

Short-Cuts To Better Racing

ENDURANCE NEWS

MAY 2010 : #69

\$3.95

**Breaking
The Sugar
Addiction**

**Recovery Drinks:
When do you
need them?**

**Reduce
ammonia,
increase
endurance!**

ANTI-FATIGUE CAPS

JAMIE DONALDSON

**She ran 100 miles in less
than 15 hours!**

The informed athlete's advantage since 1992



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Hammer Ultrarunners



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ON THE COVER

The overall winner of the Philadelphia 100, in a record-setting time of 14:58, Jamie Donaldson, runs strong at the 2009 Badwater Ultramarathon where she claimed the title of women's champion. Read about the other Hammer ultrarunners making a name for themselves on page 36. Photo : Bob MacGillivray

ENDURANCE NEWS

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Our Mission

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

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

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

Back issues available at
www.hammernutrition.com

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WELCOME

BY BRIAN FRANK

Welcome to the 69th issue of Endurance News! I hope that you all enjoyed the "diversity" of our last issue. We have been working hard on the refinements to the publication and hope you will agree that it's gone up a notch or two so far this year. This issue is loaded with ultra success, and completely opposite of our normal cover dilemma, we had three great photos of three great female ultra runners winning races in grand style. Jamie ended up getting the nod, but the other two definitely deserve hearty "honorable mention" status and can be found on page 36. I believe that these three ladies' amazing accomplishments, as well as those of so many more Hammer athletes found in this issue, give this magazine it's unique appeal. I trust that you will enjoy reading these reports and the other articles in this issue. I also hope that you will become a contributor with your personal Hammer story, experience, PR, breakthrough, or accomplishment so that we can all be encouraged to achieve the same. Remember, this is your magazine, so you can help shape it's content and message by contributing - send in feedback, article suggestions, race reports, stories, whatever you want to see in future issues.

To me this issue is about racing! Maybe every issue is really about racing, but this one more so than any for me. Spring is finally here and the excitement, anticipation, and preparations are in full swing. Our newest race support vehicle will make it's endurance debut at the 24 Hours of Round and Round. It's going to be epic. Like many of you, the first races

of the year are under my belt and the big ones are looming on the calendar. It just feels good to get into the rhythm of racing again after the long winter break. It doesn't matter what kind of racing; what I'm talking about is universal- the packing, loading, driving to the venue, setting up, the nerves, excitement, anticipation, the sense of satisfaction after a good performance, all swirling together in the grand scheme of things. Competition - I know that I'm completely hooked and have been most of my life. Over the years, I've certainly learned better balance and understand the need to keep it all in perspective, but the passion is still there and it feels good to nourish it.

As you enter the heart of the racing season, enjoying the process every step of the way, remember that we are always here to help you achieve your best results ever. You have the whole season ahead of you and all of the opportunity that it imparts; go out and seize it today.

Happy Racing!
Brian Frank
Proprietor





FROM THE SADDLE OF STEVE BORN

BY STEVE BORN

It's been a bit of a strange spring for us weather-wise, with some days being unusually pleasant (sunny, mostly warm, and dry), which has been great for getting out on the bike without having to wear layer upon layer of clothing. Of course, spring in Montana is pretty unpredictable so it was not too much of a surprise that just a couple of days after having ridden a fair amount of miles over the weekend, 4-6 inches of snow had fallen in my neighborhood and surrounding areas overnight (no outdoor riding that day!).

Anyway, by the time this edition of EN hits the mailboxes around the first part of May, we'll hopefully be into more consistently warmer, sunnier, and drier days (but if that weather pattern happens sooner you'll get no complaints out of me!), and that means more consistent outdoor riding, which I'm so looking forward to. Of course, many of you have already been able to train outdoors for a long time now, but for a lot of us, the start of May—though perhaps (hopefully) even sooner—is the time when we really crank up the mileage.

With that said, I've done something different this time around with my column and instead of a continuous block of text, I've focused on some of my favorite topics in this issue. One of the articles that I'm most excited about is our product spotlight on Anti-Fatigue Caps. On page 6 I've put together a little more information about the unbeatable combination of Anti-Fatigue Caps and Endurance Amino. Simply amazing! The others that rank right up there are recovery, the use of the Globus EMS, and what Hammer-sponsored ultrarunners have accomplished.

As you page through this issue, once again you'll see that there are a lot of great articles from a variety of contributors. We hope you enjoy it!

Steve Born

Hammer-fueled ultra runners a-plenty!

As Angela and I were compiling all of the articles and race results in this issue, we realized that we had a lot of great results from our ultra running clients, more than ever before. These are some amazing athletes with quite awesome results, so in addition to our "Spotlight" athlete for this issue, Ray Sanchez, we wanted to devote an entire section detailing the accomplishments of these remarkable athletes. You'll find that article on page 36 but here's a little teaser of just one of our amazing ultra runners and the success that he's having out on the course.



Jay Smithberger - Umstead 100, 4th place, 15:22

"Just wanted to give you some feedback on my experience with your product. I've had great success using your fuels and electrolytes during my ultra running events for the more than three years. Prior to this, I frequently struggled with intestinal problems and dehydration.

Most recently, I was able to complete the Umstead 100-mile race in 15:22 fueled exclusively by Hammer products. Twelve servings of Perpetuem, two servings of Sustained Energy, four Hammer Gels, and a bunch of Endurolytes helped me to a world-class time, 4th place finish, and a PR by over 2 1/2 hours!

Thanks Hammer and please keep doing what you're doing. Your products are the best out there.

I'll keep spreading the word for you . . ."

Two-a-days the easy way thanks to the Globus!

For many of us, the Globus has been a god-send in terms of getting in a super thorough muscle-stimulating workout when the weather outside doesn't allow for "regular" training. Of course, you don't receive any cardiovascular benefits when using the Globus but oh, the workout you're providing to your muscles is flat-out awesome . . . you really have to try it to understand just how much your muscles are being worked.

Of course, when the weather allows for longer-duration workouts, the Active Recovery feature of the Globus is, as I like to put it, "worth the price of admission." Rarely is there a day when I've done a medium-to-long workout that I don't hook up the Globus for at least one Active Recovery session. It has undeniably helped my legs recover so much quicker. Again, if you've never experienced what this better-than-a-massage program feels like you're really missing out. It feels awesome and it really does help to accelerate recovery.

One of the things that I've always been curious about, perhaps you have as well, is how to get the most bang for your buck training-wise with the least amount of time and effort. Two-a-days are frequently done by endurance athletes but they can be draining on your body as well as your time. I started thinking that I could perhaps augment my "regular/traditional" workouts with a strength or endurance session on the Globus. I consulted with Globus expert, Jim Bruskewitz, who confirmed that yes, one can benefit greatly from a "traditional + Globus" workout on occasion. As to when it would be best to incorporate the Globus into one's workout routine—before or after the traditional workout

session—here's what Jim told me: Regarding the timing of the Globus and traditional workout on the same day, in general I would do the traditional training first followed by the Globus work. The reason for this is that the Globus work is supplemental to the traditional workout. Any of the Globus workouts, not including the warm ups or the recovery programs, will take something out of an individual. In order to keep the capacity to absorb a workload at its highest, the Globus workout done post-traditional workout will best protect that training load absorption capacity. If someone had goals of training while fatigued, then preceding the traditional workout with Globus work would be appropriate. Most don't want to adapt to performing while tired, but rather while

recovered and race ready. For the ultra-endurance athlete, a good part of their performance is accomplished while fatigued and operating at less than full capacity. I could see some traditional long workouts preceded by Globus workouts for these individuals.

As you can see, depending on what you want to achieve, you can use the Globus either prior to your traditional workout or afterwards, though most athletes who have done two-a-days will do the traditional workout first, followed by a Globus session afterwards (and

of course with a Globus Active Recovery session after everything has been completed). If you're doing an endurance-specific workout, you might want to follow that up with one of the strength programs offered on the Globus Premium Sport and Premium Sport+ models, the one you use determined by where you currently are in your training program, as well as what your goals are:

Maximum Strength – After a warm up period, this program consists of maximum muscular force via the

stimulation of as many fibers as possible. It is intensive training for the purpose of building pure strength and muscle mass, as is useful in the first stages of training to accustom muscles to stress.

Explosive Strength – After a warm up, this program is designed to stimulate the greatest number of muscle fibers in the shortest time possible. It is suggested to incorporate this program after having used the Maximum Strength program, which prepares the muscle for explosive strength.

Resistance – This program consists of a warm up period followed by a period of long contractions alternating with brief rest periods. The purpose of this program is to exert high strength for an extended time and to delay muscle fatigue. This program is recommended for those who practice sports requiring an intense muscular effort for prolonged periods of time.

So if you're looking for a way to really increase your workout quantity and quality in as little amount of time as possible, without putting the kind of strain on your body that a traditional "two-a-day" workout may very well do, doing a traditional + Globus workout is something definitely worth considering.



Jim Bruskewitz helps an athlete out with the Globus. To read Jim's article on E-Stim Power Pump, turn to page 24.

Anti-Fatigue Caps + Endurance Amino = Unbeatable endurance-enhancing combination



I've often wondered if there could be a product that would complement Anti-Fatigue Caps, something that would add to its benefits of extending endurance without replicating any of the nutrients already in the product. Well, when we introduced Endurance Amino last year—and especially after using it myself and receiving such positive feedback from athletes—I knew that we had found an amazingly effective endurance-enhancing combination. Here's why:

By taking Endurance Amino prior to and hourly during prolonged bouts of exercise, you provide the body with the primary “used-in-the-energy-cycle” amino acids (the BCAA's – l-leucine, l-isoleucine, and l-valine). The BCAA's in Endurance Amino, along with the BCAA's that naturally occur in the soy protein component in Sustained Energy and Perpetuem, help prevent the muscle tissue from being broken down to satisfy the 5% - 15% of the body's energy requirements during extended exercise. 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.

By taking Anti-Fatigue Caps prior to and hourly during prolonged bouts of exercise, 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.

The result: A uniquely powerful “one-two punch” to help prevent fatigue and extend endurance! Many Hammer athletes are already enjoying the benefits of this combination in their longer-duration workouts and races, so if you've yet to give it a try, now is the perfect time to do so.

"Since we are on the topic of Endurance Amino, just wanted to mention how well Endurance Amino and AF Caps (Anti-Fatigue Caps) worked for me recently. At the Leadville 100 Trail Run a few weeks ago, I was taking 2 Endurance Amino and 2 AF Caps per hour. Although I struggled big time with the high altitude (the race is above 10,000' and includes a double crossing of 12,600' Hope Pass) my legs felt great. This flatlander was just able to finish in 29:51. The day after the race I was able to go up and down stairs unassisted. I totally credit the AF Caps. The Endurance Amino really kept me focused. I was never sleepy despite being up for over 36 hours straight.

I was able to keep my mind on the race throughout. These two supplements are my race day secrets."

-Geoff B.



Make recovery between workouts a priority!

I admit that I'm pretty zealous about this particular aspect of fueling because I think it plays such a crucial role, not only in obtaining greater levels of fitness, but also in regards to maintaining ever-increasing immune system strength.

My position on this topic may sound a bit clichéd, but I think it's appropriate: “How well you recover today greatly determines how you'll perform tomorrow.” The basis for that statement is something that I think we've all heard many times – “You don't get stronger solely from what you do in your workouts but just as much if not more so in the time period IN BETWEEN your workouts.”

Bottom line is that if you do little-to-nothing recovery-wise after your workouts, you won't get the full value out of all the time and energy you put into them. Instead, you may end up going in a negative direction instead of a positive one. Why? Because when you don't spend a little time to “refill the tank” with high quality carbohydrates and protein—be it from food or fuel (Recoverite)—and when you don't provide the body with



nutrient support (primarily antioxidants), you (A) Deny your body the opportunity to store higher amounts of glycogen, (B) You don't give your muscles the amino acids it needs for reparation purposes, and (C) You ignore your immune system's nutrient needs

If you go down that road you can't possibly expect to enjoy improved athletic performance. So while there are many factors that go into determining athletic success, strong emphasis must be placed on recovery between workouts and races. It is such an easy way to improve your athletic performance, as well as your overall health. Make it a priority because you will see noticeably positive improvements very quickly. If you aren't currently doing so, now is the time to get into the habit of consistently replenishing the body with high quality food/fuel, fluids, and other nutrients, primarily antioxidants.

Two articles, both available on the Hammer Nutrition website, will provide you with some easy-to-follow guidelines and recommendations:

- Recovery - A Crucial Component for Athletic Success
- Epic Workout/Race Supplement Suggestions



LETTERS

I was very pleased and interested to read the Sugar Rebuttal article in the Endurance News.

I am a road cyclist and hypoglycemic and I can tell you in all the years I have been using them, I have NEVER had any blood sugar issues or stomach distress from ANY Hammer products. I have tried many (Cytomax, Accelerade) and have had blood sugar spikes and stomach distress from these other products. Bravo on your products and the smart article.

Debra Buchanan
Owner, Bicycle John's
Lancaster, CA

I just wanted to let you know how great I think Hammer Nutrition is! Today I experienced two amazing things concerning Hammer.

First, this morning I was mixing up some Perpetuem. I have just been becoming educated about all the evils of GMO soy and in just how many products it is in. As I was looking at the list of ingredients while I was scooping out the Perpetuem I noticed the soy in the list and I started feeling disappointed about having this huge container of it and what would I replace it with in the future. Then I glanced at another part of the info panel and noticed, with great relief and joy, that Hammer uses non-GMO soy!!! Score +1

Second, I just received the latest issue of Endurance News, the second issue for me, and I noticed that it smelled bad, just like the previous issue. Imagine my surprise, and again joy, when I saw

your response to another readers' concern about the smell. You guys are right on top of it, wasting no time listening to your customers and taking care of things!!
Score+2

And really, you get the winning score for products that work and taste good. I've been experimenting with Hammer products for one season now and you have another faithful customer on your list!!

Sincerely,
Annie Bilotta

I am really happy to see articles about fueling and training for motocross [in Endurance News].

Our family has raced motocross for ten years and have used Hammer Gel for pre-race energy boosts. I have two boys who not only race 15- to 20-minute races, but also love two-hour endurance races. My older son took up running four years ago when he joined his Middle School Cross Country team. Since then we have used several other items and love everything we have tried. I have begun to run with them and have completed two half marathons in the last year, with no prior running experience. Hammer products have definitely made a difference. When I first started taking the products, I didn't think they helped. That all changed when I stopped taking them, felt awful, and didn't have a good training run. We now take Endurolytes, HEED, Hammer Gel, Anti-Fatigue Caps, and Recoverite with us no matter if we are running or riding. Both my boys should qualify for National Motocross Associations Amateur Nationals in July. Hopefully I can

report back in August with good results!

Thanks!
Susan Ellis

Endurance News -- please at least have some news in it. I understand your position about fair balance and I am not referring to that.

Three articles prompted me to write:

Vegan Diet - WADA. This was total speculation based on nothing; no new statement from WADA, not even a comment from study author Prof. Campbell, or even a hypothetical. The premise of this piece was to totally cobble together disparate facts and take a "reducto al absurdum" approach. "A vegan diet could be banned by the WADA..." Taking this same argument, and your selective use of quotes, so could training.

Stevia - again, nothing new or newsworthy, old small studies, Appleton ranting about corporate America and the conspiracy with the FDA and being "cautiously optimistic about the eventual release..." This was even less useful than usual from her. The only thing this did was give Ms. Appleton a chance to reference her other publications again. Yeah, we get the sugar point.

And lastly, the Legislative Alert:

I agree we need to be concerned and I wanted to learn more and why, but in reading your brief article I was treated to the hyperbole

from William Faloon, someone we don't know and comments that added nothing but fear to our knowledge of the issue. Why not have a comment from Steve or Brian, someone we know and trust and who we can understand where they are coming from? You totally punted the chance to educate your readers on an important issue. You really disappointed me with this one.

As you can see, I am a dedicated reader and supporter of Hammer products, but this issue was the weakest in memory. You can do better to keep us informed.

Sincerely,
Mike Gray

I wanted to say that I appreciate the encouragement in Bill Nicolai's article in the March 2010 issue of Endurance News. While I do not race, he did encourage me to have the same attitude about living an active life as one grows older. Chondromalacia in both knees has forced me to "back up" as Chuck Yeager put it, but cycling has enabled me not to "give up". I am most content when outside and have learned to "do the best thing" so I can enjoy the active outdoor life. I agree with Bill to "live until I die".

Hammer on!
Cathy Balan

Do you have something that you'd like to say?

Send your letter to
letters@hammernutrition.com

Anti-Fatigue Caps

BY STEVE BORN

It's really no surprise that this product remains one of my favorites in the Hammer Nutrition supplement line. I mean, I've been using it for a long, long time, and I had a hand in its development. Honestly, if I had a nickel for every time this humble, yet oh-so-potent product has come to the rescue during my long workouts, races, and record attempts . . . but I digress.

A bit of early history

Several years ago, as the desire to improve my athletic performance naturally via the use of nutritional supplements intrigued me more and more, I came upon a section in a book by Dr. Michael Colgan that discussed ammonia and its detrimental effects on performance. Dr. Colgan wrote:

A second inhibitor of exercise, happening simultaneously with the accumulation of acidity, is accumulation of ammonia. All anaerobic and endurance exercise produces oodles of the stuff. Bad news! Ammonia is toxic to all cells, reduces the formation of glycogen, and inhibits the energy cycle. It has devastating effects on brain function. We still don't know how much it contributes to fatigue, but we do know that the higher your blood ammonia, the poorer your performance. So the second thing that a successful ergogenic supplement has to do is reduce ammonia accumulation.

