super tough.

I knew for me to race well the next day I had to recover correctly. Immediately after the race I had two scoops of Recoverite, 4 Premium Insurance Caps, 1 Race Cap Supreme, 2 Mito Caps, 4 Endurance Amino, 1 AO Booster, 1 Super Antioxidant, 1 Xobaline, and 1 Boron. Then, an hour later, another two scoops of Recoverite. I had the same routine after every stage. One hour before each stage I had 2 Race Caps Supreme, 2 Mito Caps, 4 Anti-Fatigue Caps, and 4 Endurance Amino. Every hour during the race I took 2 Endurance Amino and 2 Anti-Fatigue Caps. Every two hours I took 2 Race Caps, 1 Mito Caps, 1 AO Booster, 1 Super Antioxidant, and 2 Tissue Rejuvenator. Though I would get tired as the ride went on, I never was sore at any time during or after the stages or race.

Day 2 - Colorado Trail Loop

The next day had a police-escorted

see BRECK on page 43

BRECK from page 42

start that was a little too fast for me but I tried to keep up anyway. By the time I got to the first climb on the dirt I was again gasping. I wasn't the only one though. A group of us at the back would be racing all the next stages near each other. I was able to keep up on the climbs but they always went faster on the descents. This is my area of weakness. The trails were still muddy from the rain the day before, which made the riding a little harder. I was in heaven, with a smile from ear to ear, as I was riding along single track bordered with wild flowers and all things green. I came around a corner and almost fell off my bike from the sight. On either side of the narrow trail was a carpet of brilliant green clover-like growth with tall dark trees protruding from it. I just kept saying, "wow! wow!" to myself. No matter how hard the climbing was I knew this was why I was doing this race. The end came sooner than I thought as I had enjoyed all 35 miles. I rode for 5:21.

Day 3 - Penn Creek Loop

Today was only going to be 28 miles and not as much climbing. So far my body was holding up well. I have had knee problems in the past and was concerned about six days of hard climbing. Today I couldn't smile enough. If you like single track and great scenery, this is the race for you. At the end of the day and 4:08 hours riding I was stoked.

Day 4 - Circumnavigation of Mt. Guyot

This was the Queen stage. We would be climbing 9,000 ft and go up to 12,000 ft three times. This stage had fast water stream crossings, steep rocky hike-a-bike, fast and narrow rocky descents, and snow fields to cross. As I got to French Pass I could see black dots up ahead pushing their bikes. This course was extremely well marked and through my own carelessness I missed a turn and climbed an extra 45 minutes before discovering my mistake. Since I was last and they were pulling the markers behind me it was a little scary for a while. Some motorcyclists helped me catch the sweep and all ended well with 7:15 riding. At the daily awards ceremony I was very honored when the woman's solo leader, Jen Gersbach, presented me with her stage win jersey.

Day 5 - Wheeler Pass

The Wheeler stage was supposed to be

easier. I had ridden the last half in the Breck 100 and thought I could finish it in about 6 hours. I had a rude awakening. The climb to the top of Wheeler took me four hours when I thought it would take three. At least an hour was pushing the bike. I would count 100 steps before I could stop to rest. There were several snow fields to cross and bushes nearly covered the trail in places making it almost impossible to push a bike through. Then a fast descent to the bike path where my son Jeff started to ride with me. The path was a nice respite for what I knew was coming, the Peaks Trail, an uphill root-filled trail that seems to go on forever. It was really nice to have some company. We met recreational riders along the trail who were very encouraging. This was the longest day at 7:48.

Day 6 - Gold Dust Loop

This was an excellent way to finish the race. No giant climbs, just gradual railroad grade climbs and fantastic swooping single track. By this day I had a general fatigue and not as much zip as before. By the time I got to the first climbs I was bringing up the rear. My son Randy, rode his single speed with me, which helped make the 4:28 go by faster. When I got to the finish many riders had waited and they had a big soft chair waiting and handed me a Dale's Pale Ale beer. It was all over; I had finished 200 plus miles and over 30 hours of racing. I was relieved and a little sad too. All that great riding had come to an end. I would definitely miss it.

On Friday night, after the last stage, racers were given an exceptional banquet dinner before the awards ceremony. Every racer was given a special Breck Epic belt buckle. The solo winners Jen Gersbach and Jeremiah Bishop, rode much faster than I did, but they certainly didn't have any more fun! After the awards was a great prize giveaway, with something for everyone. The Giro sunglasses I got were the perfect ending for a perfect race. The Breck Epic is a race you shouldn't miss. It is a unique multi-day race in the United States that starts and ends in the same place every day, but you ride different trails each stage. It was very spectator friendly; my sons were able to easily get to the multiple points every day to support and cheer everyone on. They also had a lot of fun hanging out in town while I was racing, as there is a lot

to do in Breckenridge. There were only 150 racers this year. Next year there can be 250 and I believe it will fill quickly. It was very well organized and staffed, and this was only the first year. It will only get better. As a bonus, the promoters worked very hard to limit environmental impact every day, and the race benefits local open space initiatives and trail improvements.

Steve's Note: Congratulations to you, Wendy, on behalf of all of us at Hammer Nutrition! We were honored to sponsor the Breck Epic in this, its inaugural year, and we look forward to being a part of the race for many years to come.

Reader Recipe

I make this Recoverite smoothie after a long workout.

- 1 packet of Recoverite
- A little extra whey protein
- 4 ounces of water
- 4 ounces of orange juice or soy milk, depending on my mood
- handful of frozen strawberries and/or blueberries
- Tablespoon of flax seed

Blend it all up in the blender and serve! It's a recovery drink and a meal all in one.

- Pam Z.





Jacob Rathe, center.

The Road to the Top

**Author : Jacob Rathe,
Hammer/CMG Racing Team**

Every year USA Cycling invites the top 15-22 year olds in the country to race in Europe with the National Team. It is an experience that they won't soon forget.

Whisked away from their homes, family, and friends, they are submerged into the deep sea of the amateur Belgium racing scene. 200+ rider fields, tight, twisty, small roads, wind, rain, cobblestones and the famously short, steep climbs challenge them as they take on the ferocious and tactile Belgians. You either sink or you swim.

The goal of the National Development Team is simple- to produce more Pro-tour bicycle racers from the United States. Simply put, experience racing in Europe at a young age is essential step in rising to the top.

While North Americans have limited racing opportunities in big fields and technical courses until we are big enough to race upper-level adult races, European 12 year olds are navigating through 100+ rider fields and learning the skills necessary to someday race with the best in the world. At the age of 17-18, Americans are just as strong as Europeans, but far behind in racing skills and must learn fast if they want to be competitive. We are often tricked into thinking that they are stronger than us, simply because they are so much better at conserving energy while riding in the peloton. We waste our energy moving up at a bad time, riding on the wrong side of a cross wind, are too nervous to eat and

drink, and having to close down gaps at the back, that when the big acceleration on the climb comes, all of our mistakes come back to slap us in the face and right off the back.

While power numbers and equipment are emphasized in America, Europeans focus on bike handling skills, racing smarts, field positioning, and tactical savvy. The first time I raced in a 200 rider field in Belgium when I was 17, was similar to the feeling I had the first time I rode in a 50-rider Cat. 4 field when I was 14. The peloton cruising at a nervous 50 k/h, riders riding shoulder to shoulder, sudden slow-ups, accelerations, yelling, fighting, everything coming at you at once can be hard to handle at first, and many times has scared Americans right off the back. I've gone up plenty of brutal mountain passes, through countless wet road furniture laden roundabouts, and even a few crazy field sprints. Every time I get back to the team bus, I sip on my Recoverite and wonder how I'm still in one piece.

While the racing itself is a big change, the European cyclists' lifestyle can take getting used to. The U23 National Team house is in Izegem, Belgium, one of the many small towns in Belgium. Up to 24 athletes can stay there at once, living in close quarters. Much (all) of our time is spent eating, sleeping, riding, racing, watching TV, shopping, or sitting at the coffee shop. After doing this week after week, or for some month after month, it is easy to get bored, unmotivated, and homesick. Living in a different world, living, eating and sleeping bicycle racing, being 4000-7000 miles away

from everyone you know, and everything you've become accustomed to can be difficult. But, it is what we know we have to do if we want to make it in this sport.

This past spring of 2009 I spent 9 weeks in Europe racing with the Junior National Team. Stationed at the house in Belgium, I also raced in The Czech Republic, Germany, Switzerland, and Holland. Along with racing in Croatia, Italy, and South Africa last year. In my third year with the national team, after 17 weeks of European racing experience, the skills I have learned and mastered will be astronomical in my success in this sport. Not to mention the sights, sounds, and off the bike moments that I will remember forever.

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David Ellefson celebrates his victory in the Time Trial at the Master Road National Championships.
Photo - courtesy of David Ellefson

Masters Road National Championships

Hammer Nutrition athletes rock!