(Colgan, Michael. Optimum Sports Nutrition. New York: Advanced Research Press, 1993, pp. 282-3)

Well, Dr. Colgan's words were all I needed to begin the investigation to determine which nutrients could aid in the removal of performance-robbing

ammonia. I only had to read a bit further to get some answers. Later in his book, Dr. Colgan discussed the tremendous losses of glutamine during exercise and why it wasn't the best idea to replenish these losses with supplemental glutamine. Instead, he suggested a nutrient called OKG (ornithine alpha-ketoglutarate):

... glutamine is not used with catabolic patients because it adds to the ammonia burden. To overcome this problem, researchers in France developed alpha-ketoglutarate, which has the same carbon skeleton as glutamine, that is, provides a substrate for glutamine, but contains virtually no ammonia. Far from adding to the ammonia burden, alpha-ketoglutarate acts in the body as an ammonia scavenger. Ornithine also acts as an ammonia scavenger. The combination of the two is a potent way to reduce your ammonia burden. *(pp.377-78)*

I immediately began taking OKG supplements in my longer workouts and races and I really could see a difference in regards to less fatigue. As a result, I wondered if there were other ammonia-scavenging nutrients that I could consider. After quite a bit of investigation, I located two more likely substances, the amino acids aspartic acid and citrulline, in a book by James Balch, M.D. Balch had this to say about these two amino acids:

Because aspartic acid increases stamina, it is good for fatigue and plays a vital role in metabolism. Chronic fatigue may result from low levels of aspartic acid, because this leads to lower cellular energy. It is good for athletes, and helps to protect

the liver by aiding in the removal of excess ammonia. Citrulline promotes energy, stimulates the immune system...and detoxifies ammonia.

(Balch, James F. Prescription for Nutritional Healing. Garden City Park, NY: Avery Publishing Group, 1997, pp. 36-37)

Bingo! Ammonia scavenging nutrients #2 and #3 discovered! Now all I had to do was find a source to buy them from (which I eventually did) and assemble, in my own kitchen, ammonia-fighting packets to take during my events. And that's just what I did for many years during my ultra cycling career.

Fast-forward a few years

Now, the original Anti-Fatigue Caps product was pretty darn effective, though it contained only the aspartic acid component (in the form of potassium/magnesium aspartate). After discussing my successful, long-term usage of both OKG and citrulline with company owner, Brian Frank, and Dr. Bill Misner, the now-retired head of R & D at Hammer Nutrition, and how effective it was for me and several other riders that I turned my "secret potion" on to, we decided to add OKG and citrulline (a.k.a. l-citrulline) to the existing Anti-Fatigue Caps formula. I'm very thankful that we did and that it's an all-in-one formula, because it sure makes things a lot easier than taking the three different components separately. Brian and Dr. Bill took the product formula one step further by adding the patented Enzyme Enhancement System™ blend of digestive enzymes to ensure maximal absorption. Needless to say, it's an amazing ammonia-scavenging product; there's nothing like it that I know of in the supplement industry, and here are the reasons why...

A major enemy of endurance athletes is the accumulation of excess ammonia, which undeniably and significantly compromises athletic performance. Your body produces ammonia during exercise as a natural by-product of protein metabolism. As mentioned by Dr. Colgan earlier, it doesn't matter what type of exercise you do, aerobic or anaerobic, you will still produce ammonia; it's unavoidable. Problems

- continued on page 10

Reduce ammonia, massively increase endurance!

The Anti-Fatigue Caps Formula

Potassium/Magnesium Aspartate – I think that what Dr. Balch says about aspartic acid is about as good as it gets regarding the benefits of this amino acid: “Because aspartic acid increases stamina, it is good for fatigue and plays a vital role in metabolism. It is good for athletes and helps to protect the liver by aiding in the removal of excess ammonia.”

Studies (Agersborg and Shaw 1962, Hicks 1964, Gaby 1982) have shown that a potassium + magnesium + aspartic acid combination provides substantial benefits in the prevention of fatigue. Aspartic acid also combines with other amino acids to form molecules that absorb toxins and remove them from the bloodstream, aids the function of RNA and DNA, and helps to protect the liver. Additionally, the potassium/magnesium aspartate compound increases production of a key substrate, oxaloacetate, which is involved in energy production.

L-Citrulline (a.k.a. Citrulline) – Citrulline is an amino acid that is found in plant foods such as onions, garlic, and watermelon. Citrulline detoxifies ammonia and, like aspartic acid, is used in the treatment of fatigue. It promotes energy and stimulates the immune system. Additionally, citrulline works with the amino acid arginine (which is in rich supply in the soy protein used in Sustained Energy and Perpetuem), to aid in the production adequate amounts of nitric oxide in the body. Nitric oxide promotes the healthy flow of blood and supports cardiovascular system health.

OKG - Both ornithine and alpha-ketoglutarate (OKG) provide a readily-available, non-ammonia-producing source of glutamine in the body. Glutamine is depleted at high rates during exercise but cannot be replaced with regular glutamine as it creates excess ammonia on its own. OKG increases the amount of glutamine in the muscle and also helps prevent muscle catabolism. Repeating Dr. Colgan’s earlier quote: “Both ornithine and alpha-ketoglutarate act in the body as an ammonia scavenger.”

Enzyme Enhancement System™ (EES) – This proprietary blend of protease and amylase enzymes help maximize nutrient absorption.

Now, if all Anti-Fatigue Caps did was aid in the removal of excess ammonia it’d be completely worth it. However, these nutrients do more than that and provide these additional benefits:

- More consistent energy from the conversion and increased production of a key substrate, oxaloacetate
- Support in the prevention of muscle tissue catabolism from effective, non-ammonia producing glutamine replenishment
- Additional support for the prevention of cramping, from the aspartate component being chelated to magnesium and potassium

What athletes are saying about Anti-Fatigue Caps

"I have always had problems with cramps in my legs on long rides. I just finished my first endurance mountain bike ride with nothing but Hammer products, and a couple of slices of white bread and honey. I used four 2-hour bottles of Perpetuem, 3 Endurolytes per hour, 1 Anti-Fatigue per hour, and half a flask of Hammer Gel for energy boost.

65 miles in 8 hours and 25 minutes of sweet single track, fire roads and a few rock gardens. I still felt strong at the end! THANK YOU HAMMER!"
- Bruce A.

"Since I have a complicated case of Lyme disease, I’m often very tired. I wanted to ride recently but was feeling blah and too exhausted. Tried some Anti-Fatigue Caps and within an hour, I was not only rippin’ but beat a guy up a climb who, too, had on his Hammer jersey :). THANKS to the nutrition, I was Hammerin’!"
- Moriah C.

SUGGESTED USAGE

Take 2-4 capsules one hour prior to workouts or races and 1 capsule per hour during workouts or races.

Supplement Facts	
Serving Size 1 Capsule Servings Per Container 90	
Amount Per Serving	%DV
Potassium Magnesium Aspartate	250mg 1
L-Citrulline	100mg 1
OKG (Ornithine alpha-ketoglutarate)	140mg 1
Enzyme Enhancement System™	10mg 1
EES - A proprietary blend of protease and amylase	

* Percent Daily Values based on a 3,000 calorie diet.
† Daily Value not established.

OTHER INGREDIENTS: Stabilized Rice Bran, Vegetable Capsules (plant cellulose and water)



truly arise during longer-distance efforts (approximately 3-4 hours and beyond), which is when ammonia accumulates in the blood and then ends up in muscle tissue. Repeating Dr. Colgan's earlier statement: "Ammonia is toxic to all cells, reduces the formation of glycogen, and inhibits the energy cycle." One study examined the changes in blood ammonia levels in humans during exercise and determined that the higher the blood ammonia, the poorer performance will be.

One way to help prevent excess ammonia accumulation is to use Perpetuem or Sustained Energy as your primary fuel during workouts and races that exceed two or three hours. These supply an adequate amount of protein to help prevent the "cannibalization" of your lean muscle tissue, that is, when your body literally feeds upon itself, metabolizing the protein from lean muscle tissue to satisfy energy requirements. This complicated "amino acids-to-glucose" process produces huge amounts of ammonia as a byproduct, which again, is a primary culprit in fatigue. So the first step to preventing fatigue is to prevent muscle cannibalization by using a fuel with the right amount of the right (non-ammonia producing) protein. Use Perpetuem or Sustained Energy and you've got that covered.

During your longer workouts and races, it's an extremely wise strategy to go beyond that first line of defense and provide your system with additional ammonia-removal support. That's precisely where Anti-Fatigue Caps comes in. It's a one-of-a-kind product combining a potent arsenal of three known ammonia-scavenging nutrients – aspartate (aspartic acid), l-citrulline, and OKG. Whether you're training or racing, if you're going long, Anti-Fatigue Caps is a "must have" supplement for you. In fact, many athletes report that the longer they go, the better Anti-Fatigue Caps work!

Summary

Anti-Fatigue Caps may not be the premier supplement in the Hammer Nutrition line (I'd give the nod to Premium Insurance Caps, Race Caps Supreme, and Mito Caps there) but oh, does it ever work well under specific conditions and for certain applications. It's been a long-time "secret weapon" of mine and it's definitely a product that you should seriously consider, too. Of all the supplements in the Hammer Nutrition product line, Anti-Fatigue Caps may very well be the one that our clients talk about the least with their friends or competitors. Why? Because it works so well it's almost like having an

unfair advantage . . . who wants to give away an edge like that? Additionally, I have found—as have many Hammer Nutrition athletes—that pre-and-during-exercise doses of Anti-Fatigue Caps and Endurance Amino makes for an unbeatable endurance-enhancing combination.

You don't need to take Anti-Fatigue Caps daily, though many of our staff members—as well as a number of athletes—do take it on a regular basis (especially after lunch) to help provide energy but without any unwanted Central Nervous System stimulation. That said, Anti-Fatigue Caps' primary use is prior to and during prolonged bouts of exercise, such as a long training session, an ultra distance running event, a half or full iron-distance triathlon, or a century or double century ride. It really is a product that works amazingly well and the beneficial effects are significant and very noticeable. If you're not currently using this product on any/all workouts and races that are in the three-hour-and-beyond range, you're really missing out on a definite endurance-enhancing ally. So join the ever-increasing fans of Anti-Fatigue Caps and enjoy all of the benefits that it can provide. **HN**



INCREASE ENDURANCE!

Thoroughly tested over several years in the most extreme athletic endurance events, Anti-Fatigue Caps helps remove fatigue-causing, performance-robbing ammonia.

SKU Price
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Hot Tip

Tired of lugging a big, bulky container of Hammer products on short trips or to races in your duffle bag? Here's one of my travel secrets: Reuse old Hammer Gel bottles and fill them with your favorite Hammer powder product. Each bottle holds 12 scoops of powder and the wide mouth opening is perfect for filling water bottles without mess. Just label the bottle and put tick marks along the side to let you know how much you are using!

Leslie Handy
via Facebook



Contributors in this issue

Jim Bruskewitz

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 left teaching at UW last year to study and teach EMS training.

Shane Eversfield

Shane Eversfield, Total Immersion Master Coach and author of *Zendurance*, is currently producing a T'ai Chi DVD and a "vook" (e-book with embedded video) on triathlon cycling technique. Both will be distributed through Total Immersion. Shane@totalimmersion.net

Randy Profeta

An avid cyclist, Randy started racing in his mid-40s. He competed in his first 24-hour solo mountain bike race on his 50th birthday. His effort was good enough to qualify for the 24-Hour World Solo Championships the following year where he placed 1st in his class. He has raced in every World Solo Championship since 2005, placing sixth, third, second, and first once again in 2009.

Suzy Degazon

Suzy is an Ultra Distance Triathlete, with over 350 events all over the world. She is currently the only woman in the world to compete in 12 Ultraman Hawaii World Championships and she is a die hard Hammer Nutrition athlete! www.suzydegazon.com

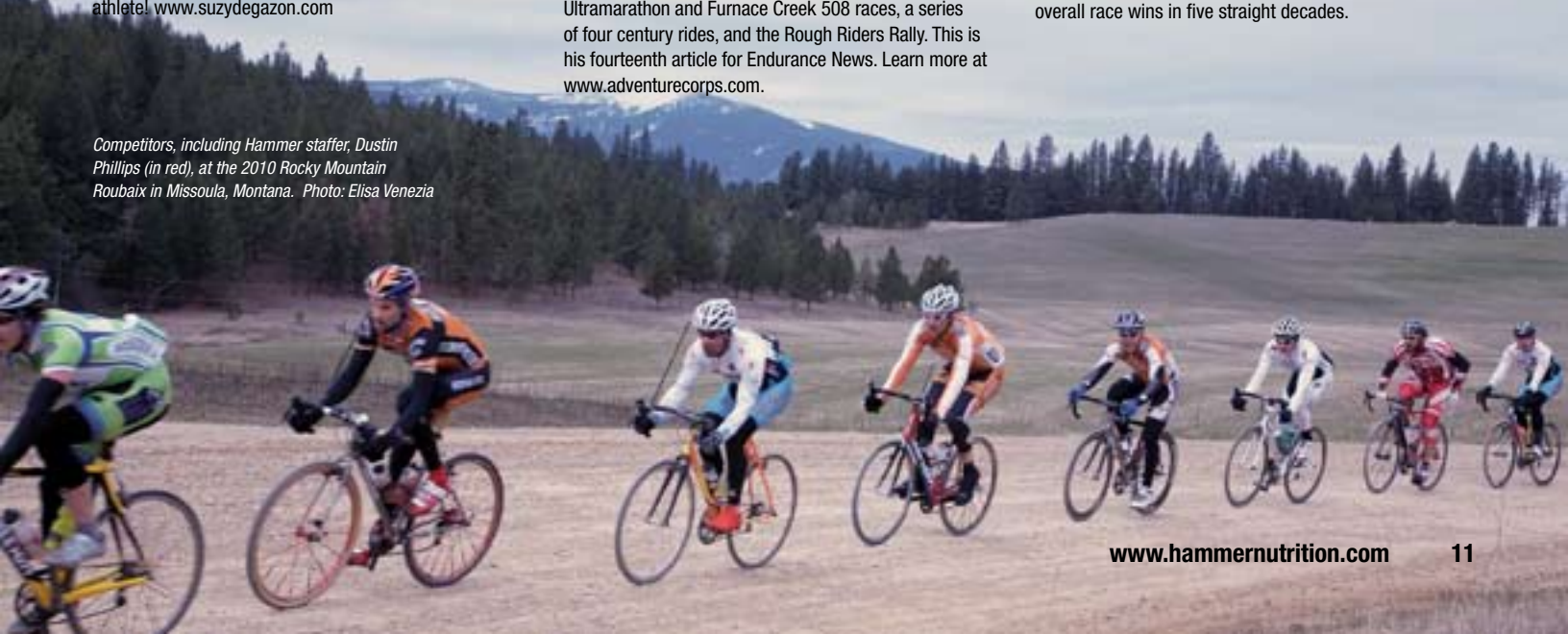
Chris Kostman

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 the Badwater Ultramarathon and Furnace Creek 508 races, a series of four century rides, and the Rough Riders Rally. This is his fourteenth article for *Endurance News*. Learn more at www.adventurecorps.com.

Tony Schiller

Tony Schiller is an old-school Hammer customer, using the products since the late '80s to achieve many race wins. By adding one more overall race win somewhere in 2010, he'll join a rare list of people who have recorded overall race wins in five straight decades.

Competitors, including Hammer staffer, Dustin Phillips (in red), at the 2010 Rocky Mountain Roubaix in Missoula, Montana. Photo: Elisa Venezia





Breaking The Sugar Addiction : 16 Tips

BY JAMIE JEFFERSON

It seems as though added sugar is in everything these days, from ketchup to salsa to soup. It's everywhere, I suppose, because we have come to expect it to be.

And it's not just the white stuff we need to worry about. "Refined carbohydrates," such as white bread and white flour products, produce the same reaction in our bodies.

Researchers have linked sugar consumption to everything from cavities to wrinkly skin, as well as wide range of much more serious health problems. Some research has been cited that says sugar has not been proven to be a direct cause to these health problems and may not even be directly linked to them, but when you consider that added sugar is basically non-nutritional calories, the lack of nutrition and obesity can cause health problems in themselves.

Sugar, some researchers say, can lead to the damage of healthy cells, and can lessen the effectiveness of white blood cells, leading to a weakening of the immune system. Too much sugar means lots of empty calories, too, which can lead to obesity. As any parent knows, when you fill up on sugar, you simply aren't hungry for nutritious meals. And sugar can make you hyperactive and irritable, too, as it knocks your body out of whack.

When you eat sugar, your blood sugar spikes. So your body secretes insulin, which sends your blood sugar crashing. The result? Irritability and fatigue. Plus, you're hungry again and

probably craving another hit of sugar, and so the cycle repeats itself anew.

One of the nicest things you can do for your body (and your mood) is to reduce your intake of added sugars and refined carbohydrates.

What is the Daily Recommended Sugar Intake?

The World Health Organization recommends reducing your intake of added sugars to less than 10 percent of your total caloric intake. That means, if you eat 2,000 calories, you should eat less than 12 teaspoons of sugar each day. The US Department of Agriculture also recommends limiting your consumption of added sugar to between 6 and 12 teaspoons of sugar each day, depending on your daily average caloric intake. (Six teaspoons a day for people who eat 1,600 calories; 12 teaspoons if you eat 2,200 calories each day.) Keep in mind that a single 12-ounce soft drink contains 10 teaspoons of sugar.

To find out how much sugar is in some of the items in your cupboards, look for Sugars (measured in grams) on the Nutrition Label. Then divide the number of grams by 4 to get the number of teaspoons. So, 12 grams of sugar is 3 teaspoons of sugar. Sixteen grams of sugar is 4 teaspoons. **HN**

Read Jamie's 16 helpful ways to break your sugar addiction on the following pages.

16 Tips To Break Your Sugar Addiction

So how do you start to reduce your sugar intake? Here are some tips . . .

1. Try decreasing your intake of added sugar gradually.

It can be difficult to suddenly cut all added sugar and refined carbohydrates. Try taking a week-by-week approach. One week, add less sugar to your morning coffee. Next week, replace your afternoon soda with bottled water. The following week, replace white bread with a whole grain alternative. Before long, you will find that the foods (and drinks) you used to love now taste sickeningly sweet. And you will likely find it easier to keep your moods on an even keel, too.



2. Keep notes on your sugar intake in your journal or Daytimer.

How does decreasing your sugar levels impact your energy levels? Your mood during the day? Your ability to fall asleep at night? When do sugar cravings hit? It might be helpful to start with a Sugar Fast for a day or two. See how one day without added sugars affects you.

3. Make easy substitutions. Buy brown rice instead of white rice, for example. Brown rice has a nice, nutty flavor, and takes just a bit longer to cook. The next time you go to the store, experiment with all kinds of whole grain alternatives. You might find some new family favorites.

4. Keep healthy snacks readily available, and rely on a bit of protein in your snacks to keep your energy levels high. Keep a small bowl of nuts on the table, along with fresh fruits. When you are hungry for a mid afternoon snack, opt for lean protein and complex carbs.

5. Indulge in moderation. If you are a chocoholic, treat yourself to a square of fine chocolate at the end of a long day. When the chocolate is quality, you won't feel the need to have more and you'll be more apt to take your time and savor it. When you do indulge in a sugary snack, keep it small, eat it slowly, and eat a bit of protein, too, to help moderate those blood sugar spikes and dips.

6. Dilute the fruit juice. If you or kids love fruit juice, try diluting it gradually to the point where you are just adding a splash to the top of water.

7. Become a sugar detective. You can start by knowing the alternate names for added sugars, often found in ingredients lists. These include any ingredient that ends in the suffix "-ose," including sucrose, dextrose, fructose, lactose, polydextrose, maltose, and galactose. Also, look for the following: corn syrup, high fructose corn syrup, honey, maple syrup, molasses, carob syrup, turbinado sugar, fruit juice concentrate, brown sugar, cane juice, cane sugar, evaporated cane juice, beet sugar, and sorbitol.

To calculate the number of teaspoons of sugar in an item, remember this simple formula!

Grams divided by 4 = # of teaspoons

8. Avoid replacing added sugar with artificial sweeteners. Your best bet is to gradually reduce your taste for sweet foods, not to replace them with chemical alternatives. On ingredients lists, look for sucralose, saccharin, aspartame, acesulfame K, and neotame.

9. Avoid the center of the supermarket as much as possible.

That's where most of the processed foods are shelved. Instead, shop the perimeter for healthy, raw foods.



- continued on next page

"Thank you all for your awesome customer support and outstanding products." - Erik H.

10. If you have young kids, go to the grocery store by yourself. You may be less apt to come home with sugary treats. Plus, you can take more time to examine the labels for hidden sugar. If your kids are grade school age or older, take them along and enlist their help as Sugar Detectives. Give them each a list of hidden sugars and artificial sweeteners and turn it into a game.



11. Carefully measure how much honey you put in your tea and how much sugar you put in your coffee.

Aim to put in a bit less each day or each week until you are drinking it either unsweetened or with just a bit of sugar.

12. Buy items that are not sweetened, and add sugar only if you find that you need to. This will help you wean off the sugar gradually

13. Steer clear of added sugars for breakfast. When you start your day with a sugar blast and crash, you may find yourself in a vicious cycle for the remainder of the day. Start your day with healthy lean protein and complex carbs. Try natural whole-grain breads and cereals for breakfast, along with a lowfat protein, such as skim milk, cottage cheese, or yogurt.



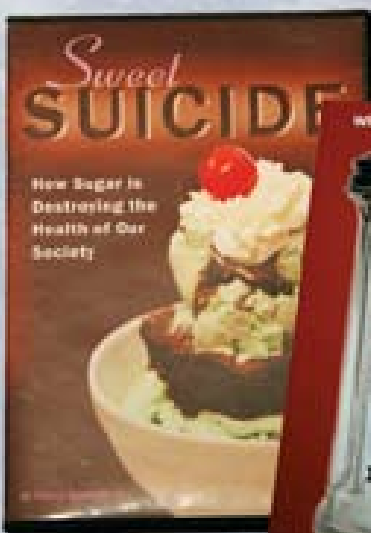
14. If you need to lose weight, consider a diet plan that focuses on reducing sugar intake. The Sugar Busters Diet Plan is probably the most well known. The idea of this diet is to reduce your intake of sugar and high starch carbohydrates, focusing instead on lean protein, low starch veggies, and whole grain carbs, in order to lose weight. Many of the low GI diets out there use this method, as well.

15. Be careful not to make sugar taboo in your household. With children, especially, when you swear off something completely, you run the risk of creating a mystique around the forbidden food. Instead of running a completely sugar free household, make sure your children understand the effects that sugar can have on their bodies and their moods, and then help them understand the beauty of moderation. Encourage them to eat low fat protein and help them develop a taste for healthy whole grain carbs.

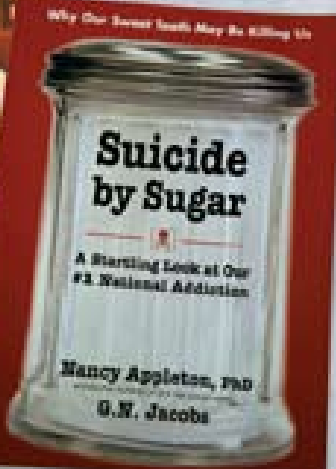
16. Focus on well balanced, nutritious diet, instead of simply swearing off all sugar. Your cravings will slowly and naturally fade once you gain a better understanding of why they are cropping up in the first place.

(Note: This article is for informational purposes only. Please discuss any dietary changes with your doctor.)

Jamie Jefferson is a frequent contributor to Momscape.com, where you can find diet reviews (www.momscape.com/diet-reviews/) and special promotional coupons on the most popular weight loss programs (www.momscape.com/weight-loss-review/)

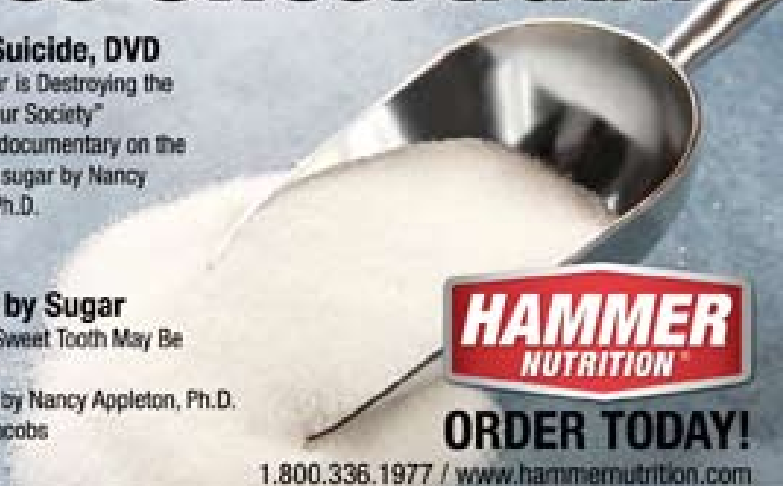


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176 pages by Nancy Appleton, Ph.D. and G.N. Jacobs
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Kitty Myers and Heidi Mooney, friend and fellow Hammer athlete, share a laugh during the Blues Cruise 50K.

"I started taking HEED on a recommendation many years back. I had major gastro issues during marathons and the person said to avoid processed sugar. I knew nothing about nutrition but loved HEED right away. Quite simply, it worked for me. My nutritional needs have developed as you have grown as a company. I now do marathons, ultras, duos and trios and use most of your products for everything. I recommend Hammer to anyone who will listen and have many friends and family using the products. I am also a walking billboard at races. I am an age group winner in some duathlons but pretty much just your average recreational 42 year old.

In sum, I love this company. It is one of the few experiences where I feel like I have a relationship with a company. I am happily dependent on you to be successful in my athletic pursuits. It's nice to trust a company and be able to count on that company. I will continue to order from you guys because I think you are the best at what you do."

Kathryn "Kitty" Myers (#213)



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Single-serving, 6 count box, 32 serving, and 80 serving sizes available!

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FINISH

Photo : Joelle Comesanas

Recovery Drinks

When are they necessary and how much should I use?

BY STEVE BORN



One of the primary purposes of post-workout/race calorie consumption—ideally done within the first 30-60 minutes after the workout is completed (because that's when the glycogen synthase enzyme is most active)—is to replenish glycogen stores, which have become depleted during exercise. It varies for everyone, but in general, glycogen stores are depleted after a time period of 60-90 minutes of exercise.

At the most, about 60 minutes of glycogen is available in untrained, less fit athletes OR in fit athletes who are exercising at a high rate of intensity (at or above 85% VO2 max). Generally speaking, athletes who are at peak fitness levels, and who have been consistent about post-workout carbohydrate/protein replenishment, can make glycogen stores last 80-90 minutes at an aerobic pace.

Because having the maximal amount of glycogen available prior to a workout or race is so important (remember, it's the first fuel your body will use when the training session or race begins), I would err on the side of making sure that I was doing whatever I could to enhance that aspect (and others) of recovery, even after a low-intensity/short-duration workout. For a super easy workout that may just mean eating a piece of fruit or two, or drinking a one-scoop serving of Recoverite. For anything longer than 60 minutes, and for sure 90+ minutes, I'm consuming two or more scoops of Recoverite or high-quality food ASAP after my workouts, even if they are done at a very mellow, relaxed pace. If for no other reason, this practice gets me in the habit of employing this important component of athletic performance more consistently.

Also, post-workout fueling, even if it's not 100% crucial on those shorter-duration/lower-intensity workouts, is good for me mentally – it makes me feel as though I'm doing everything that I can to ensure my body is receiving the nutritional support that it needs. Bottom line is that it certainly can't hurt and it'll most likely yield noticeably positive results. Most of the time I use Recoverite, not just for the complex carbohydrates, whey protein isolate, and glutamine (which I know my body appreciates), but also because it's just so easy to do – mix one or more scoops in water, drink, and I'm done; I've just put the best “finishing touches” on my workouts, even the short-duration/low-intensity ones. Still, whether you use a scoop of Recoverite or high quality food such as fruit, I recommend getting in the habit of “refilling the tank” after all of your workouts, even the shorter, lower intensity ones.

How much Recoverite one should use is based on a couple of factors:

1. The body weight of the athlete
2. The duration and/or intensity of the workout or race
3. When the next opportunity for a "real food/sit-down" meal will be

I'm currently around 198 lbs/90 kg weight-wise and after long rides, unless I know that I'm going to be having a "real food/sit-down" meal within the next 60-90 minutes—and unless I know my stomach is ready to take on solid food after an arduous workout—I'll definitely make a 4-6 scoop bottle of Recoverite, and nurse that for a good hour or so. I remember doing that after the longer rides we did over the Highline Hammer period last year (and definitely the day we did the actual Highline ride), as well as during this January's Hammer Camp, and there's no question in my mind that it benefited me greatly.

In the updated Product Usage Manual we put together these generalized dosage suggestions for Recoverite based on body weight:

> Up to 120 lbs (approx 54.5 kg)

1.5 to 2 scoops

This provides 127.5 - 170 calories

> 120-190 lbs (approx 54.5-86 kg)

2 to 2.5 scoops

This provides 170 - 212.5 calories

> 190+ lbs (86+ kg)

3 or more scoops

Three scoops provides 255 calories

Again though, you want to take into account both the duration/intensity of the ride as well as when you're going to be having a "real food" meal. When you factor those things in, it'll help you determine how much Recoverite you'll want to use.

Recovery is such a crucial component of athletic success that we have an article dedicated to the subject with almost the same exact title. The recently-updated article "Recovery – A crucial component of athletic success" goes into greater detail on this all-important aspect of athletic performance and health, and you'll find it on the Hammer Nutrition website in the "Advanced Knowledge" link in the KNOWLEDGE section.

Remember, how well you recover today greatly determines how you will perform tomorrow! **HN**

"I LOVE the new design of Endurance News!" - Chris K.

Recovery made . . . **DELICIOUS!**

One of our clients and Endurance List members recently suggested a recovery drink combination of both chocolate and strawberry flavors of Recoverite. We've already received some positive comments on this combination, including this one - "Whoever made the suggestion of one scoop of strawberry Recoverite and one scoop of Chocolate Recoverite, THANK YOU. I seriously love it!" While these two flavors of Recoverite are outstanding by themselves, the combination of the two appears to be a real hit. Give it a try after your next workout and let us know what you think!



SKU	MSRP
RRV1	\$2.80
RRV32	\$49.95
BWV1	\$8.50

(= flavor)

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NATE'S CORNER

BY NATE LLERANDI

RECOVERY TRAINING

Invariably, there are athletes who think they are recovering as long as they keep their HR aerobic, regardless of the duration of the workout or what they've done in the previous day(s) workouts.

Saying you are going out for "a recovery ride of 2.5 hours" is oxymoronic.

Recovery is defined as completing a workout that is short enough and easy enough so you don't kick other physiological adaptation processes into gear. Your recovery workouts need to be as intense (in an easy sort of way) as your hard workouts are hard and your long workouts are long.

Recovery workouts should almost always be an hour or less in duration. On the bike, you may be able to stretch that to 90 minutes, but I would limit that to two conditions:

- You're training for ultra-cycling events such as RAAM or the Furnace Creek 508
- You are training for an Ironman.

Outside of this, recovery workouts should remain a maximum of an hour in length.

Now, on to intensity. Simply because you are training aerobically—below 75%—does not indicate that you are recovering. Far from it. You can train strictly aerobically and still trash yourself into overtraining. In my mind, recovery is defined as training that takes place below 70% HR at a minimum; below 65% is even better. You still reap physiological effects in the 50-65% range, so technically you could train as low as 50% on your recovery days and you would not be wasting your time. In fact, depending on how you recover today, dropping your HR this low may be a big boon to your training (if you currently recovery too hard or too long for a given workout).

Also take into account the number of days a week you train. For example, if you are a triathlete and only run three days a week, then your recovery run could be up to an hour so you still achieve adequate volume for the week. Or, you could limit your recovery days to swimming and cycling so that you maximize what you get out of your running. If, however, you are a cyclist biking 5-6 days a week, then you can afford to institute shorter, easier recovery workouts.

But, if you are the type that bikes an "easy three hours" the day after a race, you're kidding yourself if you really think that is a recovery workout. It's not and it never will be. Save the longer durations for your adaptive workouts – the ones that will help you complete RAAM or the bike leg of an Ironman, for example.

Each type of workout—recovery, hard, long—has certain parameters within which it should be completed. Keep your recovery workouts short and easy. This is where the adaptation from your more challenging training days takes place. This is what you might need to do to really reach "the next level" in your training and racing. **HN**

YOUR RECOVERY ARSENAL!



SKU	MSRP
EAL	\$49.95
AAB	\$29.95
SAO	\$35.95



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www.hammernutrition.com

Hi Hammer,

I thought you'd appreciate this picture of our son, Cody, age 7, taken on the Pipeline Trail, enroute to Guaje Ridge in the Jemez Mountains, near Los Alamos, New Mexico this past fall. Cody rode 14 miles that day (!!) and put your gel to good use along the way. Thanks for making such great products for our whole family!

Sincerely,
Rachael and Jason Hundhausen

Way to go, Cody, on a great ride! Rachael, who's hometown is Missoula, Montana, a short 2 1/2 hour drive from us, wrote later saying that Cody was so happy that day to be out riding and to have his own gels in his Camelback. We're glad we got to come along!



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- Rock solid energy
- Made with real fruit and wholesome ingredients
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"I am writing on behalf of my husband who LOVES your Apple-Cinnamon Gel! He is training for his first full marathon this spring and has been using your products during that training process. He says he likes the Apple-Cinnamon flavor because it tastes and feels like apple pie filling which makes eating it a little more appealing. He's tried other brands/flavors, but keeps going back to your Apple-Cinnamon one. Thanks for making such a great product that will help my husband fulfill his goal of running his first full marathon." - Stacy W.

"Lovin' the Apple-Cinnamon gel! So much so, that during my long runs, I can hardly wait for the next 45 minutes to pass so I can gel again. Helps keep me moving down the road!" - Melissa J.

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Pelle Eccellente

The Ultra Hydrating Skin Cream Formula

BY BILL MISNER, Ph.D.

Steve's Note: I have tested/used just about as many skin care products as I have supplements and fuels. It may sound a bit overly hyped, but I can honestly say that I have never found a more amazing product than Pelle Eccellente. The very first time I tried it I felt the ultra-hydrating/moisturizing effects almost instantaneously. And most amazingly, these beneficial effects lasted a long, long time – far longer than any other lotion I had used to that point. Needless to say, I am completely hooked on Pelle Eccellente and, if at all possible, I won't use any other lotion . . . that's how impressed I am with this product; it is absolutely worth every penny.



In this article by Dr Bill, he provides detailed information about each of the ingredients that make up this most-unique skin care product. Though much of it is in the "language of science," I think you'll find it fascinating and insightful, and will convince you to give Pelle Eccellente a try. Where names appear, those are in reference to scientific research about that ingredient. Though we have not listed all of the references, they are available upon request.

I know you will be supremely impressed, just as I was when I first tried it and continue to be to this day.



Athletes frequently train in conditions that expose the skin to extreme evaporative-cooling, dehydration followed by rehydration, overheating and cooling down, UV skin-damage from sunlight, environmental virus, bacteria, and fungus infection, all of which with age present drying, inflammation, itching, infections, wrinkling, age spots, cancer growths, and a variety of skin issues. The ingredients formulated in Pelle Eccellente are proposed to resolve these issues with a daily thin application to face, arms, trunk, or legs.

Each ingredient is listed by volume proceeding from greatest to least in the following columns.

OLIVE OIL

Topically applied olive oil is reported to resolve eczema, bruising, healing calluses, and eliminating scalp dandruff. Sun exposure increases the rate of skin wrinkling. Purba reports that a high intake of vegetables, legumes, and olive oil are protective against cutaneous

actinic sun-induced damage; however, diet-associated high intake of meat, dairy, and butter are associated with adverse effects. Olive oil, topically applied after UVB exposure, is shown to effectively reduce UVB-induced murine skin tumors, possibly via its antioxidant effects in reducing DNA damage by reactive oxygen species, and that the effective component may be labile to UVB. It is likely that the active ingredient of olive oil for the prevention of UVB-induced skin cancer is squalene. Furthermore, 8-hydroxy-deoxyguanosine (8-OHdG) formation in mice epidermis was apparently reduced by super virgin olive oil painted immediately after UV radiation, although cyclobutane pyrimidine dimers and (6-4) photoproducts were not reduced by olive oil treatment. Daily topical use of super virgin olive oil after sun bathing may delay and reduce UV-induced skin cancer development in human skin. Animal study (mice) demonstrated the ability of olive oil (applied topically) to prevent skin cancer when applied after exposure to UVB.