Author : Steve Born

This year's USA Cycling Masters Road National Championships took place from June 26th – July 4th in Louisville, KY and Hammer Nutrition was well represented at this prestigious event. In the Men's 60-64 age group, Jack Kelso, from Pleasanton, CA, riding for Team Hammer Gel, came in 2nd place in the individual time trial and earned a spot on the podium with his 33:15.10 time over the 25.8-km course.

Jim Fox, from Aptos, CA, also racing for Team Hammer Gel, replicated Kelso's feat in the individual time trial. Jim finished in 2nd place in the Men's 65-69 age group with a time of 29:48.90 over the 20-km course.

Another Hammer Nutrition athlete,

David Ellefson of Banner Elk, NC, continued Hammer's dominance in the time trial. Competing in the 75-79 age group, and riding for Team Veloproject.com, Ellefson took top honors with a dominating 33:03.40 time over the 20-km course.

Two other long-time Hammer clients, Julie Kaplan, from Oxnard, CA and Margaret Thompson, from Clinton, NY—riding as Team Hammer Nutrition—also showed that they're not slowing down a bit; they're only getting better and better.

Competing in the Women's 55-59 division, Kaplan came in 4th place and Thompson in 6th place in the criterium. Kaplan's time of 1:01:31.00 was a mere 1 second out of a top three position! The finishing positions were reversed

in the 30-mile road race, as Thompson garnered a well-earned 4th place finish, with Kaplan also showing strong, finishing in 6th place.

The individual time trial is where the duo really shined, however. Kaplan took top spot on the podium with a blistering 31:25.30 time over the 20-km course. Thompson was a mere 2.9 seconds back to claim 2nd place for Team Hammer Nutrition.

Congratulations to Jack, Jim, David, Julie, and Margaret on their tremendous efforts... well done!

Note: In an email that Julie sent to us she wrote, "Thank you for your great products & support. Good showing for Hammer Nutrition all around ... saw many Hammer kits on the podium." So if you competed and placed in this year's Masters Nationals, we'd like to recognize you! Email us at athleteupdates@hammernutrition.com

To see photos of Julie, Margaret, and David, check out the Hammerbuck\$ report on page 57.



Jim Fox celebrates his 2nd place standing at the Masters National Championships.
Photo - courtesy of Jim Fox



Jack Kelso celebrates a TT NCNA District Championship in the 60-64 age group.
Photo - courtesy of Jack Kelso



Tyler, Dave, and Dane Rasmussen on the summit of Mt. Rainier. Photo - Dave Rasmussen

Making Our Way Up Mt. Rainier

Author : Tyler Rasmussen

Mt. Rainier - again. An exciting prospect. In the Paradise Visitor Center parking lot, a confusion of ice axes, harnesses, and backpacks surrounded our van. Using a tinted window as a mirror, I slathered my face in sunscreen. I felt confident. Two years earlier I'd climbed to 11,000 feet on Mt. Rainier, only to be stormed off. In 2007 the most miserable part of the climb had been hiking the trail between the visitor center and the Nisquali Glacier. Hot, out of breath, slogging through mushy snow, I hoped the same would be true this year. It was. As we climbed the moraine and got on the glacier, I felt better. Cool radiated up from the snow. I put on my new ultra light crampons. Such a nice feeling: those flashing red teeth biting into the glacier. We roped up; Dad led the way, followed by my 14 year-old brother, Dane. I brought up the rear. Dad's friend Jamey Sampley and three of his kids, Amity, Levi and Jesse, formed a second rope team. Despite being on a team with six other people, I found myself alone. Too far apart to talk without shouting, we kept silent. I enjoyed the solitude. There is a certain monotony in climbing. Right foot, left foot, move ice axe. Right foot, left foot, move ice axe. And don't forget to breathe. Hard. After kicking steps up the steep snowfield for a while, my body shifted into autopilot. My mind wandered off. I made up stories, thought about projects I'd work on at home, talked to myself. Mountaineering is physically taxing, but it leaves the mind free to explore things that get shoved to

the proverbial back burner. Occasionally we'd stop, enjoy a Hammer bar, and perhaps sit on our packs. These stops were always short. "No point spending time here when we could be in camp," Dad would say. I agreed completely. The nearer camp got, the slower time



Tyler leads the climb up the Kautz Direct. Photo - Dave Rasmussen



Dane and Tyler continue the climb. Photo - Dave Rasmussen

moved. I got impatient, so Dad had me lead. When leading, you have to concentrate on route finding, not just following footprints.

We came to a rocky ridge covered in smooth, gravelly spots. Camp. Finally. The first thing I did at camp was mix and drink a bottle of Recoverite. Feeling much better, I helped set the tent up. On the mountain, simple tasks take a long time. We spent all evening melting snow, filtering drinking water, and making dinner. When the sun set, wind came up and the temperature

plummeted. We scurried off to nice warm sleeping bags. I woke up to a whistling noise. Dad had opened the valve on my sleeping pad to wake me up. After a quick breakfast, I mixed up a bottle of HEED, my staple drink on the mountain. Another day of aloneness, slowly hauling myself up a mountainside. The climb to high camp was short. By noon we were done climbing. Once again, the afternoon was spent melting snow, cooking, and preparing for our climb. Despite an early arrival at camp, we found ourselves in a bit of a hurry. At midnight we would be starting off for the summit. Getting to bed early was important.

I woke up to find Dad fiddling with his headlamp, which was blinking on and off erratically. The light

see RAINIER on page 47

RAINIER from page 46

had a short, and was completely useless. It was midnight. Time to leave for the summit. The weather was perfect: absolutely no wind, clear skies, and warm temperatures. I'd been to high camp before, but never beyond. Curious, excited, and a little nervous, I started off for the summit. Jamey Sampley led. Dad and Dane stayed in back, sharing Dane's light. The slope became steep and icy as we pushed on. I could climb up a very steep slope with no trouble, but coming down was on my mind. Descending is usually the hardest part of climbing a mountain. Fortunately, someone had fixed a rope on the steepest, iciest part of the climb. Once Jamey Sampley found it to be secure, everyone clipped into the rope. When the red fixed rope ended, we crossed a number of large snowfields. Crevasses like bloodless, jagged knife wounds pierced the glacier around us. We took a breather on some sunny rocks. I slammed down a Hammer bar. Following our rest, I took the lead. Instead of following the main route, I blasted straight up a steep exposed face known as the Kautz Direct. My calves burned, my heart beat like a machine gun. But I was enjoying myself, so I didn't slow down. More rolling snowfields. I began appreciate the size of this mountain. From the parking lot it had looked so small.

Near the summit, I felt whipped, my stomach hurt, I was a little dizzy. I hadn't eaten enough since leaving camp. Now I felt too sick to eat. Dane, who had eaten three Hammer Gels, waltzed to the summit, chipper as ever. I dragged myself to the summit, took off my crampons, unclipped my rope. Only three steps now. I stood on a thin rock ring surrounding a crater: immense, perfectly round, filled with smooth snow. No crevasses, steam vents, nothing to mar the porcelain-perfect bowl. In my excitement, I forgot how tired I was. We explored an ice cave made by steam vents down in the crater. Inside was warm and moist; the ground was muddy; blue light filtered through the thin places in the tunnel roof. Before descending, we headed over to the true summit. From there, I could see for hundreds of miles. Everything in sight was below us, even the summits of Mt. Hood and Mt. Adams. I wondered if this was how my Dad had felt upon reaching the summit of Mt. Everest two years earlier. As

we tromped down the mountain in hot, heavy clothing, I daydreamed about downhill skis, hang gliders, and helicopters. We came down quickly. The steep, icy section shocked me. I could hardly believe it was the same slope I'd come up twelve hours earlier. I inched out onto the icy incline. Rivulets of water scurried between the points of my crampons. I was so grateful to have that red rope. Using a Prusik knot, I quickly down-climbed the face. Before long, we burst into camp.

But what had happened to camp? Instead of our two tents, there were at least eight. People were everywhere. Someone asked Dad when we would be leaving; they wanted our tent spots. Instead of spending that night in camp, as planned, we jammed gear into our packs and left. Levi and I discussed how fast we could get to the car. Neither of us remembered exactly, but we thought it had taken five hours last time. I hoped we could do it in four or less. It was already five pm. Upon reaching

the snowfield below camp, we roped up. Having no skis or hang gliders, sliding was the fastest way to get down. Holding our ice axes across our laps, we began to slide. Slowly at first, then faster, we slid down the mountain, using our ice axes as brakes. In one hour, we were nearly at the bottom of the mountain. We began the hike back to the parking lot. I thought

the trail would never end. The sun slid down in the sky. Shadows lengthened. The snowfields beside the trail seemed strangely deserted. The parking lot. It was about time. Levi and I raced to the car. Two hours and forty-three minutes after leaving high camp at 11,200 feet, we were done. As we drove through Seattle late that night, Jesse told me he'd been poking himself for the last few hours. "To keep awake," he explained. "I was worried that if I fell asleep, I'd wake up at high camp!"