ALMOND OIL

Almond Oil applied topically is observed to eliminate both dry skin and dandruff. Ultraviolet (UV) radiation has been implicated in photo-aging and various types of skin carcinomas. Sultana investigated the role of almond oil in reducing the degradative changes induced in skin upon exposure to UV radiation. Upon exposure of mice to UV radiation, it was found that pronounced visible skin changes were seen after 12 weeks of exposure. The results of the biochemical tests, glutathione estimation, and lipid peroxidation showed that almond oil reduced the effect of UV light-induced photo-aging on the skin. Histopathologic studies also indicated a photoprotective effect of almond oil on the skin after UV exposure. Sultana concluded that topical almond oil is capable of preventing the structural damage caused by UV irradiation and it was also found useful in decelerating the photo-aging process.

JOJOBA OIL

Jojoba Oil is a wax (even though named an oil) derived from the seeds of the jojoba plant. This oil is most commonly used topically [though edible]; it surprisingly does not turn rancid after exposure to light or heat. Jojoba oil is readily absorbed by the skin and imparts temporary "velvet" softness. Jojoba oil resembles sebum both chemically and physically, therefore it prevents excess sebum build-up. It is also highly resistant to contamination by detrimental bacteria. Anecdotal reports suggest that topical application of jojoba resolve dry skin, psoriasis, and oily hair. Habashy demonstrated the effectiveness of jojoba favorably for its skin anti-inflammatory property in several experimental animal models. Topical jojoba oil has been suggested as a skin-lubricating agent for the scalp to resolve flaking of skin associated with dandruff. Mowrey acknowledges that by lubricating the scalp with jojoba oil, a reduced skin flaking occurs in dandruff sufferers.

DISTILLED WATER

Pure water in this formula functions to increase fluid content and prevent dry skin. Water with oils penetrates the stratum corneum layer of the skin to increase the amount of water held in this layer of skin.

HOPS (leaf)

What occurs inside skin through oral-dose may also be topically delivered from outside the skin. Yasukawa isolated and identified Humulon, one of the bitters in hops that inhibit arachidonic acid-induced inflammatory edema in mice. Lemay also demonstrated anti-inflammatory effects from hops in oral consumption form to inhibit Cox-2 activity in humans. An oral dose of hops exhibited Cox-2 inhibition over nine-hours-equivalent to ibuprofen (400 mg), but had significant Cox-1 sparing activity relative to ibuprofen. Hops extracts appears to present a safe alternative to ibuprofen for non-prescription anti-inflammation.

SPEARMINT (leaf)

The skin organ protective barrier is exposed to a host of environmental carcinogens. Skin cancer is the result of excess environmental elements that create harmful mutagen cell proliferation. Using water -extract spearmint, Yu inhibited mutagenic activity of one potent carcinogen, [heterocyclic-amine parent compound]. Spearmint is an anti-carcinogenic ingredient.

COMFREY (root & leaf)

Allantoin found in comfrey applied topically is widely reported to reduce the swelling associated with bruises, insect bites, eczema, psoriasis, and heal burns. An ointment (comprised of comfrey leaf combined with beeswax and extra-virgin olive oil) applied topically to the site of psoriasis totally eliminated the symptoms of psoriasis in several psoriasis patients for whom no other treatment has been effective. Topical comfrey is consistently claimed to be useful for the treatment of skin ulcers.

GINGER (root)

Users & manufacturers of skin cream to stimulate blood circulation to the skin proclaim [the effectiveness of] topically applied ginger. Tsukahara demonstrated that ginger inhibits the activity of elastase, which prevents wrinkles. They typically applied an extract of ginger to the skin of rats and mice. The animals received chronic exposure to UVB radiation. Ginger inhibited wrinkle formation induced by chronic UVB exposure. The mechanism the scientists

discovered was that ginger extract inhibited UVB-induced increases in elastase, the enzyme that destroys skin elastin.

MULLEIN (leaf)

Approximately 8 out of 10 people are Herpes Simplex Virus carriers and 25% of these people suffer from Herpes Simplex attacks throughout their lives. The lyophilized infusion from mullein (*Verbascum thapsiforme*) demonstrated antiviral activity in vitro studies against Fowl plague virus, several influenza A strains, influenza B strain, as well as Herpes simplex virus. Mullein is a skin antibiotic with remarkable anti-viral effects to reduce antimicrobial-induced skin irritations.

BRAZILIAN PALM WAX (*Copernicia Prunifera*)

Because of its hypoallergenic, moisturizing, emollient properties, *Copernicia Prunifera* appears as an ingredient in many cosmetic formulas used to thicken lipstick, eyeliner, mascara, eye shadow, foundation, deodorant, various skin care preparations, and sun care preparations. Emollients soften and soothe the skin by reducing dryness and scaling of the skin. The term "moisturizer" simply means it adds moisture.

PURE BEESWAX

Beeswax does a sterling job as a thickening agent, emulsifier, and humectant. Beeswax works synergistically with Brazilian Palm Wax, generating emollient skin soothing softening effects while retaining moisture.

PURE ALOE CONCENTRATE (Gel)

Topical Pure Aloe concentrate acts on skin surfaces as follows:

- Kills *Propionibacterium acnes*, the bacteria that causes acne
- Heals burns
- Heals dry skin, acts as moisturizer
- Inhibits inflammation of the skin
- Inhibits itching
- Prevents infection
- Improves skin appearance by stimulating regeneration of skin cells
- Accelerates the recovery healing process in dermabrasion
- Is a skin-penetrating carrier vehicle

- continued on next page

- Resolves psoriasis
- Accelerates healing of skin ulcers
- Resolves and heals sunburn
- Kills many of the detrimental fungi

SQUALANE OIL

Squalane is a Triterpene Unsaturated Hydrocarbon that is chemically similar to squalene (but is more stable against oxidation) than squalene. Physically, squalane is a colorless, odorless, tasteless, transparent, stable, inert, homogeneous liquid oil. Squalane is an endogenous component of human sebum. Squalane is believed to be the most important protective lipid in the skin. When applied topically it is capable of penetrating the skin, accounting for its use in this topical skin care product.

VITAMIN E OIL

Topical vitamin E has been shown to:

- Resolve acne
- Accelerate burn healing
- Reduce (atopic) eczema
- Resolve/moisturize dry skin
- Treat psoriasis by restoring optimal glutathione peroxidase
- Inhibit and heal scarring
- Prevent and treat seborrheic dermatitis
- Protect and treat skin from sunburn
- Cure onychomycosis (toenail fungus)
- Resolve wrinkles

PEPPERMINT OIL

Topically applied, Peppermint Oil has been shown to:

- Kill herpes simplex viruses
- Applied topically to the forehead and temples, resolves headaches
- Topically applied, resolves the pain associated with neuralgia

CLOVE OIL

Clove Oil (applied topically) is shown to be a remarkable analgesic agent reducing pain. Alqaereer scientifically reported no significant difference between clove and benzocaine regarding patient pain reduction scores.

WINTERGREEN OIL

Wintergreen Oil is a pale yellow or pinkish fluid that is strongly aromatic with a sweet, woody odor (components: methyl salicylate (98%), a-pinene,

myrcene, delta-3-carene, limonene, 3,7-guaiadiene, delta-cadinene) that gives this plant a distinctive "medicinal" smell when bruised. Wintergreen essential oil is obtained by steam distillation of the leaves of the plant following maceration in warm water. Methyl salicylate, the main chemical constituent of the oil, is not present in the plant until formed by enzymatic action from a glycoside within the leaves as they are macerated in warm water. The oil is used topically (diluted) or aromatherapeutically for muscle and joint discomfort, arthritis, cellulite, obesity, edema, poor circulation, headache, heart disease, hypertension, rheumatism, tendinitis, cramps, inflammation, eczema, hair care, psoriasis, gout, ulcers, broken or bruised bones. The high 98% methyl salicylate content in wintergreen oil has been shown to:

- Act as an exfoliant for the skin to improve the visual appearance (thinning of the superficial layer of the skin results in smoother, more radiant skin)
- Remove abnormal skin pigmentation, fine wrinkles, precancerous lesions, and lipofuscin (age spots)

Dermatologists routinely apply salicylic acid in chemical skin peel treatments for rejuvenating skin beauty, to resolve solar keratoses, and to remove warts. Wintergreen's 98% methyl salicylate in Pelle Eccellente does not attain dermatologist-potency, but with chronic use [it] may prevent and reduce the risk of wrinkles, age spots, even precancerous lesions with the added effect that the superficial layer of the skin will appear smoother and more radiant.

CONCLUSION

Pelle Eccellente is formulated to resolve over-exposure to sunlight, wind, cold, low or high humidity, virus-bacteria-fungus infections, drying, inflammation, itching, wrinkling, age spots, cancer or benign growths, and a variety of unwanted skin issues. Daily application of a light, thin layer—massaged into the skin for 1-2 minutes—immediately following bathing will effectively restore moisture and prevent and reverse most skin issues before they appear.

References available upon request. **HN**

"This message will sound like one of those raving product testimonials that no one knows whether to believe or not but I've been struggling for years with dry, cracked skin on my feet from my miles and miles of running, cycling, mountain biking, kayaking, etc. I've tried four other products over the years with minimal effect. In the last couple of weeks I've been applying your Pelle Eccellente daily after showering. It's awesome! My feet haven't looked and felt this good in years. I don't know which of the ingredients is doing the trick, but you've definitely got something right with this one for sure! Thanks!"

PS - Full disclosure: I'm a Hammer-sponsored athlete, but believe me, I wouldn't say a product is worth buying and using if it wasn't worth buying and using."

David Kooi



David Kooi at the 2010 Catalina Marathon. Photo: ASI Photos



ASK DR. BILL

Q: I was wondering about the safety of the comfrey component in Pelle Eccellente. I had read that certain substances in it—I believe they're called Pyrrolizidine Alkaloids—can be toxic to the liver. What are your thoughts?

A: Pyrrolizidine Alkaloids are present in Borage, Comfrey, and Butterbur, and are widespread in the plant kingdom. Excess oral intake of Pyrrolizidine Alkaloids have been associated with liver cancer in animal studies. Comfrey LEAVES contain 0.003%-0.115% Pyrrolizidine Alkaloids, while Comfrey ROOT contains 0.14%-0.4% Pyrrolizidine Alkaloids.

Below is some feedback that we received from a client regarding the information about the comfrey component in Pelle Eccellente

"Thanks so much, Hammer! I should mention two things - my midwife seemed completely comfortable with me applying your cream to my daughter's face (she is six months old and has some eczema that has been uresponsive to any creams except for hydrocortisone, which I ABHOR putting on her little face). Secondly, your Pelle Eccellente has so far been as effective and probably more effective than the hydrocortisone, and I feel much more comfortable using P.E. Please tell Dr. Bill that we are really pleased with the product. My husband, being aware that comfry is, as he put it, "a mondo herb", felt like we should check with you just to be sure. Thanks so much for responding." - Anna Rask

The carcinogenic potential from oral dosing of comfrey requires that it should not be consumed internally; however, topical use has been clearly shown to be beneficial. In fact, most herbalists claim that the carcinogenic potential from an oral dose of comfrey is overstated.

Comfrey amounts to only 2.1% of the total Pelle Eccellente cream. Of that 2.1% comfrey fraction, the maximum Pyrrolizidine Alkaloids skin contact is 0.021% Pyrrolizidine Alkaloid content, which is poorly absorbed at toxicity levels, if at all.

Steve's Note: Other studies regarding topically-applied comfrey can be found at http://www.stockwellfarms.com/comfrey_research_studies.htm

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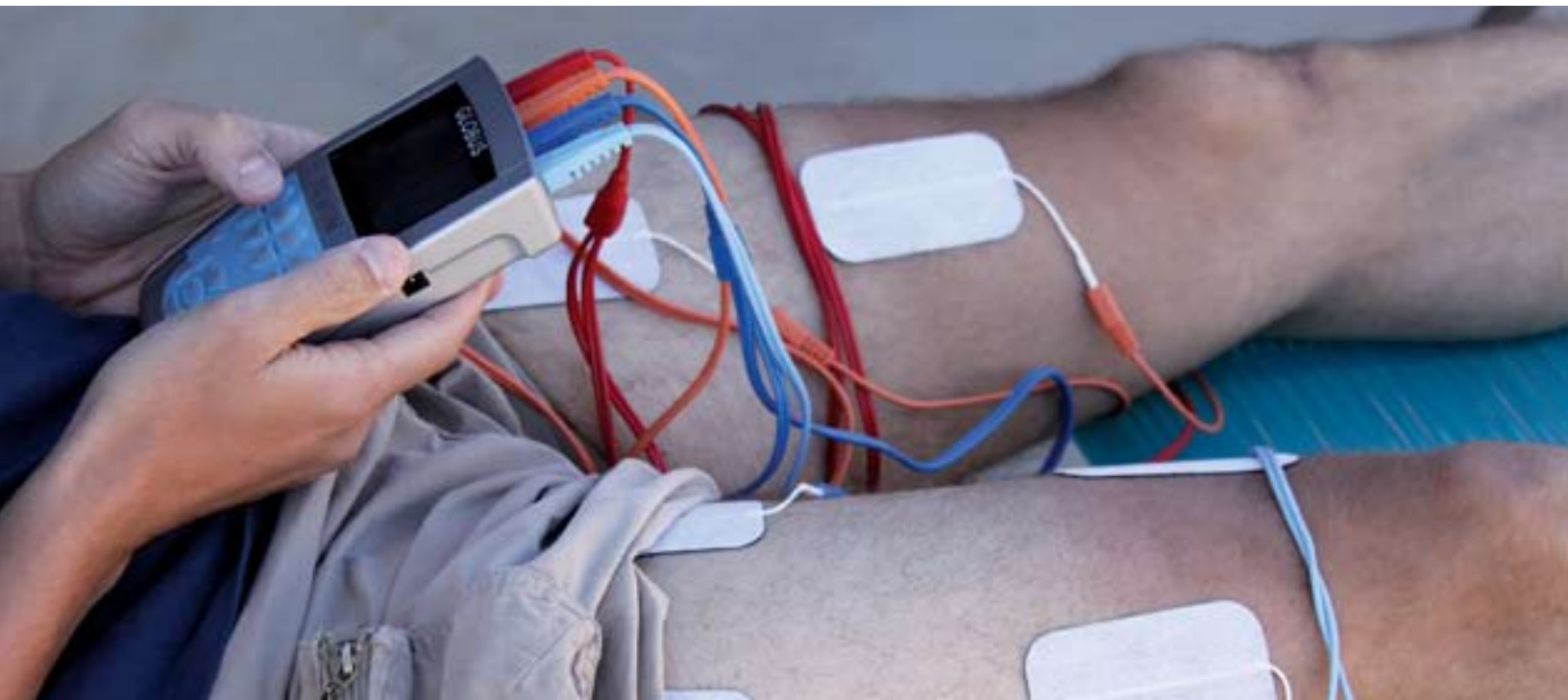
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EMS - Electrical Muscle Stimulation

E-stim Power Pump

BY JIM BRUSKEWITZ

Let's take a practical approach to E-stim training. Those of you that train with E-stim certainly use the active recovery to maintain frequent, high quality training. The Globus offers many strength training programs that can do as much for your training as the active recovery does. These benefits are real and quickly felt. Here's a very basic and powerful approach that I know from personal experience works extremely well.

I chose two prime mover muscle groups for cycling and running for discussion purposes. Other muscle groups could be substituted or added. A muscle group can be trained for strength every 48 hours to allow for recovery. One could strength train daily using this convention if

muscle groups were assigned to alternate training days. The example that I will develop below progresses the load (mA), applies a training stress regularly over an extended period of time, and takes into account that particular strength adaptations are gained in a six to eight week period. (Continuing specific strength training for longer periods of time is inefficient). Other programs that incorporate these characteristics can be successful too. This example is simple and straightforward and it works!

Phase 1 (six weeks of Max Strength)

nota bene: The mA levels in the table are suggested. A progressive load pattern should be followed. The loads (mA) increase in the 5% to 10% range

every four to seven days. After the first 10 to 14 days of strength training, when soreness has subsided, be aggressive when finding a mA level that is tolerable. mA levels for different muscle groups may vary since the degree to which different muscle groups contract at a given mA level is quite often different. Find a mA level by feel as well as trial and error for each muscle group, and progress with the 5% to 10% increase every 4 to 7 days in mind.

(See Phase 1 chart on following page)

What to expect:

- Measureable increase in limb girth
- Increased muscle definition
- Increased power most noticed when hill climbing

Phase 2 (six weeks of Resistive Strength)

nota bene: The mA levels in the table are suggested. A progressive load pattern should be followed.

The loads (mA) cannot continue to increase by 5% to 10% every four to seven days. Since training has been preceded by six weeks of Max Strength training and the period of Delayed Onset Muscle Soreness is over, find a

mA training level that is just tolerable and, by trial and error, proceed with this perceived exertion in mind.

(See Phase 2 chart on this page)

What to expect:

- Continued Increased muscle definition
- General increase in power with endurance

Phase 3 (six weeks of Endurance)

nota bene: The mA levels in the table should be high. This is a relative and individual level.

Adaptation to E-stim training has been achieved. Be aggressive with the settings. Continue to use trial and error with the settings to determine a training load that allows for recovery within 36-48 hours.

(See Phase 3 chart on this page)

What to expect:

- Increased power at aerobic effort levels
- reduced muscle burn when workload increases during long efforts
- lower incidence of "dead legs" from high training loads

One can certainly get fancier with a periodized approach to E-stim strength training. Mixed phases, where one trains for more than one kind of strength within a week block of time, are often used. We'll discuss that sort of thing in this forum in the future. For now, know that a simple straightforward approach will deliver dramatic results. Charge your batteries-your pads are calling. **HN**

Phase 1

6 Weeks of Max Strength - 3 Levels						
	Week 1 & 2	Max Strength 1	Week 3 & 4	Max Strength 2	Week 5 & 6	Max Strength 3
Training	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
mA & Program EMS	20 mA max str 1 quads & calves		20 mA max str 1 quads & calves		20 mA max str 1 quads & calves	
EMS	Active Recovery	Active Recovery	Active Recovery	Active Recovery	Active Recovery	Active Recovery
Notes	Globus active recovery program daily after traditional training. 20 mA to 40mA (max) for active recovery session. There is no protocol on Mondays during this program.					