Tyler Rasmussen is a 17-year old climber/skier/mountaineer from Whitefish, Montana.



*Tyler Rasmussen
Photo - Dave Rasmussen*

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*Tyler Rasmussen on Mt. Rainier.
Photo - Dave Rasmussen*



Jeff Linder and Randy Profeta accept their awards at the 24 Hours of Adrenalin.
Photo - Courtesy of Jeff Linder

24 Hours of Adrenalin

24-Hour World Solo Championships

Author : Randy Profeta

WHO - Randy Profeta
WHAT - 24 Hours of Adrenalin
24-Hour World Solo Championships
Men's 55-59 Solo Competition
WHEN - July 25, 2009
WHERE - Canmore Nordic Center

This year's mountain bike 24-Hour World Solo Championships were contested in near perfect weather conditions. Daytime temperatures were in the mid-80s and although a bit warm, were much better than last year's downpours and chilly conditions. The cloud cover provided some protection from the sun for most of Saturday and part of Sunday morning. We only saw some very brief sprinkles after the gun went off.

The course was the most technical I have ridden during my five year's of racing at the Worlds. While the course was shorter than last year (11 vs. 14 miles) and with a bit less vertical gain per lap, the twists, turns, rocks, roots, and abundance of undulating singletrack required a lot of work and concentration. There were no good places to refuel or even hydrate since you were either straining to clear a hill or maneuvering around trees and other trail obstacles.

It was time to put into practice what I have been preaching. My usual race regimen of fueling, hydration, and supplements did not disappoint. I started the day with a bowl of Cream of Wheat topped with some Apple Cinnamon Hammer Gel at about 7 AM. At about 8:30, I was still a bit hungry

and had a Hammer Bar. I consumed about 90 ounces of water before the race as we attended to last-minute race preparations. Son Dan was my crew chief and my wife Mary Ann took care of my nutritional needs.

An hour before the race, I took a Mito Cap, two Race Caps, two Anti-fatigue Caps, and two Endurolytes. After each lap, Mary Ann made sure that I took in another Mito Cap, one Race Cap, one AF Cap, and as many Endurolytes as I felt that I needed. I started to feel the twinges of a cramp coming on after lap #2 so I upped my intake to three Endurolytes per hour for the rest of the race. The only variation was the addition of a few Energy Surge ATP tablets during the last lap to help me over the steep stuff.

Fueling consisted of three scoops of Perpetuem and two servings of Chocolate Hammer Gel in the new Polar insulated Hammer water bottles. As a backup, I had another gel flask filled with a mix of 50% Tropical and 50% Raspberry. A 70 ounce hydration pack provided me with plenty of water on the course.

After the first two laps, Mary Ann told me to increase my calorie and water intake. She always measures what I return with and, based on her calculations, I was only taking in about 150 calories and 16 ounces of water per hour. My goal was 250 calories and 24 ounces of water. I found a few spots to refuel on course and made sure to double my water bottle sips of Perpetuem to meet my caloric requirement.

The net result was another World

Champion jersey to add to my collection and zero stomach issues or muscle cramps.

As some of you know, this race marked my return to competition after a long injury-related six month layoff. While I was not in peak physical condition, I was still competitive. Thanks, Hammer, for the fantastic products and your continued support!

Dear Hammer Friends and Family,

It is once again a distinct pleasure to write to inform you of yet another successful outing at the 24 Hours of Adrenalin World Solo MTB Championships held in Canmore, Canada on July 25-26, 2009. The Championship jersey and accompanying Gold Medal for my 60+ age group were the 3rd such award since I began to contest the World Championships in 2003. Thus far in the 4 events, I have 3 first and 1 second place finish.

I continue to be oh so pleased with my Hammer product ensemble which includes 3 Endurolytes, 1 Race Caps Supreme, and 1 Anti-Fatigue Cap each lap. It almost goes without saying, but the very core building block for my endurance racing is my precise use of Perpetuem during the event. This time I chose to use a concentrated mixture in my Hammer flask and gel flask bike mount. On the extremely technical single track course, the combination of a CamelBack with HEED and the Gel flask with concentrated Perpetuem allowed me better success at feeding in the rare opportunities that the course permitted.

Thank you once again for your support and incredibly effective nutritional products. I can't conceive of success without them.

Please find enclosed a high resolution photo of myself (left) and Randy Profeta (right) on the podium accepting our awards as World Champions in the 60+ and 55-59 age categories respectively for the 24 Hours of Adrenalin World Solo MTB Championships.

Jeff Linder



Stephen Legate, John Legate, Ted Thayer, and Mike Moyer prepare for the Baja 500.
Photo - courtesy of Mike Moyer

Baja 500

Team Hammer takes it!

One of my first memories of the Baja 500 or 1000 was when I was a kid on vacation with my parents, escaping the long winters of Montana! The event stood out to me as the locals lined the course and how it wove itself through the desert of the peninsula! Now, twenty years, later my intrigue remains about one of the worlds most famous and difficult motorsport races. I have found an avenue to live out this intrigue through the sponsorship of some great guys who went to participate in the 2009 Baja 500. Things have changed from when I was a kid though, because before I just witnessed the cars and motorcycles racing through the dessert. This time I was able to see how much effort goes into ones fitness, nutrition, and general logistics for an event like this. Below, the Hammer Nutrition Baja 500 team has given their personal account of the event from their point of view. Enjoy!

Ted Thayer

Pre-running my section two weeks earlier from San Matias in mid-Baja to Erendira on the coast, proved it would be a really fun & challenging section. I'd hydrated right & felt great on race day with the objective to be fast, but mainly to pass off a straight bike that could last the final 120 miles into Ensenada. Prior to my noon time start I ate 2 Hammer Bars, took 4 Race Caps Supreme, & 5 Endurolytes, and packed 90 oz. of water with HEED.

The first 20 miles consisted of WFO sandy washes, rocky dirt track, and mountainous hairpin drop-offs, then 30 miles of jumps, ruts, and varied technical

terrain. There were some near get offs and despite all of the spring training, afternoon temps had me working really hard while trying to stay focused. The final 40 miles through mountains, across desert, past farmland, and over the coastal range to the ocean were fast, all through stunning Baja, Mexico scenery. I really enjoyed navigating the blurred terrain while trying to keep it upright during some 90 mph blasts and power slides, the ambulances; picking up downed riders serving as reminders to keep concentrating.

The 260X Legate bike performed flawlessly and Stephen, John, and Mike rode the more difficult sections so their race times were especially impressive. I was also stoked to feel fresh throughout the race and can well attest to the efficacy of the Hammer advantage I've been enjoying since 1987. Many thanks to the gang in Whitefish for all of their support with our class win! We'll see you in November at the Baja1000.

Stephen Legate

Have you ever experienced an event where everything just clicks and unbelievable and unexpected things keep happening? Well that was our experience in the 2009 Baja 500 and it was all made possible by the

support and products from Hammer Nutrition. From hooking up with the pro Hammer Nutrition team and meeting all kinds of famous icons of the off-road racing world all the way to an unexpected twist in the results, it was truly the event of a lifetime.

The success of an event like this comes down to teamwork. Unfortunately, Brian Frank could not join us but his support made it all happen and he was missed. Next time Brian! Thanks to Dustin for the product coordination. We all had some custom mixture of HEED and Hammer Gel in our hydration packs as well as suggested amounts of Race Caps Supreme, Mito Caps, and Endurolytes pre-, mid-, and post-race and I know I could have done many more miles when I was done. Having four properly

see BAJA on page 51

Joint health second to none

"I just completed the cycling leg of the Full Vineman on 08/01/09. I often have lower back pain after 2-3 hours on the bike and have taken Tissue Rejuvenator (TR) a few times before and during a ride with good results. On race day during the Vineman, I took TR about 30 minutes before the race, but still had the onset of lower back discomfort during the third hour. I took four more TR pills at Mile 57 and had no more lower back pain throughout the remainder of the race. I don't know what's in the pills that helps the pain, but the effect was dramatic. Riding pain free for 3 more hours was wonderful!"

- Chris Mangum



120 capsules - \$24.95

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The Hammer tent and trailer at the 2008 Dirt Demo in Las Vegas, NV.
Photo : Jason Keister

Upcoming Events

Author : Steve Born

If there's a downturn in the economy, it apparently hasn't hit the racing scene. Or, perhaps more appropriately stated, the recession/depression/whatever it should be called hasn't affected our support for endurance events throughout the U.S. and Canada. In fact, even though it's only mid-July (as I write this), we already have over 2300 events on our Master Calendar... a new record for us!

We've got some really great races coming up in the months of September and October. In the tables to the right

is just a sampling of the ones Hammer Nutrition is sponsoring.

Again, this is just a sampling of the events we're sponsoring in the upcoming couple of months. And, as mentioned earlier, we've already broken our previous record in regards to the number of events we're sponsoring... we really do support your sport! As I'm fond of saying, "Chances are, if it's 'endurance,' we're sponsoring it!"

For a full list of all the events we're sponsoring, visit the Hammer Nutrition website and click on the "EVENTS" link on the left hand of the page.

DUATHLON / TRIATHLON

Sept 5 – The Great Illini Challenge - www.mattoonmultisport.com

Sept 7 – MXT Moab Xstream Off Road Triathlon – www.gravityplay.com

Sept 12 – Harvest Moon Long Course Triathlon, Duathlon, AquaBike – withoutlimitsproductions.weebly.com

Sept 13 – Toughman Triathlon – www.westchestertoughman.com

Sept 19 – Redman Triathlon Half & Full Iron Distance Triathlon – www.redmantriathlon.com

Sept 19-20 – SavageMan Triathlon Festival – www.savagemantri.com

Sept 24-27 – ITU Duathlon World Championships – www.usatriathlon.org/event/event/1072

Oct 4 – South Carolina Half Iron Triathlon – www.setupevents.com

Oct 11 – American Zofingen Ultra-Distance Duathlon – www.americanzofingen.racesonline.com

Oct 18 – Miami Nice Triathlon – www.miaminicetri.com

RUNNING/ULTRARUNNING

Sept 13 – Hammer Nutrition Two Bear Marathon & Half Marathon – www.twobearmarathon.org

Sept 18-20 – Rock Cut HOB0 Trail Rendezvous – www.rockfordroadrunners.org

Sept 25-26 – The Bear 100 – www.bear100.com

Oct 4 – Oil Creek 100 Trail Runs – www.oilcreek100.org

Oct 10 – Can Lake 50 – www.canlake50.org

Oct 17 – 24 Hours of Boulder/Boulder 100 – www.geminiadventures.com

Oct 23-24 – Syllamo 100 – www.syllamo.org

Oct 24 – The Double Dirty Dozen – www.doubledirtydozen.com

Oct 25 - 24 The Hard Way – www.24thehardway.com

Oct 31 – Healdsburg Wine Country Half Marathon – www.runhealdsburg.com

CYCLING/MTB

Sept 4-7 – Green Mountain Stage Race – www.gmsr.info

Sept 12 – HooDoo 500 – www.planetultra.com

Sept 19 – 12 Hours of Dauset – www.goneriding.com

Sept 19 – 12 Hours of Bradbury Mountain – www.bradburytwelve.com

Sept 27 – Six Gap Century & Three Gap Fifty – www.cyclenorthgeorgia.com

Oct 2 – Show Low Bluff Tour of the White Mountains – www.epicrides.com/towm/towm.htm

Oct 3 – Furnace Creek 508 – www.the508.com

BAJA from page 49

fueled riders really did give us an edge and we won our class of 28 riders by 76 seconds! Not bad for the maiden voyage of Team Baja Hammer Nutrition. Mike Moyer brought the speed, Ted Thayer brought an unwavering spirit, and brother John gave us a great bike that never missed a beat even when hurled into an embankment at high speed! The team gelled (literally) with a beautiful chemistry worthy of the spirit embodied by Hammer Nutrition as a company and we can't wait for the next event. Thanks guys!

John Legate

This years Baja 500 was one of the best weeks of my life. Everything went smoothly with no real issues to deal with. Team Hammer Nutrition/Callaway Motorsports arrived in Ensenada, B.C., Mexico the week of the race with high hopes and Hammer Nutrition fuel. After some last minute prerunning, the team was ready to go. Steve got us off to a solid start, keeping a strong pace for the first 98 miles. Then our ace in the hole, Mike, hit the afterburners and put us in third place on the course. Mike handed off to Ted who did a great job of keeping the pace going and saving the equipment for the end. Ted handed the bike off to me in Erendira for the final push back to Ensenada. Steve and Mike waited at

the last pit and had plenty of water and Endurolytes there for me. Having been refueled and feeling the Hammer kick in, I brought us home for what ended up being a 1st place finish! Thank you, Hammer Nutrition, for your support and excellent product. Without it I would have surely faded at the end.

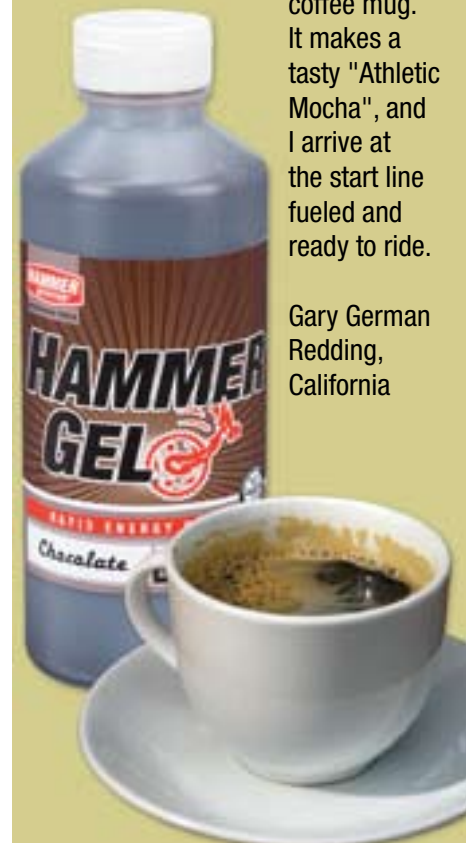
Mike Moyer

Baja has always had a reputation of being the hardest race around and finally I got the opportunity to tackle it. Being a seasoned District 37 AMA off-road racer, currently #3 open expert, I was hoping my experience would pay off, and it did. Stephen handed me the bike at 9:15am and I was off into the first 35 miles of my section which was pure rock, up hills and back down, through washes and back through the hills, until I finally reached the end of the 'summit'. For the next 100 miles I knew it would be as fast as I could go, across open valleys and through silt beds; I was having a blast catching and passing people! The Hammer Gel mixed with water in my pack and Race Caps Supreme previously taken were keeping my energy up and me charging hard all the way to the exchange point. I could not have asked for a better experience and cannot wait to get back on the race bike for another tour of the awesome Baja desert.

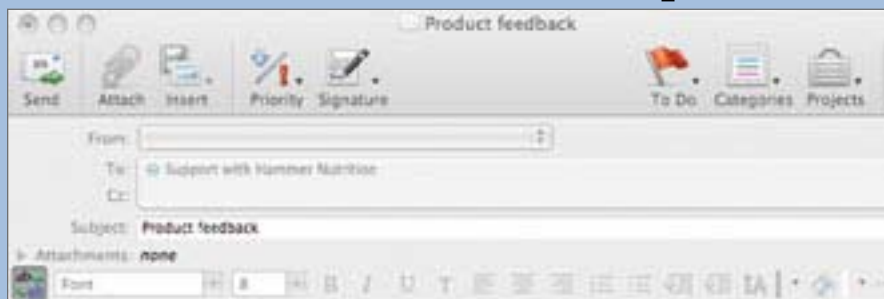
Reader Recipe

When I have to drive to a race or ride, I like to dump a Chocolate or Espresso Hammer Gel into my coffee mug. It makes a tasty "Athletic Mocha", and I arrive at the start line fueled and ready to ride.

Gary German
Redding,
California



The difference is superior



I started the beginning of this season using Hammer products and I will NEVER ride without them again. Whether I am going out to ride my bike for 20 minutes or 12 hours, I always fill my bottles with HEED or Perpetuem and have my gel flasks full of Hammer Gel in my jersey pockets. The difference is superior compared to the other nutrition products I've tried; there's no sugar induced crash or energy roller coasters, just good, consistent performance. Great products, better prices!

Thanks for your determined spirit to the endurance world!
Jeromy Bishop

This testimonial was unsolicited and has not been modified.



- Rock solid energy
- Made with real fruit
- Wholesome ingredients
- 9 flavors
- Economical

Single serve \$1.25
12 count box \$14.95
26 servings \$19.95
Gel sampler \$7.95
Hammer flask \$1.50



ENDURANCE FUELS



Kristin Stilton celebrates her 2nd place age group victory at the June Lake Triathlon (at 7600' elevation).
Photo - Mike Stilton

Multisport Economics

Author : Shane Alton Eversfield

“Is Triathlon Recession Proof?” This headlined a post on USAT’s website. Turns out, we are registering for races at full force, still training passionately, perhaps investing less in equipment. We continue to enjoy the multisport lifestyle, grateful that running and biking are virtually free, regardless of frequency or duration. For a nominal fee, so is swimming. We may race closer to home, but we are continuing to race; it’s our way of celebrating together our pursuit of excellence and mastery, in sport and in life.

What!? Multisport flourishing during economic recession? Why not? We live in a universe that values and thrives on abundance: That which is most abundant is most valuable. Abundance is part of our multisport lifestyle!

Yet, for countless generations, humanity has chosen to value and subscribe to scarcity: As things become more scarce, we put more value on them. This is the very foundation of our current global economy, our means of accounting for and distributing wealth. Supply diminishes; value increases. Corner the market; name your price. This is so ingrained in us, so natural for us, that we are just recognizing the devastating effects of valuing scarcity.