Phase 2

6 Weeks of Resistive Strength - 3 Levels						
	Week 1 & 2	Res Strength 1	Week 3 & 4	Res Strength 2	Week 5 & 6	Res Strength 3
Training	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
mA & Program EMS	25-30 mA res str quads & calves		25-30 mA res str quads & calves		25-30 mA res str quads & calves	
EMS	Active Recovery	Active Recovery	Active Recovery	Active Recovery	Active Recovery	Active Recovery
Notes	Globus active recovery program daily after traditional training. 20 mA to 40mA (max) for active recovery session. There is a fair amount of individual variation. There is no protocol on Mondays during this program.					

Phase 3

6 Weeks of Endurance - 2 Levels						
	Week 1, 2, & 3	Endurance 1	Week 4, 5, & 6	Endurance 2		
Training	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
mA & Program EMS	high mA Endurance quads & calves		high mA Endurance quads & calves		high mA Endurance quads & calves	
EMS	Active Recovery	Active Recovery	Active Recovery	Active Recovery	Active Recovery	Active Recovery
Notes	Globus active recovery program daily after traditional training. 20 mA to 40mA (max) for active recovery session. There is a fair amount of individual variation. There is no protocol on Mondays during this program.					

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24 Hours In The Old Pueblo

Hammer-fueled teams not only finish side by side . . .

Damian Calvert, Jason Quenzler, Jens Nielsen, Santiago Chavez

24 Hrs. In The Old Pueblo: A full day in the life...

This last weekend we made our way down south to Tucson to race our mountain bikes for 24 hours in the Sonoran desert with 1400 other riders. I traveled with two great friends, Jason Quenzler "Q" and Jens "Jensy" Nielsen. We made the sun and singletrack seeking trip to catch up with our 4th teammate from El Paso, Santiago "Santi" Chavez. We also hooked up with our MountainTop teammates Chris "King Kong" Casey (thanks for the hospitality), Marty "Mariachi" Moriarty, Tim "Revoltion" Bolton, and some of our sponsors: Mike "Miguel" Rosson - owner of The Bicycle Company, Tyson Brown - wrench at TBC (thanks for the race support), and Jason "Kratz?" Katz of Specialized, and the many other friends that we reconnected with down there.

We went into this year's race as one of the favorites since we've podium'd in the last two tries as a 4 man team. There was another good looking team from NM - Café Giuseppe with some of the regular Pro/Cat 1 podium guys stacking that team (McCalla, Brennenman, Prinzivalli, Searles). Kona didn't send their ringers (Trebon, Wicks, or Sneddon) for some reason, and neither of the Schultz bro's (Andy and Sam) showed. Honestly that took a little pressure off but we went into this planning on racing our race and doing what we do well - ride steady and strong, all day and all night long.

Now that the appropriate introductions and the setting has been laid out, here's how it went down. Q has always been a

good all-rounder so he has always been the runner who runs 800m in carbon sole bike shoes to the bikes and then rides the first lap. He has always put us in top 6 on the first lap and this year he put us in 3rd by the time I took the baton for our second lap. With so much off-season behind us coupled with the excitement for a new season, we have to keep our cool and ride the technical course clean or else you hurt instantly when you slam into any one of the 5+ types of cactus that are everywhere out there. It's the most inhospitable vegetation you can imagine - everything grabs and pokes at you - even the trees and probably the hundreds of mice that get road-killed every year.

I was riding strong on my first lap until my rear tire went soft - there goes my shot at fastest lap... A quick blast of CO2 and I was back on course headed for the long climb that finishes the 16 mile lap. On that climb I paid back the debt to my legs back from when I pushed them hard in the wind...and suffered a little more than expected. This is bike racing again - welcome to the suffering!

Lap Time - 58:44 (over a minute off "fastest lap of the race" pace.) + An off-season of preparation and anticipation released!

Surprisingly we're battling these young guys from Waste Management out of Phoenix and they are throwing down some great times (see Lost Boys on the 4 man results). We didn't know any of them and their names weren't recognizable in our limited biking network. Someone said they were all young, under 23, roadies which I never actually confirmed. I did talk

with Steve Cullinan - who was super fast through his first 3 laps, he only confirmed that he was a young roadie from Colorado. So it was quickly turning into them (young and probably still in school) vs. us (old school).

Through the first 6 laps they were in the lead, never more than a minute or two up. We all suspected that dynamite burns hot and then blows up...and old-growth hardwood burns slow and strong throughout the night. We've been in way worse spots than this and we're experienced Pro's with endurance (our average age is 38).

After lap 7 Jens came into camp more fired up than I maybe have ever seen him, he explained how he caught them and put 3 seconds into them. There's the spark that lit our bonfire. Looking back it seems silly how that pivotal moment is but seeing is believing. Santi went out and crushed lap 8 and put a minute into them...the balance had shifted and was leaning in our favor. Q went out and put another 30 seconds into them with a strong lap. I was up next for my first night lap and so was their fastest rider Steve C. Over the last 3 years of racing this course lap 10 usually took 1hr 8mins to 1:11 for the top racers. Determined to better that I rode my lights out and was pacing a sub 1:04 time at all my course checkpoints. Then the legs suffered on the big climb and I was grinding - just trying to keep the pedals turning over. It was only lap 3 and I felt horrible. Competition is a great thing because it brought Steve C. from the Lost Boys up and right past me on the climb - he was riding out of his mind and it helped me dig a little deeper in the suitcase of courage to finish this lap out. He threw down a 1:03...that's uber-fast and where he won my respect...wow. After descending through the visual tracers that you get when you're cracking I went to camp to eat and get back in it.

Digging through the memory banks I reflected on 2007 when John Stevens and I took down the Duo win; and how much more of a challenge racing every other hour was than racing every 4th hour on a four man team is. After reminding myself of the saying "HTF Up!" I was back in that frame of mind to get it done. It's never easy - and in all reality we aren't looking for easy and that's why we race bikes, it's a suffering sport and if you can tough it out you'll feel the elation of a good ride.

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Team Waste Management/Lost Boys

This past weekend, Team Waste Management presented by Hammer Nutrition decided to race the eleventh annual 24 hours of Old Pueblo. Usually the team jumpstarts the season by diving straight into the fast and furious southwest road scene, however this year the self proclaimed "Lost Boys" decided to start our season by doing things a little bit different. So we headed to the desert to shred our mountain bikes in the Old Pueblo.

The weather was spectacular, perfect sunny skies and absolutely gorgeous desert riding conditions. I have to tell you, 24 hour races are a bit of a shock to the system for a couple of roadies. As I stood watching the sun rise Saturday morning I couldn't help but be amazed by the hundreds of motor homes, tents, and bikes strewn about the desert floor.

Twelve noon (when the race starts) was upon us quickly, and of course I (Ben Bradshaw) was the sucker who was chosen to do the first lap, and the ridiculous Le Mans start that it begins with. The start of the race is a hectic affair, and as the gun went off 600 cyclists in carbon soled shoes charged for their bikes. The run was miserable, but as soon as I got on my bike I started to get my wind back. I got in a rhythm and started to pick guys off. The desert course was fast, but definitely required caution, as any overshoot turn would result in a cholla to the backside. My first lap was decent but not spectacular, I came in 6th overall. As I tagged Stevie Cullinan in for our second lap, I knew it was going to be a fast time. I wasn't wrong. Stevie crushed the lap and brought us into the lead with the fastest lap by far.

Lap after lap we slowly began to extend our lead. In between laps we would pound all of our Hammer products to replenish the glycogen we had lost during the laps, which was extremely important in a race as long as this. Our race was looking good as we headed into the early morning hours, but unfortunately luck began to turn against us. At around three in the morning, I began to have . . . issues, and eventually I had to refund a bowl of chicken soup during a lap (should have stuck with the Recoverite). Needless to say my lap time was not quite up to speed after my little pit stop.

Even though food poisoning prematurely ended my race, my teammates rallied to keep us in second throughout the rest of the race. Stevie, Ron Jensen, and Cory Steinbrecher all pulled extra laps to hold on to our podium spot. Looking back it was quite the weekend. I definitely could see us doing another 24 hour race, and perhaps this time our luck will hold out for the win.

A couple people we would like to thank for making our weekend possible- Hammer Nutrition for keeping us fueled in one of the most grueling endurance events in the world, The Bitty Bitty Cycling Team who provided us with food, lodging, and Bitty Fuel, and of course none other than Steve Cullinan and Brian Smith who manage our team and keeps us set in all departments . . . until next time, Ben Bradshaw. **HN**



Stevie Cullinan, Ben Bradshaw, Ron Jensen, Cory Steinbrecher

Santi had that feeling on lap 12 when he caught them and got the lead back for us - he smoked it! 1:05:45 is FAST in the night and he was in a major rhythm - like techno 200 beat/second! Quenzler stepped it up this year also beating his 2009 lap times consistently. On lap 13 the guy he was racing apparently had to take number 2 in the cactus - probably had to sacrifice a glove or two for that mis-step.

Jens doesn't slow down, as he's proven in many 12hr solo race wins. I was riding consistently faster than any previous year so we were definitely on track to win this year. My 4th lap was great and I had recovered from my earlier cracking and threw down a 1:05:01 and put a minute into Steve C. Finishing that lap at 2:56am with an 11 minute lead over the closest challengers, it was time to preserve and protect this team lead. No stupid mistakes or mis-steps; make sure you've taken your bathroom turn before your laps, no flats or crashes and we'll get this done.

The rest was a little more along the lines of the script we anticipated - we kept closing out clean lap after clean lap; eating, resting, recovering; and doing it again and again. After lap 18 Q and I had monster breakfast burritos and coffee - finally! I was so pleasantly stuffed for around 10 minutes until my hypermode metabolism made light work of the 1000 calorie stomach-crete. Jens and I closed out the final laps strong and brought the victory safe to our camp.

FINALLY!

The happy hour(s) that followed were the best I've ever had at that race: coffee, beers, chips, lunch, laughs, friends, the coldest shower ever, campsite tear-down, and the podium ceremony where we took the top step. There is so much to try to recall but in reality it's just one of the best days in the life of a mountain biker and should be experienced by everyone who rides at least once.

Thanks to all our friends and families for helping us, supporting us, and ultimately being there for us as we ride along.

Thanks for reading - see you there next year. Damian Calvert **HN**

... but three out of four as well!

Our team just took 4th in Mens Open at the 24 Hours In The Old Pueblo mountain bike race. HEED, Perpetuem, Gel, Recoverite, and supplements were our exclusive source of race fuel! 21 laps with no leg cramps or bonks is a testament to how good Hammer is. Thanks for fueling us!

Jonathan Davis and the Trek Boulder racing team.



Left to Right: Les Handy, Jon Davis, David Wert, Curt Wilhem

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Are You Getting Enough Nutrients?

BY DR. ALLEN S. JOSEPHS

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If you're one of the millions of individuals not getting enough vitamins and minerals, you may be depriving your body systems of crucially helpful nutrients that can support basic cellular health.

A recent meta-analysis in the Journal of the American Medical Association reviewed several studies on vitamin B6 intake [1]. Researchers found that increased blood levels of B6 were associated with a decreased risk of abnormal cellular growth in the colorectal area.

Another recently published study dealt with the intake of various nutrients and the risk of developing abnormal cellular growth in the bladder [2]. The authors concluded that in older individuals, higher intakes of carotenoids, vitamin D, thiamine, niacin and vitamin E were inversely related to the risk of abnormal cellular growth in the bladder.

As important as these nutrients are, some of us may engage in activities that could deplete them. A recent study in Clinical Chemistry found that smoking lowered blood concentrations of various

B vitamins, including folate, B6 and riboflavin [3.] However, nutrient levels increased significantly after only a few days of smoking cessation.

These studies and many others point to the need for consuming adequate amounts of important vitamins and minerals. Unfortunately, our diets are typically severely deficient. If you want to supplement your nutrient intake, I suggest that you look for a multi-vitamin or nutrient product that contains more than just the RDA, as this number is generally lower than the optimal dose needed to maximize health. **HN**

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Different Color In New Premium Insurance Caps Formula

BY STEVE BORN

The newly formulated Premium Insurance Caps is in stock and we're really excited about the changes we've made to this already-awesome product (we discuss these changes in more detail in the article "Premium Insurance Caps Gets a Facelift!" in Endurance News #67). If you have been using Premium Insurance Caps for awhile (and if you haven't, what are you waiting for?!) you may notice that the color contents of the new formula are different than the original formula – the new Premium Insurance Caps formula has a more yellow-to-light-gold color as compared to the old formula, which had a tan/gray color. The reasons for this are:

1) A number of tan-to-grayish-colored nutrients—lecithin, royal jelly, chlorophyll, ginger, Ginkgo biloba, alfalfa, and spirulina—were removed. This allowed some of the other ingredients in the product that may have a naturally-occurring yellow-to-orange color—vitamin B2 (riboflavin) and beta-carotene are the first to come to mind—to stand out even more.

2) Quercetin was not in the older formula but it is now in the new Premium Insurance Caps formula at 50 mg per capsule. This particular nutrient has a naturally-occurring light-to-moderate yellow color.

So the tan-to-grayish-colored nutrients that were removed from the older formula and the addition of a yellow-colored nutrient (quercetin) in the new formula are why the capsule contents look different.

For more information on quercetin, which is the key ingredient that we've added to Premium Insurance Caps, see the article "Quercetin – Multibeneficial flavonoid now in Premium Insurance Caps" in Endurance News #67. **HN**



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BELGIUM OR BUST

Hammer Nutrition Sponsored, Annapolis Bicycle Racing Team's Nat Thompson selected for the Johan Bruyneel Cycling Center in Belgium

BY LISA PALMER



Young cyclists tend to focus on the physical side of their gorgeous sport, often forgetting--until they've gnashed their teeth one too many times while cramping up on the last half of a criterium race--that there is a great deal more to learn. Nathaniel Thompson, 24, of the Annapolis Bicycle Racing Team (www.abrtcycling.com), is among an elite few who will be schooled in that extra dimension--and what it takes to be a world class athlete--when he begins an intensive, three month training program with the Johan Bruyneel Cycling Center (www.cyclingcenter.com) in March.

Thompson, 24, of Middletown, Maryland, will enter Bruyneel's Belgium-based international cycling development program with 10 other cyclists selected to attend the premier academy, which provides athletes training, racing, nutrition, tactics and education on all aspects of bicycle racing in Europe. Each of the riders will have exposure to talent scouts from European professional cycling teams.

"A lot of guys get invited to ride for a domestic U.S. pro team, but if you have the chance to race in Europe, you have to take it," said Thompson, a Category 1 rider who currently races for the Annapolis Bicycle Racing Team (ABRT), and previously for Rocky Mountain Bicycles in Boulder, CO. "The Cycling Center is a boot camp for cyclists. But it's not about getting race results, it is about growing as a rider and as a team member."

In 2009, Thompson had a break-out year. Early in the season, USA Cycling advanced him from Category 2 to the elite Category 1, where he achieved top 10 results at 10 of the cycling events he participated in. He won the Renfrew Road Race, won the Tour of Lancaster County and he won the Green Jersey competition at the Fitchburg Classic stage race in Massachusetts.

At the Cycling Center Thompson will be racing in events throughout Belgium, which are between 120 km to 180 km in length. To prepare for the cycling academy, he has increased his endurance and distance of training rides to 20-26 hours per week. When the conditions outside were hazardous with snow and black ice this winter, he trained indoors using a Compu Trainer, which simulates riding outdoors.

Thompson has used Hammer Nutrition throughout his training and racing. For hydration, Thompson fills his water bottle with HEED high energy electrolyte drink, preferring its light taste over other drink products. "When I'm in a crit and my spit has already turned to paste, I don't want a syrupy drink that adds to that stickiness," he said, laughing. For calories and energy when racing and training, Thompson brings a few apple cinnamon flavor Hammer Energy Gels with him.

Last year Thompson earned his bachelor's degree in Environmental Studies from Washington College in

Chestertown, Maryland, after taking a year off from his studies to train and race in Colorado. He says he is more than ready to begin this new venture and live with other riders who share his dream. "The Cycling Center has lots of rules, and it's very structured. Over there, cycling is your job. But if you really dream big and want to fulfill the dream, then this is the kind of opportunity you grab," he said.

The Cycling Center bears the name of Johan Bruyneel, currently the Team Director of the American Pro Tour team, Team Radioshack, which includes Lance Armstrong. Bruyneel has led teams to 13 Grand Tour wins and was the team leader for all of Armstrong's Tour de France wins. Bruyneel was also a professional cyclist, retiring in 1998.

The Annapolis Bicycle Racing Team is one of the top-ranked amateur cycling teams in the United States. USA Cycling selected ABRT as their "Club of the Year" in 1996, 1997, 1998 and 2003. ABRT has also won the Mid-Atlantic Bicycle Racing Association Best All Around Team 11 years in a row, 12 years total. They have over 100 regular members ranging in age from 14 to 65 years old with abilities ranging from novice to elite level.

Hammer Nutrition is a sponsor of the Annapolis Bicycle Racing Team. **HN**

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ATHLETE SPOTLIGHT:

Ray Sanchez

Along with Jason Harper and Michelle Purcell





ur featured athlete in this issue of *Endurance News* is ultra runner extraordinaire, Ray Sanchez of Sacramento, California. To call Ray merely an ultra runner is quite the injustice because what he's done, and what he's chosen as his goals, are pretty amazing. Speaking of goals, he is on the verge of doing the unthinkable – obtaining the

BAD 135 World Cup, a completion of three of the hardest 135-mile foot races on the planet in a single calendar year.

BAD 135 is an Ultra Race Series that average runners would hardly consider. An acronym for their locations (Brazil, Arrowhead in Minnesota, and Death Valley), the BAD World Cup has never been completed.

On January 21st, Sanchez and two crew members, Michelle Purcell and Ashley Loucks, touched down in Brazil to run the Brazil 135. The rolling hill course snaked through the base of the Andes Mountains and rain forest-type climate. Known as the Path of Faith, only 12 of the 135 miles are considered flat. After torrential downpours and pelting hail, Sanchez completed the race in just over 36 hours.

The next day he was in route to International Falls, Minnesota, for the harder of the two races, the Arrowhead 135, this time with Jason Harper and Sarah Nelson as his pre-race crew. Together they made crucial tweaks in his nutrition/fueling to augment the extreme exposure to cold.