Economies weaken as participants lose confidence. Fueled by a compassionate desire for health and happiness, we are no longer confident in a scarcity-based economy. Our current global economic crisis is a crisis of valuation. Placing

value on scarcity is no longer healthy or appropriate for planetary life or for our global human culture. This loss of confidence is healthy and appropriate for our growth and transformation. Just like the athlete who is returning to sport after healing an injury, we are ripe for the transformation of training, for the next level of excellence.

What does an economy based on abundance look like? How does abundance-based economy function? Here are simple truths to guide us on our quest: First of all, remember we live in a universe that values abundance. It’s pretty simple: The physical resources that are most abundant to us are most valuable to us. The most abundant and most valuable life-supporting resource is air. Without a constant air supply, the finish line is death. (Even with a constant supply, I still drag a little ass on the hills and during interval training... not to mention sprint races.) The second most precious life-supporting resource is water. (No, it’s not coffee.) The third is food. (Iron Man cannot live on gel alone.)

Subscribing to scarcity affects these precious resources for all of us, even for those of us who possess, control and consume most of the resources. Those who are hungry, those who are thirsty, those who are struggling for air, they are no longer distant and removed from us. In our global culture, they are our brothers and sisters.

Money is made of metal and paper and plastic. Not one of us can eat money, drink money, or breathe money. And money won’t save us, especially when it

accounts for wealth and value based on scarcity.

As our economy transforms to value abundance over scarcity, we will naturally transform our reliance from the diminishing finite resources, like petroleum, to abundant renewable resources. Someday all of our races (and our training) will be green!

Time has a very high value for us; that’s why it is so scarce. You see? We can’t decree that time be both valuable and abundant. We use scarcity as a criteria for value. We can’t decide that’s it’s OK to raise the price on one resource because there is greater demand and diminishing supply and then expect to exempt something as valuable as time from scarcity. In a system based on abundance? No worries, plenty of precious time for everything in life.

Let’s face it, we love to train and we love to be with family. We love time, just like we love air. (Well, so long as a fat Father Time doesn’t shovel it on to my lean mean racing times.)

By sheer necessity, we du, tri, even quadathletes are masters of transition. Transitional skills make us adaptive and cooperative. We’re well trained for the economic “Team in Transition”.

We measure multisport quality of life by more than finish line times. Each of us has a unique way of appreciating our “success” as we pursue excellence both in sport and life. Just in the way we live, we contribute to the global economic transformation. We are functional, versatile, adaptable, patient and disciplined. It comes with the training. Now, it’s time to take it to the next level.

Happiness is a premium. As we

see ECONOMICS on page 53

ECONOMICS from page 52

transform our economy to value abundance over scarcity, like the people of Bhutan, we will choose to measure success not as Gross National Product, but as Gross National Happiness. See you at the races!

Shane Eversfield is author of "Zendurance, A Spiritual Fitness Guide for Endurance Athletes". www.zendurance.net. He races triathlons up to ultra distance and was USAT All-American 2008. He is also a Serotta Certified Advanced Bike Fit Technician and a Total Immersion Swim Technique Coach. ironzen@hotmail.com

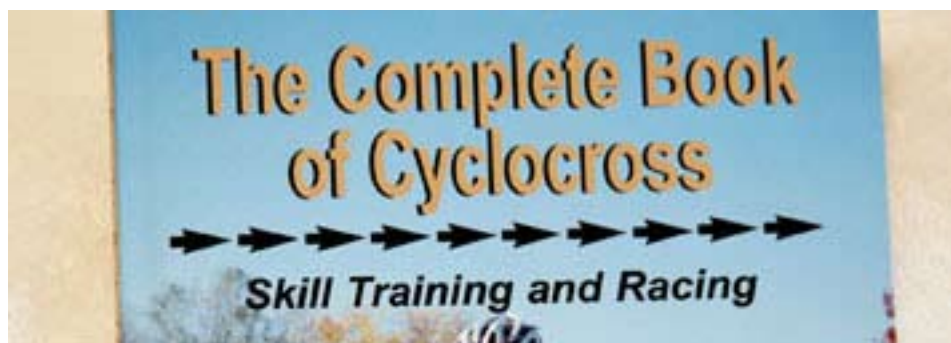
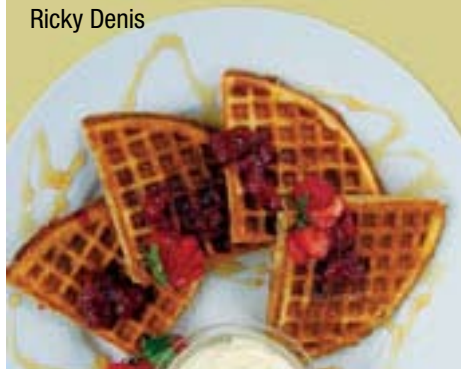
Reader Recipe

Try this simple waffle recipe I came up with; it works for me (i.e. 3 hours or more before start time). Makes about 8 waffles but 2 of these will probably be enough.

- 1 1/2 cups quick oats
- 1 cup buckwheat flour
- 1 tsp baking soda
- 1 packet stevia
- 1/2 tsp potassium chloride
- 2 cups soy milk
- 2 tbsp canola oil
- 1 egg whole
- 1 egg white
- 1 tsp fresh ground cinnamon
- 1 'little bit' fresh ground nutmeg

First, mix the dry ingredients well. Then the wet ingredients. Then wet and dry ingredients together until smooth. Top the waffles with a little bit of almond butter and banana or apple cinnamon flavored Hammer Gel. Also, cook the whole batch and freeze the left over waffles immediately. You can make great hot or cold sandwiches, using them instead of bread.

Ricky Denis



"The Complete Book of Cyclocross Skill Training and Racing"

Reprinted with permission from CX Magazine, www.cxmagazine.com

Scott Mares has been racing 'cross from the early 90s and got hooked not long after picking up the sport. His addiction took him on an adventure that includes attending a 'cross camp at the Olympic Training Center, racing at multiple national championships, and playing a long-time (former) role as the skill and head coach for the ACA's Junior 'Cross Camps. Now he can add author and publisher to his palmares.

Mares has decided to spread his teachings by writing and publishing his own book, "The Complete Book of Cyclocross : Skill Training and Racing," released this past fall. Mares' book joins the all-time classic, "cyclocross Training and Technique" by Brit Simon Burney (now in its third edition) as one of only two cyclocross how-to books on the market.

Mare's book is ambitious in its attempt to cover all aspects of the sport, starting with an introduction to the sport, a discussion of types of race courses and equipment options, and progressing to drills and training and exercises. Any newer racer will learn a lot from his book, and even seasoned racers can find inspiration to add some spice to normal workouts and improve technique through Mares' creative and comprehensive drills, such as his group races around cones and grabbing bottles off the ground.

The book does a particularly good job of explaining the benefits of good 'cross technique and offers many drills to

help you take advantage of what Mares calls the possible "one minute gain" you can realize just from improving your technique. It also includes exercises to improve in the often-overlooked aspects of the sport, including mental training, race tactics and core strengthening. But it's not the type of book you buy hoping to find custom to-the-minute training programs with power levels and heart rate zones. Mares admits he's more of a skills guy than a training coach and acknowledges the limitations of a book in creating a personalized training program. He instead recommends a personal coach to help you in that area.

By trying to cover so much in the skills area, not everything is covered in depth, and as bike geeks, we wished for more tech stuff. Mares keeps it simple, which is a good thing for most newbies, posits a few over-generalizations. "The skinnier the tire, the lower the rolling resistance and thus the faster it is," and "Aluminum is a one or two season material," are two contentious statements, and there's no mention of tubeless tire options. But not everyone cares about those details like we do, and they're minor nitpicks.

It's a commendable start for a first self-published book that will be incredible helpful for the newbie. Although a book is never a substitute for a great cyclocross clinic, it's also a perfect set of refresher notes before practice or a race. And even the most seasoned racers may find the many tips and drills in "The Complete Book of Cyclocross" just the ticket to continue their development in the sport. -A.Y

Available at www.cx-book.com



Suzy and Abby
Photo - Suzy Degazon

Challenges Facing the Athletic Baby Boomers

Author : Suzy Degazon

As baby boomers, my husband and I have been blessed with a beautiful granddaughter who has become a very intricate part of my life. As most of you know, as athletes we are always trying to balance work, relationships, and training for the special events we do and this is where my story starts about training with my grandbaby!

The phone rings on a Thursday evening and it's my daughter-in-law wanting to know if I will babysit Abby for the weekend. I say sure because I just love spoiling her! I ask what time and she says late Friday which means that I can get a swim, a bike ride, and an hour of yoga if I'm lucky. Abby arrives and at 13 months, she is fun to play with but come Saturday I find myself in a bit of a pickle as my husband is at work and I need to run! I decide it is time to break out the three-wheel baby jogger with off road tires.

Now I have NEVER used a baby jogger so I packed the essentials (diapers, sunscreen, and cell phone), loaded up the Hammer Gel and water, and put on my Cascadias. This was going to be fun. I had the perfect two hour training run picked out with lots of small, steep hills, a few downhills, and a little flat. I reckoned this would be a good start!

I loaded Abby up and set out of my driveway. Woohoo! I felt great! I ran a mile and stopped at a traffic light... everything was good. At three miles I enter the trail head, and suddenly

discovered muscles I did not know I had as I pushed that three-wheel buggy up a short, rocky hill surrounded by mustard grass. I could hardly see Abby because my sweat was blinding me! I was hot and it was not easy pushing that buggy! A downhill came which presented a whole new set of problems. Now I had to make sure the buggy did not run away from me and concentrate on keeping my footing on the dry fire road! Abby really enjoyed the thrill of this section and I heard her laughing and straining her neck to see me through the plastic window of the jogger! I coo'd back at her... yes this is your crazy grandma! Are we having fun in there? Soon I was crossing a small wooden bridge which was shaded. followed by a nasty grade and this is where I used the baby card. Barely walking at 13 months. I took Abby out of the buggy as I figured it would be easier to push the buggy without her weight and she could walk next to me up the hill. Of course, in retrospect, I should have left her in the buggy. I took a Hammer Gel and looked at my watch... I was definitely not on course to break 2 hours and still had a journey of discovery as Abby wanted to explore everything within hands reach which, of course,

meant the next stop was the mouth! Oh my, what a nightmare! If I had ever thought that nasty grade was difficult to run, I had never pushed an off-road buggy up to the top while towing Abby who wanted to point and say hi to every blade of grass she could see! And the worse thing was I had no cell service and had not anticipated being out for longer than 2 hours or I would have packed a bottle of Perpetuem!



Abby and the buggy out on the trail.
Photo - Suzy Degazon

At the top of the nasty grade the view is spectacular. A bunny rabbit passed by and Abby was laughing at the world. I must say, viewing the scenery through a child's eye was breathtaking and took away momentarily the aching biceps, triceps, and lats. I looked at the buggy, which had seemed like such a great idea hours ago, and laughed at myself. There

I was, well into my third hour and nowhere near home, actually enjoying the workout! I was aching, my heart rate had elevated a few times over the 175 mark (actually unheard of for me), and I was sharing the experience of the outdoors with my granddaughter, who I hope will grow up with a love of the outdoors.

Then the inevitable happened - the dreaded diaper change! Yep, it took place on the trail. The deed done, we continued on with Abby back in the buggy. We spit out onto a road that connected to another

see *BABY BOOMERS* on page 55

BABY BOOMERS from page 54

fireroad around a small lake. I still had 7 more miles to run and Abby wanted to get out of the buggy. We sat together for 10 minutes to watch the ducks and I took the chance to stretch a bit and weaken as I called my husband to pick us both up! Four hours on the trails and it was time to call it a day. I had had a brilliant workout. I used muscles that I did not know even existed and am already planning my next adventure with the baby buggy! I am thinking there should be a special category for athletes with babies. At home, with the workout over, I barely had time to relax before Abby was wanting to eat, play, and finally sleep!

The moral of this story is, as we age, we "Baby Boomers" are blessed with certain things in life. Whether it is gifts or grandchildren, we should never forget our passion for the things that we love, which in my case is running, cycling, and swimming!

In closing, I would just like to say that I went on to do the LA Marathon. One of my targeted races with not as much training as I would have liked, yet due to baby buggy training, I pulled off a personal best and qualified for the 2010 Boston Marathon!

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The TEAM HAMMER Auto-Resupply program is for our clients wanting the ultimate in convenience and super VIP treatment. Receive automatic shipments of your favorite Hammer products, FREE shipping, and much more!



Join today!

Katey, Client Advisor

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www.hammernutrition.com/team

Hot Tip : Hammer Whey

In previous issues of Endurance News we discussed the benefits of taking whey protein prior to bed to help elevate hGH levels by as much as 400% (*read the original Hot Tip below*). The key for this to be successful is to take Hammer Whey in water only, as carbohydrates will hinder the process. Note that Hammer Whey contains no added carbohydrates so it's going to be somewhat bland tasting. However, the benefits derived are anything but bland!

From Endurance News 54

Elevating Human Growth Hormone (hGH) levels is the surest way to enhance athletic performance and shorten recovery time. This is why some athletes resort to risky injections. To safely raise hGH levels without risk to your endocrine system, try this - just before bed, take 1 scoop of Hammer Whey protein in 4-6 ounces of water, (not juice or milk as those carbs will hinder the process). This practice may safely raise hGH levels while you sleep by as much as 400% compared to the usual nightly spike. That's enough to have a noticeable effect on anabolic, muscle building/maintaining activity in the body, and that's a good thing.

Safely raise hGH levels!
100% whey protein isolate in 3 delicious flavors
(and Unflavored too)



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



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Single serve - \$2.89 / 24 servings - \$32.95 / 3 or more - \$26.95 ea.



Mountain Bike National Championships

Author : Andy Schultz

This past weekend brought the Kenda-Tomac-Hayes riders to Sol Vista, CO for one of their most important races of the year, Mountain Bike National Championships. The past two years, National Championships have been held in Mount Snow, VT and East Coast riders who excelled at the muddy, rooty, riding also excelled at the race. Being that all of the Kenda-Tomac-Hayes riders live at altitude in the Rocky Mountains I think that we were all happy to have Nationals return to the dusty, long-climb, high-elevation West.

The first race of the weekend was the Under-23 (U23) National Championship race. It was Colin's last year as a U23 rider and he was racing near where he competed in his first ever mountain bike race so I think he was looking to put his stamp on the race. And he certainly did that. Colin took the lead early in the race and never looked back. I'll let him tell it:

"Having been 2nd and three times 3rd place at Mountain Bike National Championships, I was anxious to get a win. This year, preparation and good fortune were on my side, and I held a small gap over Rob Squire to win the U23 National Championship. As a Colorado native, I love long aerobic climbs and was able to stretch my gap each lap on the course's long lone climb. Rob would reel me in a little each descent, which kept the race exciting and stressful right until the finish. I remember reaching the top of the

final downhill with a comfortable gap and vowing to ride a safe and smooth descent. Seconds later, I washed out my front wheel in a corner and went sailing over the bars. Fortunately my bike was unharmed, and I jumped back on with so much adrenaline that I didn't notice my skewed handlebars or the rock lodged in the front of my helmet. I can say with confidence that the final switchbacks and finishing straightaway of the course were some of the most fun bits of bike riding I have ever done. On the one hand, riding well was so much fun that I immediately get motivated future races. On the other hand, winning nationals makes me think back on all the support that has gotten me to this point. Great family, coaches and friends, and exceptional support from USA Cycling and great companies like Kenda, Tomac, and Hayes, and Hammer have made it possible to pursue this dream. "

So Kenda-Tomac-Hayes has a National Champion on their team. I think red, white, and blue are his colors.

Saturday was the elite men's and women's cross country race. It was a tough course with a long, sustained climb and a rough and dusty descent. Zephaniah was the best finisher for our women with an 11th place finish. In the men's race I battled

for 4th and 5th all day but in the end the race was one lap too long for me and I had to settle for 6th .

Sunday we all woke up with sore legs and bodies from digging deep and/or crashing yesterday but we all saddled back up and competed in the short track race. It was a very atypical short track course. Generally in a short track you never have to leave your big ring and there might be a really short, steep climb to contend with. We faced a course that went straight up a ski hill run and came straight back down. It was by far the longest climb I had ever seen in a short track. Again, Zeph was the best finisher for the women with a solid 10th place. In the men's race I finished 8th and Colin was 10th.

All in all, it was a great weekend. All the team riders would like to thank Chris Magerl and Nate Carey for their tireless work to make sure we had clean and perfectly working bikes and were well fed during our races. Also, a big thanks goes out to all of our sponsors who provide us with some of the best equipment on the market. We couldn't do it without you.

Thanks for reading,
Andy

Save 15% when you buy a complete men's or women's Hammer kit!

Buy a kit consisting of a jersey, shorts or tibs, arm warmers, and a wind jacket and receive 15% off the individual prices! Gloves, socks, and other Visler items will also be discounted if they are ordered at the same time.

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Max Durtschi crosses the finish line at the U.S. Junior National Championships. Photo - courtesy of Max Durtschi

Hammerbuck\$

Turn your race day into a payday!

Julie Kaplan

USA Cycling Masters Road National Championships

Time Trial
1st place in the 55-59 division

criterium
4th place in the 55-59 division



David Ellefson

USA Cycling Masters Road National Championships

Time Trial
1st place in the 75-79 yr division



More Winners!! Other Hammerbuck\$ winners include Max Durtschi (Junior National Championships - page 41), Jim Fox (Masters National Championships - page 45), and Jack Kelso (Masters National Championships - page 45).