For nearly fifty-five hours, Ray ran in Minnesota's arctic conditions. Though Arrowhead runners must be completely unsupported by a crew, fans and family are able to check in with runners at three check points along the nearly three day journey. "The extremely cold temperatures of Minnesota (-35) and having to run unsupported (Sanchez pulled a 50+ pound sled with his supplies) scared me. I soon realized there was a reason no one has run all three races concurrent before."

So with two races down, both of them done in back-to-back weeks (which is an absolutely amazing accomplishment of its own), the one remaining one is the "D" – the Badwater Ultramarathon in Death Valley, which takes place on July 12th. Ray has completed the race twice, with his best finish in 2008, 22nd overall in a time of 37:54:25.

STEVE: In the four years since you've focused on ultra running, you have run more than 110 Ultras of distances that exceed a typical marathon of 26.2 miles. If my math is correct, that's doing a race every two weeks, slightly under two weeks in fact. There are a number of questions that come to mind: "What got you interested in ultra running in the first place" and "Do you realize just how many races you've done in the past four years?" and "How do you stay motivated to run that many races?"

RAY: In 2006, I had never run any long distances. I kept hearing a guy at work talk about the California International Marathon in my hometown and even a group of people who run 100 miles at a time. I went out and really enjoyed it. Since those early races, I have focused on running to bring awareness to the plight of inner-city children's education and health. I figure, if you are going to run, run for a reason. I am never short on motivation knowing that every step is for Be Change.

S: When did you first get the idea to attempt the BAD?

R: In the ultra running world, I heard people talking about the three races that make up the BAD World Cup. I couldn't understand why it had never been accomplished. No one had ever done it. Now, with two out of three races done on back to back weeks, from the Andes Mountains to the arctic tundra of Northern Minnesota, it started to sink in why. Someone could start with Arrowhead, then Death Valley, and end with Brazil. I've already done them concurrent and within 12 months. But to do them in the same calendar year required Brazil and Arrowhead to be done back to back. That is a huge deterrent to some and a huge attraction to me.

S: The upcoming Badwater Ultramarathon is the last race in the BAD series, and it's one that you've successfully completed before. I would imagine having that Badwater/Death Valley experience is a definite plus, even though it'll

have been two years since you last did the race. Would that be accurate?

R: I finished 22nd at Badwater in 2008 in just under 38 hours. But, I spent eight of those hours in a medical room in Stove Pipe Wells. In 2009, I got to mile 133 in 36 hours. They had moved the finish line up due to the Whitney fire. I went to Ridgecrest and slept. I had a great night of sleep and thought I was done. The next morning, Chris Kostman, the race director, had reopened the original finish line. The clock on my time had run all night because I had not crossed 135. I drove back to Whitney, got out at the 133 and jogged in the last two miles. My time was 55 hours but I am thankful that Chris reopened the original finish to maintain the integrity and distance of such a great race. I loved the challenge of both finishes but with the crew I have now, I am looking to break the 30 hour mark while capturing the BAD World Cup.

S: I would imagine it took you a long time to recover from Brazil and Arrowhead, especially considering you completed these two arduous races on back-to-back weekends. What kind of recovery period did you give yourself and what, if anything, have you done race-wise since the completion of those two races?

R: I came home from Arrowhead feeling great and actually wanting to try to re-run it. I learned so much this year in the cold. When I got back to Sacramento, I sat with Jason and Michelle and we mapped out every race I would do between now and 2011.

We really focus hard on recovery and maintaining mental momentum. Eleven days (Feb. 13) after Arrowhead, I ran Way to Cool 50k and placed 1st, setting a course record. Feb. 27th Pony Express 50k, March 7th Napa Marathon (7th place), March 20th Rucky Chucky (20th). All three of us are scheduled to run the American River 50 this weekend, April 10.

S: Taking into account that anything can happen at Badwater, given the extreme weather conditions, do you have a specific strategy going into that race? In other words, are you going to run hard, an "in it to win it" mentality, or are you planning on just pacing

- continued on next page

yourself somewhat conservatively, with the goal finishing the race the primary objective, and without worrying about what your placing or time is?

R: I am ready to run hard, but with intentional goals for each segment. I don't try to hold the same pace the whole race. Through certain stretches of the road and certain times of the day, we dial it down. Last year, I think the pavement was 140+ degrees. In those times of maximum heat, I am prone to making huge errors by not being strategic. The crew is setting the pace goals and my job is to listen to them. This is not a secret, I try to pick up pace through the night.

S: Jason and Michelle, how did you get involved in Ray's ultra running career?

JASON: We started crewing for Ray last year after he invited us to be pacers for him at Badwater. Michelle and Ashley crewed and I was a fan at check points. While at a check point, his crew was doing a great job. Yet, Hammer was not a staple. The hydration and fuel were [well-known brand of sports drink] with simple sugars and a high fat content. Watching, I felt negligent but remained silent. After Ray's finish, we spoke and I said "if you ever want me in the car again, we have to get you on Hammer exclusively." Since August of 2009 and nearly 15 ultras later, he is all in.

MICHELLE: I know what Jason

thinks most of the time while running. I know that he is a nut for absolutes when it comes to fuel and hydration. As our friend, we want Ray to excel. What I didn't expect was to be flying around the world and running with him on these great adventures.

S: So since that time he's been pretty much a Hammer guy?

M: Completely Hammer. Jason is a fanatic and very stubborn with Ray's intake during the race. Ray trusts us and we listen to his needs. We are not afraid to make adjustments on the fly. Jason and I have learned Ray is at his best when all he is thinking about is running. We remind him on timed interval to "swig."

S: What Hammer products does Ray use in his training and racing, and is there a specific strategy that you like to employ when keeping him fueled during his races?

J: That "swig" could be a Hammer Gel mixed into a drink, Perpetuem, or a combo of the two depending on need. We also augment with Endurolytes and Premium Insurance Caps. We have what we call "base-camp." His optimal performance is consuming 20oz of water with two tablespoons of Hammer Gel. Once he exceeds the two-hour mark of exertion, we add in 18-20 oz of Perpetuem. Now with a bottle in each hand, he consumes that over 90 minutes. From "base-camp" we can add, subtract, and/or stack other items as the

conditions demand.

S: Perhaps the most well-known figure in ultra marathon cycling is Lon Haldeman, who once said (paraphrased), "The crew needs to know when to give their athlete a pat on the back or kick in the pants." Based on your ultra running experience, I would imagine you're dialed in to Ray well enough to know when he needs encouragement in the form of a "pat on the back" or more of a "tough love" approach ("a kick in the pants"). Would that be an accurate statement?

M: We are still searching for an "off" switch inside of Ray. He goes hard. At times, we have to push, but sometimes we have to "pull." He can go out too fast and the crew needs to see that to.

J: I can bark at Ray and he might listen. When Michelle barks he listens and adjusts. It is fun to watch. For me, I have only had to really dig into him once and it is usually regarding staying on top of hydration. Forgetting to drink and bonking can cost him the race.

S: In your experiences in crewing for Ray, can you recall the one race where he needed the most encouragement, especially the "kick in the pants" kind? Or, is he pretty low maintenance in general?

J: At Arrowhead, he was finishing a 19-hour segment. It was -34 degrees and he looked like death. Frozen and



a little loopy, I made some very strong statements to him that I would like to think echoed in his mind. That said, he is very low maintenance and listens to what we say. We don't expect him to be thinking objectively while in the battle. That's our job. In return, we listen to him when he expresses a need. In that moment, I will do anything to meet that need.

S: What was the best experience you've had crewing for Ray?

M: At the Brazil 135, the race is run on what is called the Path of Faith. I watched Ray and others have an experience that was beyond running. For us, that is what it is all about.

S: Ray, you've done far too many races for us to list them all here. Still, if you could give us your top races/race experiences, which would they be?

R: Before running for Be Change, my definition of a top performance was different. Now, this Run for a Reason campaign makes every race matter. It may sound funny, but one of my best races was at the 2009 California International Marathon. Be Change had 200 runners out there of all different levels. I finished and then watched so many of them finish. They finished for the child they were running for. That was better than any other running moment I can remember. The cause had spread from Jason to hundreds.

Having said that, Badwater is one I love. Arrowhead, though it was brutal, draws me back to beat my time. On a performance note, the best race of my life was this past year. So here is my short list of the Top Five:

- California International Marathon, 2009 (200+ Be Changers)
- Mt Hood 100 (Knocked six hours off my PR)
- Badwater 2009 (Whitney Fire)
- Brazil 135 2008 (I got lost for 30+ miles)
- Arrowhead 135 (I have never been so cold)

S: Is there a particular race that stands out in your mind as the one where everything went right, all cylinders were firing, and you felt invincible (well, as invincible as possible)? If so, what race was that?

R: Entering Mt. Hood 100, I was on my

third race with Hammer. I was really seeing the positive effects. I ran Mt. Hood and knocked nearly six hours off my prior best. To drop from a 23-hour time to a 16:55 was stunning to me. That was amazing.

S: Conversely, can you recall a specific race where it seemed as though absolutely nothing went right? Can you describe what happened and what you learned from that experience?

R: Badwater 2008 was my lowest point. I was in way over my head. I came out too fast and crashed with dehydration. By Furnace Creek, I had lost 13 lbs and I was in trouble. I did not have a strategy for proper intake or retention. After eight hours on my back, I got back out there and finished in less than 40 hours.

S: You, Michelle, and Jason are all part of an organization called "Be Change" (www.bechange.cc). Could each of you tell me a little about the organization and what your involvement is?

J: Michelle and I volunteer on an inner-city campus where kids live at nearly 200% below the poverty rate. It is a rough place to grow up. Five years ago, we started a program called Equal Start that assures that every child gets access to an equal education and basic health services. Be Change is the after-school running program that was created to get the kids up and moving and thinking about a healthier life and better nutrition.

M: We were told that the greatest hurdle these kids face in getting a good education is actual health care. In 2008, Jason ran 100 miles around Sacramento to raise awareness and get these kids access to a doctor and dentist. Since then, enrollment in health care for these kids has jumped from 12% to 82%.

R: That is when I met Jason. I turned the news on and heard about this guy running for these kids. I had just started running and I thought it very compassionate to be proactive in making the lives of these kids better. When I show up and see kids in Be Change shirts running, instead of sitting, I know I have impacted their lives.

S: Well Ray, with such great people supporting you in your races, and armed with the Hammer Nutrition fuels, I'd say you're ready

to successfully achieve a never-accomplished-before feat. On behalf of all of us at Hammer Nutrition, we want to wish you all the very best for a successful race at Badwater.

R: I am thankful that Hammer would share a glimpse into our world and why we love what we do.

J: Thanks, Steve, for making products that make us better! **HN**



Michelle Purcell



Jason Harper

We ARE Ultra Running!

BY STEVE BORN

Is it the fact that we sponsor 140+ ultra running races annually, most likely more than any other nutrition company? Is it word-of-mouth advertising from other ultra runners who use Hammer Nutrition products? Is it just coincidental? Does it really matter?

The fact is that more and more ultra distance runners are turning to Hammer Nutrition products to not only get them through their tough workouts and races, but to enjoy tremendous success in the process. The number of testimonials that we receive from ultra runners using Hammer products seems to grow each and every month, as do the tremendous accomplishments some of these great athletes have achieved.

In this issue of Endurance News we feature ultra runner Ray Sanchez, who is two-thirds of the way through an almost-unthinkable, never-before-accomplished feat (see the "Athlete Spotlight" section to read all about it). But Ray's not the only one who is throwing down some incredible accomplishments. Check out the following awe-inspiring results from these Hammer Nutrition-fueled athletes.

Now is this a list of great performances or what? And ALL of these athletes achieved their tremendous accomplishments fueling solely with Hammer Nutrition products. We fully expect to see even more great results from these and other ultra runners in the future, and when we do, you'll definitely hear about them. In the meantime, if you're not using Hammer Nutrition products to fuel your tough workouts and races, these performances and unsolicited testimonials will hopefully get you to do so. The proof is pretty clear: Hammer Nutrition products work!

To all of these outstanding athletes: "Congratulations from all of us at Hammer Nutrition, and thank you for putting your faith in our fuels to help you achieve these amazing athletic feats!" **HN**



Photo: Bob MacGillivray

**Jamie Donaldson -
Philadelphia 100, 1st overall, 14:58**

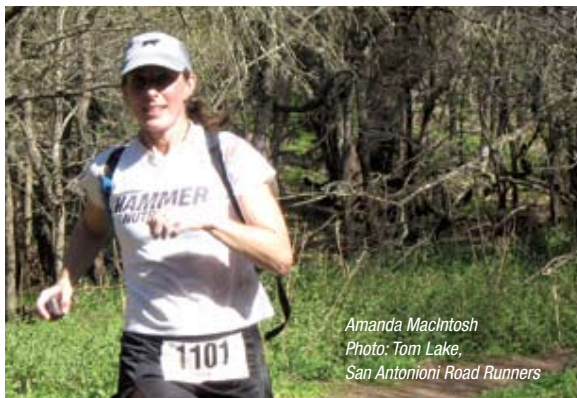
"Happy Easter! I just returned from the Philadelphia 100 this weekend. I had my best race ever there, coming in 1st overall (male or female) in a time of 14:58 (fastest women's 100 time in the U.S. right now). It was hot there during the day, but I kept fueled with Perpetuem and Hammer Gel the entire day without hunger or stomach issues! I was very pleased by that! Next up for me are the World 24-Hour Championships in France in early May! I feel very confident going in there! I am going to have to order more Hammer products for that trip, but I'll get back to you later on that! Thanks so much for everything!"



Photo: Mike Polansky

**Yolanda Flamino -
USATF 50K Championships, 1st woman, 3:34**

"I'm training for the Boston Marathon and about two weeks ago noted that my aerobic fitness was really starting to 'click'. Around the same time I found out about the race and decided to enter. It was my first race longer than the marathon distance and my experience was great. My primary fuel during the event was Hammer Gel and, as always, it did not disappoint! I also took an Endurance Amino, Anti-Fatigue Caps, Mito Caps, and Race Caps Supreme during the race with the same post-race (plus a few Premium Insurance Caps), and I feel that I am recovering well."



Amanda MacIntosh
Photo: Tom Lake,
San Antonio Road Runners



Dan Rose - Iron Horse 100, 1st overall, 16:35

"Kicked off 2010 in style for Team Hammer this past weekend in Florida at the Iron Horse 100-mile run. Took the overall win in 16:35. Went with a mix of Perpetuem and Montana Huckleberry gel the whole time as my sole fuel source. Perfectly smooth and easy the entire way. No low points or stomach issues at all."

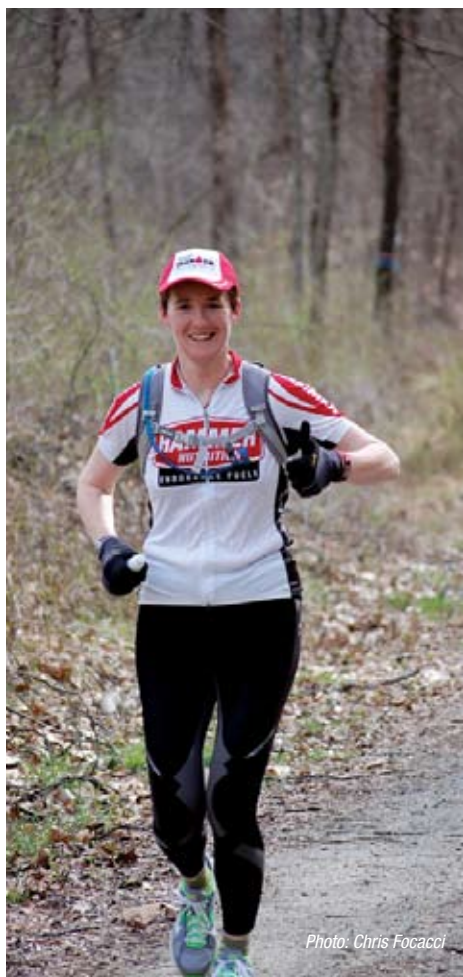


Photo: Chris Focacci

Jessica Kennedy -

New Jersey 100, 1st woman, 17:48

"Thanks so much for making such AWESOME fuels!! After a disappointing ultra season last year (DNFs) and lots of Hammer products in goodie bags, I tried out some products. At the beginning of this year I made the switch to only Hammer fuels and joined the VIP program. This weekend I had the chance to really test things out, running the New Jersey 100 with Hammer Gel, Hammer Bars, and Perpetuem. My initial goal had been to simply finish—preferably standing upright—but I felt great the entire race and finished in 17:48, good enough for 3rd overall and 1st female. I think changing to Hammer products was the best decision. Thanks!"

Other superb results include:

Francisco Garza (right) - Cactus Rose 50 Miler, 2nd overall, 1st master

Amanda McIntosh (opposite page in white) - Prickly Pear 50K, 1st master, 2nd woman, 6th overall, 4:38



Photo: Paul David

Frank Hodge -

Mt. Si Relay and Ultra Runs, 1st master, 3:49

Just wanted to thank you again for your advice on how to best "survive" my first 50K. The race was last Sunday (4/11) and I had a great experience. I ran 3:49 and finished 4th overall and 1st in the masters division.



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" I am so glad that I discovered Hammer." - Erna S.

SWIMMING 'THE CHANNEL'





What follows is a recount of a trip across the English Channel by Ray Gandy. Ray Gandy is the third athlete (that we know of) who has successfully used Hammer Nutrition products in an English Channel crossing, and he's in good company! George Brunstad of Ridgefield, CT (now residing in New Hampshire), became the oldest person to swim the English Channel - 32 miles in 15 hours, 59 minutes - on August 28-29, 2004, at the age of 70. George was our "spotlight" athlete in Endurance News #46. On August 20, 2007, Lynne Smith of Austin, Texas completed this arduous endeavor in 9 hours and 50 minutes, which was the fastest crossing by a solo swimmer that year. Lynne was our "spotlight" athlete in Endurance News #56.

You can read about their English Channel exploits, and revisit all 68-and-counting issues of Endurance News online, at www.hammernutrition.com/knowledge/endurance-news.