Margaret Thompson

USA Cycling Masters Road National Championships

Time Trial
2nd place in the 55-59 division
(see photo above)

Road Race
4th place in the 55-59 division



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Julie Deery celebrates her 1st place amateur, and 4th overall, finish at the She Rox Triathlon in Philadelphia, PA.
Photo - Heather Leiggi



Race Report

Hammer athletes

Jon Steckbeck

Congratulations to Jon on the following accomplishment!

I was notified over the weekend by USA Triathlon that I achieved All American Status for the 2008 season. All the way in 2008 (and before) I was using and promoting Hammer Products. Thanks again for taking the worry of the nutrition variable out of my race equation.

Jon Steckbeck



Jon celebrates after a successful 2008 Beach to Battleship Ironman where he won the military division, placed 2nd in his age group, and 13th overall.

Eric Sullivan

Steve, I just wanted to let you know I qualified for the Ironman World Champs in Kona at the Providence R.I. 1/2 IM this past weekend (July 12), posting a 4:13 and having the fastest amateur bike of the day in 2:15. So now I am just getting ready for Primal Quest Badlands on Aug 15th. There will be live coverage at www.ecoprimalquest.org and I will be racing on Team Salomon Crested Butte. Thanks again for all your great support!!

Eric Sullivan

Stephanie Gaudreau

I tried Race Day Boost for my first 12 hour solo endurance race recently. I live at sea level, and the race was at 6500' of elevation. I had done a training ride up there prior and had a lot of lactic acid burn in my legs.

Well, race day came and went...I did 79 miles and 11,250' of climbing (9 laps) with absolutely NO lactic acid burn. I was amazed!!! Race Day Boost will definitely be on my protocol for my next endurance race. I'm a believer!

Bradford Smith

I recently returned from a 6 day cycling trip in north Georgia and North Carolina. I only used HEED and Endurolytes in my water bottles, Hammer Bars at rest stops, and Recoverite after each ride. We climbed a total of 25,300 feet with grades as steep as 24% and I felt great! I performed so much better than the other riders that they wanted to know my secret. I sent them links to Hammer Nutrition.

The picture is from the top of Mt. Mitchell. It is the highest point in eastern North America. The photographer was Lawrence McFadden, one of the guys I was traveling with.

I love Hammer's attention to providing what is best for our bodies.

Keep up the good work.



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Wendy Skean

I wanted to let you know how well the Breck Epic went. I followed your nutrition and supplement plan exactly and I can hardly believe how well the race went. I always felt strong and never felt like I was going to bonk. The aid stations were well stocked with Hammer products and very well received. Steve, I want to thank you and Hammer for making the race the success it was.

Wendy Skean

Read Wendy's race report on page 42.



Skip Yungfleisch

Enclosed is the picture taken by Patte Yungfleisch. The Senior Olympics were held in Kalispell June 11-13, 2009. I won the Gold Medal in the road race on June 12 and the Gold Medal for the time trial on June 13th.

Skip Yungfleisch



Kate Marshall

I love your product! I did a 12 hour race last weekend, the Saratoga 12 (a 12 hour time trial, highest mileage wins in each category), using nothing but HEED, Perpetuem, and Hammer Gel (Espresso, yum). I won, setting a new course record! I did 207 miles to win the overall women's category. The old course record for women was 199 miles. I attribute my success partly to your product.

Kate Marshall

Lee Haris

Anticipating 90 to 100-degree temperatures during the bike and run portion of the 2009 Vineman 70.3, I decided to create a thick mix of Anti-Fatigue Caps, Perpetuem, and Endurolytes all into one bottle (enough for a 3 hour ride) and in another bottle enough for a 2 hour run, then augment each with water. The proportions of these ingredients were per your instructions. To complement them, I used Hammer Gel and Energy Surge.

I've been a long time fan of Sustained Energy, Perpetuem, Endurolytes, and Hammer Gel, all of which have worked well for me. However, adding, for the first time, Anti-Fatigue Caps and Energy Surge to my race day nutrition took me to a new level of endurance and comfort. I had no cramping, never felt like I tapped out on energy, and felt strong after the race. Even the day after I was less sore than I ever remember.

I'm 55-year old male and finished 13th in my age group at Vineman. The weekend before, at the San Francisco Triathlon, I finished 3rd in my age group.

My hats off to all of you. You make some great products that work for me.

Lee Haris

Team Aardvark - Race Across Oregon

The 4-person "Team Aardvark" team of Janosz Dewberry, 18, Lito Nicolai, 17, (the son of longtime Hammer Nutrition client and RAO finisher Bill Nicolai), Owen Bley-Male, 17, and Jonathan Von Ofenheim, 16, became the youngest team ever to finish this grueling race. Their time of 33 hours, 45 minutes is the new standard for the Junior 4-Person team division. (Also in the picture is coach Colin Day).



Eric Reichert & Matt Carstens

Hey guys, just a big thank you from me and my duo partner, Matt. You supported an event called 12 Hours At Night in Prescott, AZ and it was a blast! We took second place on single speeds in the duo combined category which means we lost to gear-heads. Our Endurolytes/Perpetuem/Hammer Gel combo was the reason we could keep up with the gearies, and we noticed your product everywhere. Thanks again.



*LiLynn Graves (in pink) and friends get ready for a 65-mile training ride.
Photo - Bill Erickson*



Race Report

Hammer athletes

Jeff Cooper

Certainly not a national winner but a winner nonetheless...

A picture of my 14 year old daughter, and her very proud dad, winning her first mountain bike race ever - a 14 miler at Raccoon Rally in Allegeny State Park on June 28, 2009.

She used Banana Hammer Gel and Mandarin Orange HEED and can't wait for her next ride (neither can I).

Jeff Cooper



Sarah Wetzel

I realize this race does not qualify for Hammer Bucks, but I'm writing to thank you for the amazing products you make! I'm training for Ironman Louisville 2009 and I recently tried Race Day Boost prior to the Denver Post Colfax Marathon. I planned on using the marathon as a training run, but a mile into the race I knew I was going to have a fantastic day. Not only did I run a personal best, I placed 2nd overall for women. Thanks again! I hope to send you an email in September with great news regarding the Ironman!

Sarah Wetzel



Lincoln Murdoch

Quick report on the USAT Holiday Lake Triathlon held last Saturday. Just under 200 in the race, windy and rainy conditions all race long. Thanks to your great products I finished 4th Overall and 1st in my 50-54 Age Group. Hammer Nutrition products fueled me before, during, and after the race. I won an American flag for my award. Nice.

Thank you all so much for helping me this season. So far, we've scored a 6th Overall, 7th Overall, 3rd Overall, and now a 4th Overall, with 50-54 Age Group wins in each of those four races.

Lincoln Murdoch



DO YOU WANT TO HAVE YOUR RACE REPORT PUBLISHED?

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 500 kb in size. Thanks!*

Michael Shinney

In 2005, two weeks before my first LotoJa, I hit the wall on a ride. There was nothing left. I went to the Bike Shoppe in Ogden, Utah and they turned me on to Perpetuem. LotoJa 2005 has been nicknamed SnotoJa because of it raining and snowing all day. At the time it was the most epic ride I had ever done. Perpetuem got me through my first LotoJa, and I have used it ever since. I am now training for my fifth in a row. In April of this year I went to Northern Italy to bike the Dolomites. My route climbed Passo Giau from Cortina d'Ampezzo to the summit and down the 29 switchbacks of the other side. When I reached the summit, the clouds had already started to roll in. I pushed on. When it really started to rain, I decided to turn back for Cortina. I knew that I had to climb Giau. My GPS had me at just over 2000 ft and I knew the summit was at 7200 ft. I had a monster climb in front of me. It was raining, I had no support, and spoke very little Italian. I had to finish. I could not hit the wall on this ride. As I gained elevation the rain was coming down harder. By the time I hit turn 23 it was snowing. By the time I hit the summit it was a winter storm. The decent into Cortina was slow. Snow was sticking to the road. Once I dropped 2000 ft it was back to rain. The road was like a river. I was soaked. The most epic day I have ever had on the bike. I got through it, because of training, dressing for the conditions, and one great endurance fuel. As long as I am biking, I will always have Perpetuem along for the ride.

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Stephen Armes

2009 is quickly shaping up to be a great season and I am proud to say that my only fuel source has been the phenomenal Hammer products.

So far I have had three podium finishes in five races. This is a photo from the Solana Beach Duathlon on July 26, 2009. Everything worked out for me and I was able to take 1st Overall. Of course, I was fueled by Hammer products every bit of the way.

Thanks for your sponsorship, support, and phenomenal products!!

Stephen Armes



Ted Borer

After more than five years of training, trying and refinements, I finally achieved a personal goal of riding a sub-5 hour century, yesterday. Solo, unsupported, no stops, real roads and traffic, 1400 feet of climbing, no press, no podium, no formal event, no t-shirt, just bragging rights.