My name is Ray Gandy and I was an age group swimmer growing up in West Virginia. I held several state records and was nationally ranked. I went to Clarion University of Pa on a swimming scholarship and was a multiple Division II All American. I was President of Student Senate and settled in CT to begin my career. I did not swim for the next 17 years!

I married Donna D'Alise in June 1989 and we had our daughter Jessica in October 1990. My wife was diagnosed with Chronic Myelogenous Leukemia in the fall of 1992. She was given a choice – since this disease could not go in remission, she was told that she could let the disease run its course – which would mean she could live another 5 or so years, or undergo a bone

marrow transplant. I asked about the success rate and was told that 38% of the patients live another 2 years after transplant. I asked about the time after that, and they replied they had no data. My wife did not hesitate in choosing the chance of seeing her daughter grow up. Her bone marrow transplant took place in April 1993. There were several close calls over that time, but we value each and every day as you can imagine. Our daughter, Jessica, is now a Sophomore at Brown University studying pre-med (obviously influenced by the caretakers she encountered over the years).

Around 2000, I started to swim again, as my wife was mostly recovered and things were closer to normal. We moved onto a lake and I was swimming often and feeling pretty good so I decided to join a the YMCA. For

first couple of years I competed in Master's swim meets and over time achieved several top ten times in the nation in my age group. I was even the fastest in one event in the nation and earned Master's All-American status. Soon I started open water swimming. First, with my friend in the annual Save the Bay (1.7 miles) swim in Newport, RI. I was hooked! Two weeks later I swam in an event across Lake Champlain (8 miles) – I was ecstatic. Over time I have conquered Long Island Sound (15 miles), Tampa Bay (24 miles), and Lake George (25 miles) among others. I was the only male representing the US in a FINA (Fédération Internationale de Natation) pro event in Canada in 2007.

This past August, I became the first Rhode Islander to swim the English Channel. My daughter was part of my crew (along with a friend and my father-in-law) and I am so fortunate to have

- continued on next page



ENGLISH CHANNEL SWIMMING TIDBITS:

The direct shore-to-shore distance from England to France is 21 miles. However, swimmers end up doing 24 or more miles, thanks to the channel currents which cause them to zig-zag.

Taking all successful attempts into account, the average time to swim from England to France is just under 13 hours. Doing the route in reverse, from France to England, the average time is approximately 14.25 hours.

Only about 10% of those attempting to swim the English Channel are successful.

While there are no rules preventing would-be Channel swimmers to make an attempt, the overwhelming majority of attempts are done from July through September, which is when the conditions are most suitable.

The average water temperature during the July-through-September period is 59 to 65 degrees Fahrenheit.

Wetsuits and other flotation devices are not allowed, and swimmers are not permitted to touch their support/guide boat.

The youngest person to successfully complete the English Channel crossing was just under 12 years old (record set in 1988). The oldest person to successfully swim the English Channel is our own George Brunstad who completed the crossing in 2004, four days after turning 70. The average age of English Channel swimmers is 30.

had that experience with her. I sobbed in her arms in that embrace on that beach and realized then that not all hugs are created equal – this hug included all of the family, friends, neighbors, and care-givers that helped during my wife's struggles with cancer. My wife and mother-in-law stayed on shore as I swam throughout the night. As much as I revel in swimming the channel, I am that much more excited that we raised over \$6,000 for the Leukemia and Lymphoma Society of Rhode Island.

In short, I plan a 40 mile, 20 hour swim around the island of Conanicut in RI on July 2 of this year. I have also signed up to attempt a 2 way crossing of the English Channel in 2012.

Suffice it to say that I am hooked on Perpetuem! Perpetuem is the ONLY maltodextrin-based fuel that I use and I have only great results from it. I swim in very cold water and for long stretches of time – in training and in competition.

After receiving Ray's story we wanted to know more about him, his training, and his future open-water swimming plans. Here are his answers to a few short questions that we asked :

What does a typical training week look like for you?

In preparation for the English Channel swim, I trained in a pool four days during the week and in open water (lake or ocean) on the weekend. In the pool, I would average around 5,000 yards (3 miles) of interval training at various distances and speeds. In the open water, I would swim for hours (anywhere between 4 and 12) continuously. I would have kayakers sign up for different times to accompany me to ensure safety and to deliver my nutrition. I averaged 25 miles of swimming per week for 40 weeks preceding my swim. In addition to swim training, I also prepared for the channel by gaining 30 lbs of "insulation", training outdoors in cold water, and taking ice baths and cold showers to acclimate to the cold water. I also swam at night with dark goggles to simulate limited visibility at night in the open ocean.

Do you do anything in terms of cross-training?

Currently, I alternate between pool swimming (M/W/F/S) and P90X (weight training, Yoga, Kenpo, Plyometrics, stretching) training (T/Th/S/Su). I still took cold showers and swam outdoors (in 50 degree water) until mid-November. I have been able to lose 25 of the 30 lbs I gained and feel strong in and out of the water. I am looking forward to getting back outdoors as soon as possible!



Ray leaves his mark at the famous White Horse Tavern in Dover.
Photo : courtesy of Ray Gandy.

How, and when, did you discover Hammer Nutrition products?

I was introduced to Hammer products by a triathlete that I saw occasionally at the pool. This was several years ago and after some long swims (Tampa Bay - 24 miles) prior to knowing about or using the products. I was awake all night in pain and exhaustion after that swim. After trying the products (Perpetuem and Hammer Gel), I was hooked! The sustainable energy and boost that I received during my training swims and events was remarkable. I researched and investigated the company and the products and feel very comfortable and confident with Hammer Nutrition as my partner! I could not have successfully swum the English Channel without Hammer's Perpetuem!

How do you use the products while training?

Part of my training is to go without. I allow my glycogen stores to be used up and resort to fat cannibalization. This helps me to be prepared during a long swim, and trains my mind and body about the signs and results of when that happens. I remember last summer swimming four hours without nutrition during a lake training swim and I got to the point of cramping,

fatigue, and depression. I certainly could have stopped but I wanted and needed to feel that. I had Perpetuem at the four hour mark. Within ten minutes, my energy levels were back as high as when I started the day. I trained another two hours and fed every 45 minutes. I was amazed at the way I felt and the confidence I gained in my body and nutritional choice! Many other times, I used Perpetuem and Hammer Gel throughout my long training swims. I stayed energized and focused on the task at hand.

What are your future plans as far as open water swimming?

I was honored by my hometown (Coventry) and state of RI House of Representatives resolution, and was inducted in the RI Swimming Hall of Fame on March 26th. I have been so astounded and pleased at the reception by the people and businesses of RI and am looking to complete some long swims (20+ hours) over the next couple of years in the Ocean State. I look to continue to raise funds and awareness for the Leukemia and Lymphoma Society of RI. In 2012, I have signed up to attempt a two-way crossing of the English Channel (only 20 people have successfully completed this) . . . and believe me, Hammer will be with me every step of the way! **HN**

THE OLDEST VERIFIED MALE SWIMMER TO CROSS IS HAMMER ATHLETE, GEORGE BRUNSTAD, WHO WAS 70 YEARS AND 4 DAYS WHEN HE CROSSED ON AUGUST 27-28, 2004, IN 15 HOURS 59 MINUTES.



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From Slushy Roads To Cobblestones

BY NATE WESTON

It wasn't long ago I was riding my bike with ice accumulating on the frame as my cables, water bottles, and me froze while on training rides in Billings, Montana. Now it's mud accumulating on the frame as I get bounced almost out of control in my saddle from the continuous sections of cobblestones. It has been quite a transition and not the easiest one either. I came to Belgium to race for the Fuji Test Team at the end of February to pursue my goal of becoming a pro cyclist and what a better place to continue my pursuit than here in "The Homeland of Cycling".

It all started with a couple simple 20 page questionnaires, phone conversations, sending in my resume, and I was accepted to ride for the Fuji Test Team which is a developmental team for international riders wanting to get to the professional level. To me, it was another one of my great adventures and I hardly had a single concern about it. Sure the racing was going to be tougher than in the U.S., yes I would be away from family and friends, but I had done that before and I could work my way up to the level of cycling they are at with time, right? Well that is going to take a while longer than planned to say the least. For starters, even just living here is difficult with major differences in culture, people, and style of racing. So to be able to live this lifestyle is one thing, but to do it well is quite another. As I arrived in Belgium after a full day worth of travel and 8hrs lost due to time zone changes, I was ready to get settled into a routine and get on my bike. Much easier said than done as jet lag hit me for the first time and so did the harsh Belgian weather. On tv when I would watch the spring classics like Paris-Roubaix or Tour of Flanders, sure it was raining, windy, muddy, and the riders were going over lots of cobbles, big deal. Well it is a big deal come to find out as I got ready for my first ride, my team manager told me to head out with a tailwind so I would have some legs to get back home. Now sure there is wind but here in

Belgium there are not a lot of trees and not very many hills so the wind blows with full force all day and there is no protection from it. This gets very old and monotonous when your out for a 5hr ride and your constantly getting pounded on by the wind. Add in some rain that is more like a constant mist and you have a text book Belgian spring day.

As I began to settle in over the first couple of weeks I was able to meet my teammates, who come from Canada, South Africa, Malta, U.S., Belgium, Germany, and Australia. Also I was able to start racing in local amateur races called "kermis races". As you get farther into the spring and summer, there can be a kermis everyday of the week where you will find about 200 riders at every race and find average speeds of 43-48kmph. These races are the hardcore races that Belgian kids grow up racing, and I can tell you from experience, they are amazingly hard. I lined up for my first kermis race this past Saturday in a town called Bissegem. I was amazed to find hundreds of spectators, barriered roads, and a caravan for our race that included 4-6 police on motorcycles, 1-2 ambulances, 1-2 neutral support cars, and 1-2 official's cars. All this for just an amateur kermis race, and keep in mind this happens everyday here. The roads are completely cleared

of cars so you have the full road to race on as well. From the beginning to the end of the race, the pace is full throttle as it is a mad sprint as the start gun goes off with 200 riders sprinting for the first turn. Here the racing is a little different in that the peloton slows down before the corners more but then it's an all out sprint after every corner to get back up to speed. The kermis races are reasonable short going no longer than 125km (77miles) but they average 43-48kph. This was a huge change from racing back in the U.S. as it was three times harder than a crit and three times as long, and that's only if you don't get dropped and pulled from the race. If you get dropped of the back of the main group, you are almost immediately pulled as there is little chance of you catching back up. This was my fate on Saturday as I was pulled from the race after getting dropped on the second climb of the day. As I rode back towards the start/finish line, my head was throbbing, stomach aching, and my legs were mush. The worst part about it was that our team protocol calls for after getting dropped from the race, you must go ride base miles until the end of the race, then come back for drug control and then ride back home. So to my disappointment and fatigue, I was forced to go train for another 3hrs. That night I got back and looked at my power tap data from the race and saw that we averaged 48kph and I averaged 275watts! This is European racing at its finest.

I will continue to race over the next couple months and then return to Montana to race for the Montana Junior Cycling Foundation sponsored by Hammer Nutrition for my 3rd season and hope that what I have learned in Belgium will help me as I continue my pursuit of reaching the pro ranks. Thanks for reading. **HN**

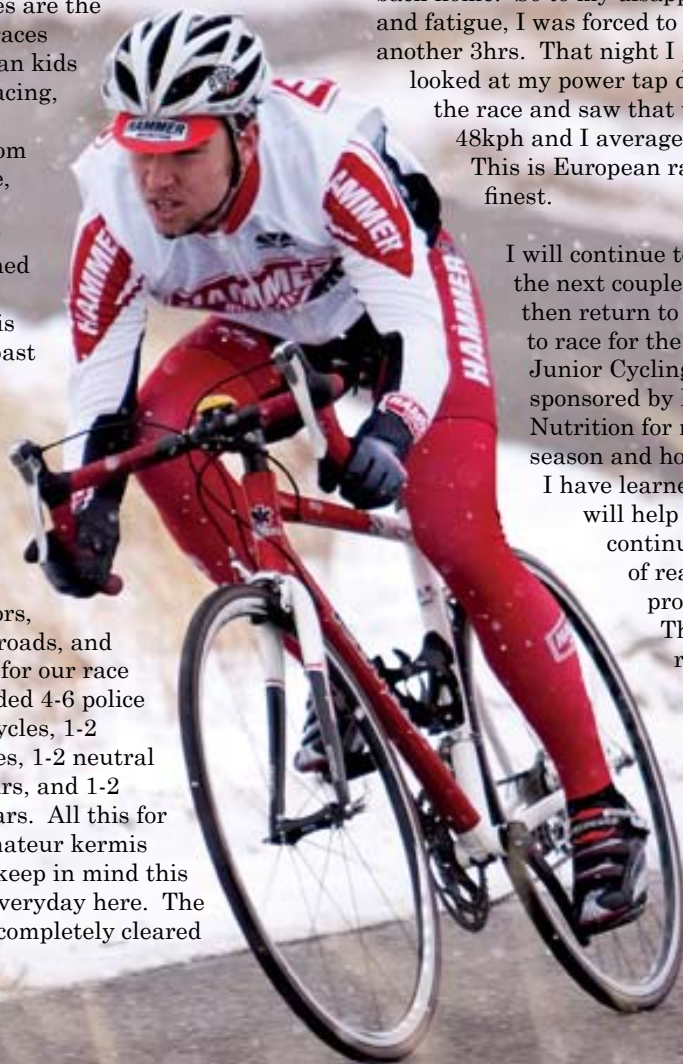


Photo : Paul Hartman

United States Air Force Airman, David Temple, rides strong with "Ten Mile Lake" in the background during a spur-of-the-moment half century near Osan, South Korea. David and Chris Lulei (another Air Force Airman and the photographer who shot this going 23 m.p.h. on his own bike) organize rides, either road or MTB, for those based at the Osan Air Base.





Tim Welte cruises in for a strong 6th place overall finish at the In The Dirt Triathlon in Temecula, CA. Photo : Frank H. Welte, Jr.

More *Short-Cuts* To Better Racing

BY TONY SCHILLER

Last issue I wrote about my 15-day plan for giving your season a quick boost after a slow start. The idea of the article was to super-frequency your training with 2 sessions every day for 15 consecutive days. I've heard from some of you who are trying it and already are enjoying higher motivation and more energy. Now let's go beyond the 15 day plan and focus on why adding frequency to your training schedule makes sense.

First off, how do you add frequency to an already vigorous training schedule and not end up walking around in a zombie-like state of fatigue? The answer is to make the sessions short, some just 15 minutes long. I understand sessions that short mean swims of 1000 yards or less, rides of maybe 5 miles and runs of just 2 miles. For some of you, those distances don't even meet your minimum requirements for what constitutes a training session. You might not even feel it's worth changing into your gear for sessions that short. If that's true for you,

I'm writing with you in mind.

Think of these mini-sessions as being like recess in grade school. While not meant to be a child's main or only exercise of the day, the few minutes of play radically changes everything about an active kid's physiological state. For proof of this, just ask a teacher what kind of hell it is to go an entire day when young kids don't get recess. It's called middle school. As teens we became too cool for recess so they took it away. That loss was our own fault, and a result of not knowing or caring what was best for us and losing it because of our own stupidity.

So recess – and physical play – ended for us while we were just kids. What a shame because we never reclaimed it as adults. Think about this: a workday with no recess for physical activity has become the daily construct for all of society, and all because of the hormonal whims of 13-year olds. As scary as that is, we endurance athletes have adapted too by enduring long workdays without breaks for exercise and accepting it as the right model for life. It's a far cry from it.

As our life and work schedules have gotten crammed with other responsibilities, we've gotten better at time management and making the most of those precious blocks of time we can steal away for training before and after work. The 60-minutes before the rest of the world wakes gets slotted for 3000 yards in the pool. The 90-minute weeknight opening is reserved for a 30 mile ride or 10 mile run. Saturday mornings are dedicated to long runs, rides or bricks. And days when there are no openings become a planned or unplanned day off. And so it goes. All things considered, it's worked out pretty well too as there's no shortage of outstanding athletes out there but can we do better? There's too many athletes wearing out and breaking down sooner thanks in part to a grind that's too intense to keep doing well year-after-year-after-year. It's easy to lose motivation, become bored, feel stagnant and fall into complacency. That leads to more junk miles and neglect to the little things that keep us sharp, strong, fast, limber and injury-free. When that happens, watch out, it's the start of the **BIG DECLINE**. Too many athletes are in a performance freefall and far too many 50-something and 60-something athletes are having body parts replaced. Fortunately, the changes to keep you from being one of them don't have to

be huge, painful or time-consuming. Sometimes the little changes make the biggest differences – like taking a recess break to play. What makes the mini-session so magical is it plays to your body's natural harmony and desire for more frequent movement. A good comparison is massage. While a 90-minute total body massage once a week is hard to beat and sure does wonders for the body, you'll actually get better results from getting one of those 15-minute post race massages on a daily basis. The same holds true for mini-sessions of training.

The key is for the session to be short on both intensity and duration so fatigue never sets in. It's not meant to expand your anaerobic threshold or become a quick time-trial effort. It's just to wake up the body which is all about the "change-up", just like recess. Minis can help you to:

- **Ratchet from once-a-day routine to 2-a-days**
- **Make 2-a-days less tiring by switching the second into a mini**
- **Add tempo/speed play with ease**
- **Comeback from injuries (i.e., doing all runs as minis)**
- **Recover from workouts or races without adding fatigue**
- **Taper to sharpen for an amazing peak**

The Bottom Line

Using minis to add more frequency to your training will absolutely make you feel better. You'll be a more complete athlete as the mini begs for a snappier pace and better mechanics. You'll begin

to need less time in warm-up which means more minutes being maximized during full training sessions. That's all good on race morning, especially for triathletes who will dial-up to full speed racing in all 3 sports easier. What's not to like about that?