Hammer Nutrition products and guidance on the website have been a key part of my training and major events for many years. First learned about them when doing the 2004 Super Randonneur

Doug Augustine

I raced the St. Anthony's Triathlon this year in unusual conditions. The swim part of the race was cancelled for the first time in the history of the event due to strong winds and choppy water. The bike part was extremely challenging due to the wind and the run was hot and humid! I managed to nail my nutrition (Hammer Gel and plenty of Endurolytes) and negative split the run on a very challenging day! Thanks Hammer!

Doug Augustine



series. Thank you for excellent products and great service.

Ted Borer

Congratulations on accomplishing your goal Ted! We think you should at least get a t-shirt so this one's on us. We'll put a credit in your account for a free t-shirt, you just pick the size and the style. Keep up the good work!

- The Hammer Team

Calvin Leithead

I was convinced by some friends to sign up for the 125km Canadian Death Race Solo, which was held last weekend in Grande Cache, Alberta. This was my first endurance/adventure Ultra Marathon. I trained for approximately 6 months with the goal of completing the 125km race in under the 24hr time limit.

During training I used numerous Hammer Nutrition products with great

success. For short training runs I used Vanilla gel. For runs of 1.5 to 5.5 hours I used Orange Vanilla Perpetuem and Endurolytes and the occasional Hammer Bar. After every workout I drank Recoverite.

I completed the race in 22 hours and 23 minutes, well under the allowed time. I believe that Hammer Nutrition had a huge role in me meeting my goals.

Christine Hauger (r) and her niece at the McCall Idaho Triathlon.
Photo - courtesy of Christine Hauger



Race Report

Hammer athletes

Jason Luchtefeld

Held in beautiful Kings Mountain, NC the Over the Mountain Triathlon was a Hammer sponsored event! I did the team relay with 2 friends, Brent Young and Tammy Bailer. We had a blast. The race was very well organized, volunteers were plenty, and Hammer products were flowing!!!! Hammer Gel at registration/sign-in. HEED at all of the aid stations. The weather was spectacular. Due to the rolling hills and heat, I decided to use some HEED (in addition to the Endurolytes). The diluted HEED caused zero problems and I powered through to the finish. We were all thankful that, due to our Hammer fuels, we never had to use the emergency vehicles!

Thanks Hammer!
Jason Luchtefeld



Morgen Bahurinsky

I completed the Hawaii Ironman 70.3 on May 30. My Hammer Nutrition was right on that day. I really appreciated your help with dialing my nutrition. My new mantra ..."Endurolytes. Don't leave home without them!" Now I am gearing up for the Ironman Championships in Kona on October 10.

Morgen Bahurinsky



Jamie Donaldson

Fresh back from the Mojave! I just wanted to let you know this was my best feeling Badwater ever! It was considerably hotter than last year by 5-10 degrees and I didn't have 1 stomach issue using only Perpetuem, Endurolytes, and Hammer Gel Amazing! Also, I LOVED the Caffé Latte Perpetuem! That flavor rocks! I placed 1st female in the second fastest time for a woman ever in 27:20 (after my 26:51 last year).

Jamie Donaldson



Paul Moir and Team

Here is a picture from Round 2 of the Singapore Regional MTB Series. 5 out of 5 Hammer winners. Both in XC and Super-D

Left to right : Fraser Morrison (1st Open XC), Tan Hong Chun (1st Super-D), Paul Moir (1st Masters XC, 3rd Super-D), Victor Young (1st Masters Super-D) and Lynda Scott (1st Womens XC)



Matt Tucker

I placed 17th overall in the ChelanMan half marathon on Saturday. I finished in 1:45:32, and my goal was 1:55! It was so fun and I felt great the whole way until about mile 12.5...then my legs were like "Hey, we've had enough." I used Perpetuem pre-race and two Hammer Gels during the race. They had HEED at the aid stations and I mixed HEED and water every other aid station. I really am happy with my strategy and fueling. I think I will use something similar for my full marathon in October.

Hammer was well represented at the event and I had several athletes comment on my hammer socks. I just smiled, knowing I was part of the Hammer family.

A few days after the ChelanMan I climbed Mt. St. Helens. I used HEED for my hydration and Endurolytes to prevent cramping from the heat and excursion. I also ate a Hammer Bar for breakfast before I left the campsite. I was so pleased with how my body felt both on the way up the mountain and back down. I had plenty of energy and no signs of cramping or fatigue. I thought for sure I would be sore this AM, but I felt good enough to get in my 5 mile run. I totally credit Hammer for my success!

Matt Tucker



Bill Misner

In spite of difficult circumstances...I was blessed with a good race on Saturday! Jesus graced my weak with his strong.

I was hoping to run much faster Saturday, but this has been a year for 4 muscle tear injuries...one injury heals, then boom, another one. I ran through

it [a left hamstring pain/tightness], setting a new age group course record, including a top-20 finish (all ages). I ran the 8K [5miles] road race, attaining "All American" honors....-3 minutes and 39 seconds under the US Masters "All American" standard.

SPOKANE INDIANS 8K PENNANT RACE 2004-2009 MALE 60+ AGE ALL TIME COURSE RECORDS

YEAR	NAME	AGE	TIME
1. 2009	BILL MISNER	69	38:54
2. 2008	BOB CANNON	60	42:59
3. 2005	DICK SILK	66	49:03
4. 2007	DICK SILK	69	51:01
5. 2004	H. CLEAVES	73	50:58
6. 2005	RON MARCOTTE	64	50:30
7. 2004	RON MARCOTTE	63	52:29
8. 2008	K. MOULAXART	64	54:34
9. 2007	K. MOULAXART	64	54:45
10. 2008	RICHARD DEHAVEN	61	1:22:55

Pascale Savard & Brenda Goss

My friend Brenda Goss and I are doing a good job "advertising" for Hammer...here is our picture last weekend at the Prouty Century Ride. We rode hard and just had a good time that day. Thanks!

The Hammer Girls... ;)





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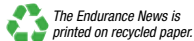
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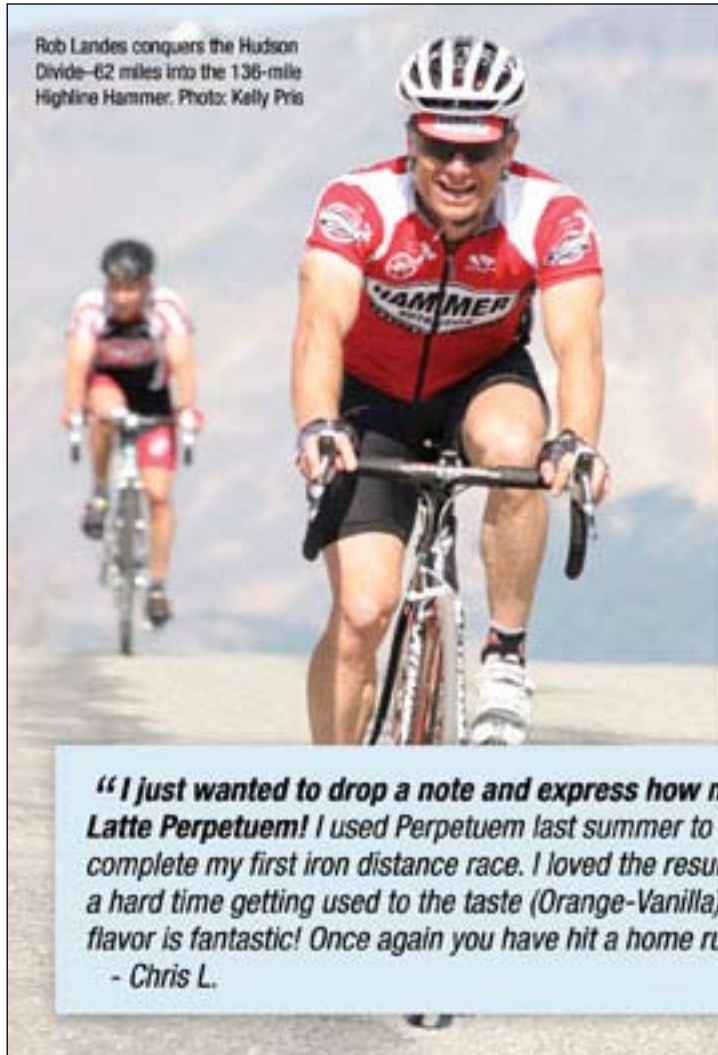
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Rob Landes conquers the Hudson
Divide—62 miles into the 136-mile
Highline Hammer. Photo: Kelly Preis



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“I just wanted to drop a note and express how much I LOVE the new Caffè Latte Perpetuem! I used Perpetuem last summer to successfully train for and complete my first iron distance race. I loved the results from Perpetuem but had a hard time getting used to the taste (Orange-Vanilla), but this new Caffè Latte flavor is fantastic! Once again you have hit a home run Hammer.”

- Chris L.