I tend to do 3-4 minis a week during race season to augment 7-9 full training sessions, although, it's not unheard of to do more during higher intensity training. By also counting EMS sessions in the recovery mode as minis, the count goes even higher. Start with 2-3 a week and you'll quickly find the mix that works best for you. Keep in mind that the more you've tended toward longer and less frequent training sessions, the more minis will feel unnatural at first, but the more you'll probably derive benefit from them in the end. So make the mini a regular part of your training day – just like recess. **HN**

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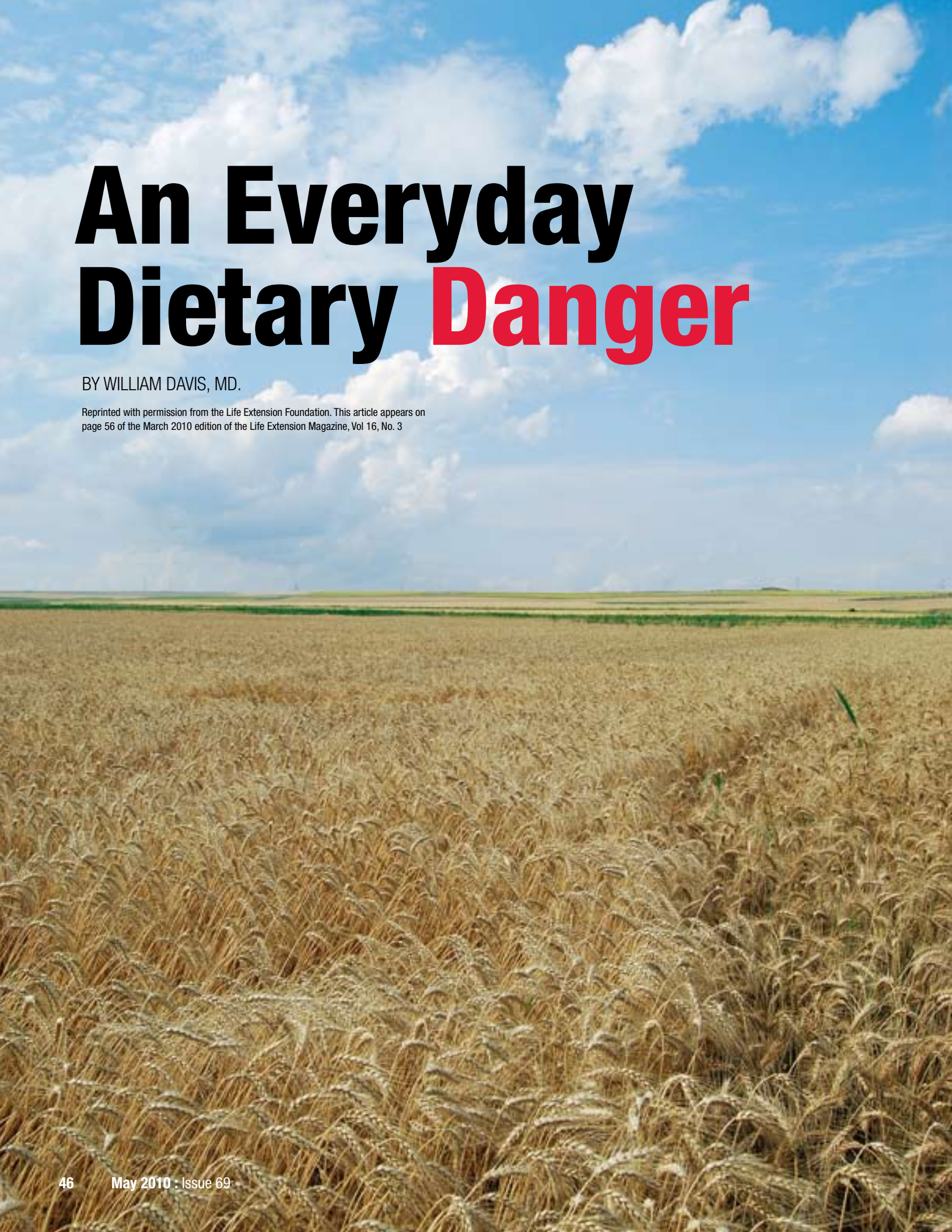
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2000g

"I recently returned from working three weeks with a medical team in Haiti. Sad situation but I think we really did some good.

The conditions were very warm and humid. I used my Sustained Energy and Endurolytes every morning and evening, just like if I was on the bike riding across the country. I never lacked energy and the heat did not really effect me. Many that were there working were just dragging and could barely keep going. I would also use the Hammer Bars for snacks in the morning and afternoon and I'm convinced that it really made a difference. I hope to go back as soon as I can work things out."

Thanks for your product,
Scott Springer

"Thanks again for supporting the Army Tri Team guys! Your stuff is amazing." - Nikolai W.

A full-page background image showing a vast, flat field of golden wheat in the foreground, stretching to a distant horizon. The sky above is bright blue with scattered white clouds. The title 'An Everyday Dietary Danger' is overlaid on the top half of the image.

An Everyday Dietary Danger

BY WILLIAM DAVIS, MD.

Reprinted with permission from the Life Extension Foundation. This article appears on page 56 of the March 2010 edition of the Life Extension Magazine, Vol 16, No. 3

What food can cause devastating inflammatory intestinal destruction that, if unrecognized, can lead to disability and death?

Increase blood sugar higher and faster than table sugar?

Trigger autoimmune inflammation in the thyroid?

Create intestinal bloating, cramps, and alternating diarrhea and constipation, often labeled as irritable bowel syndrome?

Weaken the muscle controlling food exit from the esophagus to the stomach, resulting in reflux esophagitis (heartburn)?

Worsen schizophrenia in susceptible individuals?

Contribute to behavioral outbursts in children with autism?

Increase the risk of or worsen various inflammatory diseases such as rheumatoid arthritis, ulcerative colitis, dermatitis herpetiformis, systemic lupus, pancreatitis, and increase measures of inflammation?

Cause unexplained anemia, mood swings, fatigue, fibromyalgia, eczema, and osteoporosis?

That food is wheat. Yes, the ubiquitous grain we are urged to eat more and more by the USDA, the American Heart Association, the American Dietetic Association, and the American Diabetes Association. Wheat is among the most destructive ingredients in the modern diet, worse than sugar, worse than high-fructose corn syrup, worse than any fat. What other common food can result in such an extensive list of diseases, even death?

Few foods occupy the exalted position that wheat has gained, earning over 20,000 research publications in the medical literature over the past 30 years, many studies detailing the destructive and sometimes fatal nature of this common dietary product. Celiac disease affects more than 2 million Americans. The medical literature is filled with case reports of deaths from this disease, often after years of struggle with incapacitating intestinal dysfunction and encephalopathy (brain inflammation).

What happens when you remove wheat from the diet? Experience at our clinic has shown that the majority of people quickly shed 20-30 lbs in the first few weeks, selectively lost from the abdomen (what I call "wheat belly"); blood sugar plummets; triglycerides drop up to several hundred milligrams, HDL increases, LDL drops (yes, wheat elimination is a means of achieving marked reduction in LDL, especially the small, heart disease-causing variety); and C-reactive protein plummets. In addition, intestinal complaints like pain, gas, and bloating improve or disappear; gastroesophageal reflux often disappears; rashes improve; inflammatory conditions like rheumatoid arthritis improve; diabetes (adult or type 2) is more easily controlled; and behavioral disorders and mood improve.

In people who have celiac disease, the meticulous avoidance of wheat gluten and gluten from other sources, including rye, spelt, and barley, will be necessary. But there are millions of Americans who are suffering wheat-intolerance in some form, from skin rashes to arthritis to depression, who are wheat sensitive but remain unaware.

Beware of the food industry's efforts to capitalize on wheat intolerance with products known as "gluten free." These are generally foods that don't trigger the inflammatory response of wheat, but still cause high blood sugar, weight gain, and other abnormalities.

Dr. William Davis campaigns for the cause of heart disease reversal. He practices cardiology in Milwaukee, Wisconsin and is author of the book, Track Your Plaque (iUniverse, Inc., 2004). Dr. Davis can be contacted through www.trackyourplaque.com

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" Thanks for all your help. Nowadays, customer service matters more than ever and you were great." - David V.



Sodium tribasic phosphate (commonly referred to simply as sodium phosphate) is the primary component in Race Day Boost Powder and Race Day Boost Capsules. We recently received an email from a client regarding the safety of this substance. He wrote:

I read the studies about endurance and sodium phosphate loading and was interested in Race Day Boost. But then I went to the National Institute for Health web page and read about the danger of permanent kidney damage from taking sodium phosphate. Here is the link I reviewed:

<http://www.nlm.nih.gov/medlineplus/druginfo/meds/a609019.html>

I would obviously like to gain the benefits of sodium phosphate but don't want to risk my kidneys over it. Can you comment on whether you believe this product is safe for everyone? Have any safety tests been performed?

Our reply

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

Studies on sodium phosphate date back to 1990 [Lenfant 1970, Lunne 1990], with Dr. Richard Kreider's study in 1992 arguably being the hallmark study on this substance. In Kreider's study, subjects loaded with sodium phosphate for four days (1 gram, 4 times daily). During a 40K time trial, mean power output increased by +17%, oxygen uptake by +17%, netting an 8% improvement in performance time.

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

Sodium Phosphate enjoys FDA "GRAS" (Generally Recognized As Safe) status as an Emulsifying Agent, Nutrients and Dietary Supplement, a sequestrant (a sequestrant is a food additive whose role is to improve the quality and stability of the food products), and for miscellaneous use.

Safety (MSDS) Data for sodium tribasic phosphate

General Synonyms: phosphoric acid trisodium salt, trisodium phosphate, sodium phosphate
Molecular formula: Na_3PO_4
CAS No: 10101-89-0
EC No:
Physical data
Appearance: white crystals
Melting point: ca. 75 C (decomposes)
Boiling point:
Vapour density:
Vapour pressure:
Specific gravity: 1.62
Flash point:
Explosion limits:
Autoignition temperature:
Water solubility: soluble

STABILITY: Stable. Incompatible with strong acids. Keep dry.

TOXICOLOGY: Corrosive - causes burns. Avoid skin and eye contact.

OBJECTIVE: To assess the acceptability, safety, and effectiveness of an oral sodium phosphate solution (Exelyte) for colon preparation prior to colonoscopy, compared with a polyethylene glycol solution (Peglec).

METHOD: A colonoscopist-blinded, prospective, randomized, observational clinical study.

PATIENTS: One hundred patients undergoing colonoscopy for various indications were randomized (n = 50 each) to receive either 90 mL of oral sodium phosphate mixed with 300 mL clear liquid and then consume about 4-5 glasses of water, or 2 liters of polyethylene glycol solution.

RESULT: Sodium phosphate showed a safety profile similar to that of polyethylene glycol. However, patients tolerated it better. The colonoscopist reported similar cleansing of bowel in both groups.

Conclusion

Oral sodium phosphate is well tolerated, is safe, and provides bowel cleansing similar to that with a polyethylene glycol solution.

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PDF Sodium Phosphates File Format: PDF/Adobe Acrobat - View HTML <http://216.239.53.104/custom?q=cache:ne2fhYCJekJ:www.ams.usda.gov/nop/NationalList/TAPReviews/sodiumphosphates.pdf+tribasic+sodium+phosphate+gras+food&hl=en&ie=UTF-8>

Reddy DN, Rao GV, Sriram PV. Efficacy and safety of oral sodium phosphate versus polyethylene glycol solution for bowel preparation for colonoscopy. *Indian J Gastroenterol.* 2002 Nov-Dec;21(6):219-21.

GRAS Ingredient List http://www.pacifichealth.com/gras_list.htm

Research papers establishing sodium phosphate safety (via Medline – <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>)

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As you can see, there is a fair amount of research—both for athletic performance and pre-colonoscopy bowel cleansing—that shows the safety of this compound. My belief, and this is a 100% non-medical opinion, is that when any substance—be it a prescription drug or otherwise—is used prior to, during, or after a medical procedure, EVERY one of the possible side effects MUST be listed,

even if those effects are extremely rare.

Another thing to keep in mind is that the amount of sodium phosphate per tablet of OsmoPrep, which is commonly used for colonoscopy-prep, is 1.5 grams. By comparison, one serving of Race Day Boost Powder, or two capsules of Race Day Boost Capsules, contains 1 gram. More importantly is how many servings of each of the products are required prior to a colonoscopy (OsmoPrep) and prior to a race (Race Day Boost). Prior to a colonoscopy, the recommended dose of OsmoPrep is 32 tablets, which yields 48 grams of sodium phosphate. This dose is taken over the course of a very short period of time:

- The evening before the colonoscopy procedure: Take 4 OsmoPrep tablets with 8 ounces of clear liquids every 15 minutes for a total of 20 tablets.
- On the day of the colonoscopy procedure: Starting 3-5 hours before the procedure, take 4 OsmoPrep tablets with 8 ounces of clear liquids every 15 minutes for a total of 12 tablets.

Compare that to Race Day Boost, where a four-day loading dose is suggested, with each of those doses providing 4 grams of sodium phosphate daily, or a total of 16 grams over the course of four days. This is a dramatic difference, not only in the amount of sodium phosphate

you'd take prior to a colonoscopy, but in the time frame in which you'd be taking this substance.

It is my opinion that while anything in excess amounts (even water) can be harmful, Race Day Boost's sodium phosphate component is safe when used as directed.

Dr. Bill adds: "Steve's reply is complete. The article context to which you refer is talking about a prescription high-dose sodium phosphate loading protocol, which is taken to evacuate the colon prior to having a colonoscopy. Thus, within 24 hours of a colonoscopy, using either "OsmoPrep" or "Visicol" you would consume between 48-60 grams of sodium phosphate as compared with taking a far greater diluted dose of Race Day Boost – 16 grams of sodium phosphate over a 96-hour (four-day) period. Four grams of sodium phosphate per day in solution [or consuming appropriate amount of fluids if using encapsulated sodium phosphate] is far less challenging to renal filtration than 48-60 grams of sodium phosphate in only 24 hours. This is why we advise our clientele to test this in training prior to racing to confirm compatibility with their individual biochemistry. Very few athletes have problems with Race Day Boost loading dose protocols, since the amount of sodium phosphate is so diluted in small amounts, not nearly high enough to overwork the kidneys." **HN**

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The Psychological Impact Of Injury

BY SUZY DEGAZON

Well it has been a LONG three months and during that time I have managed only two races! I have canceled double centuries, marathons, and a triathlon all because of a sports injury on my left leg! It is hard to remain positive and happy, especially when your friends are out training and racing! So I went to the internet to see if by researching my injury I would get better quicker! This is what I found . . .

Apparently there are 5 stages we athletes experience when injured and I would like to share them with you:

1. DENIAL - Yup, when I realized I could not put my left foot on the ground I could not believe it. I truly thought that if I rested my foot, put ice on it, and took anti-inflammatory medication for two days, it would get better! Denial is a great thing. I actually hurt my foot the day before a 13.1 mile event, hobbled home almost in tears, took out the foot spa, and pampered my injured foot. The next day I went to the race and ran 11.5 miles. The last few miles I managed to rip a quad muscle, change my gait, and made myself worse. Denial can do more harm than good!

2. ANGER - Okay, so now I am injured. It is official. My left leg is a problem, I have a LOT of anger, and my poor husband gets the brunt of it. I'm feeling like it is unfair, afterall I need my foot to run and bike for my sanity! I'm concerned I have

lost my identity as an athlete and need to prove I am worthy of the title.

3. BARGAINING - This is a good one. I say to myself if I am good with my A.R.T therapist Dr. Bolton, and take homemade goodies to my podiatrist Chris Bautista, I will get better quicker! WRONG! The body needs time to heal and I could be out 4-8 weeks depending on how much I listen to my doctors.

4. DEPRESSION - Okay, this is where I stay in my home, cry a lot, and get stressed out! I do not want to hear that so-and-so is doing a marathon, I have to cancel a race, and I feel like a failure. This is where all my negative feelings surface. Will I ever be able to run again? Will I make the start of Boston? I start looking through triathlon photos from the early 90s and manage to get myself more depressed. I make homemade cinnamon rolls with my step daughter and eat them too! Luckily I have a great husband, and great doctors, who do not allow me the privilege of wallowing in self pity.

5. ACCEPTANCE/REORGANIZATION - Phew! If only this was number one! This is the stage that I am at now. I have accepted the injury and taken full responsibility. I wrote a nice e-mail to all the companies that help me explaining that due to injury I would be out for a few weeks. I then had to reorganize the way I think, and focus on the positive. I could become an Olympic swimmer! I just won't be able to use my foot to

push off from the wall. I could maintain fitness by using the rowing machine and doing upper body workouts such as chest press and lat pulldowns etc.. Then I could salvage my racing and sign up for some Ultra Triathlons at the end of the year!

So, as well as the physical part of injury, I experienced a huge psychological impact due to injury. I was negative and totally stressed out, and as is usually the case, I had to deal with personal and dental woes. Stress can be debilitating and actually worse than the physical trauma. Thank goodness I have a good support system in place! I just needed to be creative, and feel a sense of purpose; I researched my injury and listened to my therapists. I had plenty to occupy my time as I am secretary of a scuba diving club and assistant race director for the San Dimas Stage Race. I have had my foot digitally scanned and x-rayed and will have custom made insoles to support my high arch. I also spent many hours getting major dental surgery to justify my foot being immobilized.

The point I am getting at is that every athlete, sooner or later, will have to deal with some sort of sport-related injury. You will laugh but my injury occurred when I decided to train for the Boston Marathon. I had stopped cycling and swimming and immediately went into 70-mile running weeks. The good news is that I am on my way to being pain free again. By the time this article goes to print I will have done my first long run of 2010, on April 19th, at the Boston Marathon. I see the light at the end of the LONG tunnel and I am looking forward to a healthier, and injury-free, year! **HN**



Dear Hammer,

The 2010 season is off to a great start. I recently competed in two multisport events and tried to live up to my end of the sponsorship by representing Hammer Nutrition as best as possible. Both events were tough, but I felt really good thanks to Race Day Boost, HEED, and Hammer Gel. The season opener was the San Vicente Triathlon where I took 2nd Overall. The second race of the season was the Pasadena Duathlon where I took 1st Overall. Thanks so much for your sponsorship, support and of course the phenomenal products!

Sincerely,
Stephen Armes, Hammer Sponsored Athlete

MILITARY DISCOUNT

We offer a 40% discount for military members currently stationed overseas, and a 20% discount for military members currently stationed in the U.S.

"I've used your products in Iraq and Afghanistan as well as Marathons while I was stationed in Germany. When it gets hot over here, there's nothing better than your HEED product. I'm not one for sweet tastes on a long run so the fact that I can get it unflavored is a great bonus."

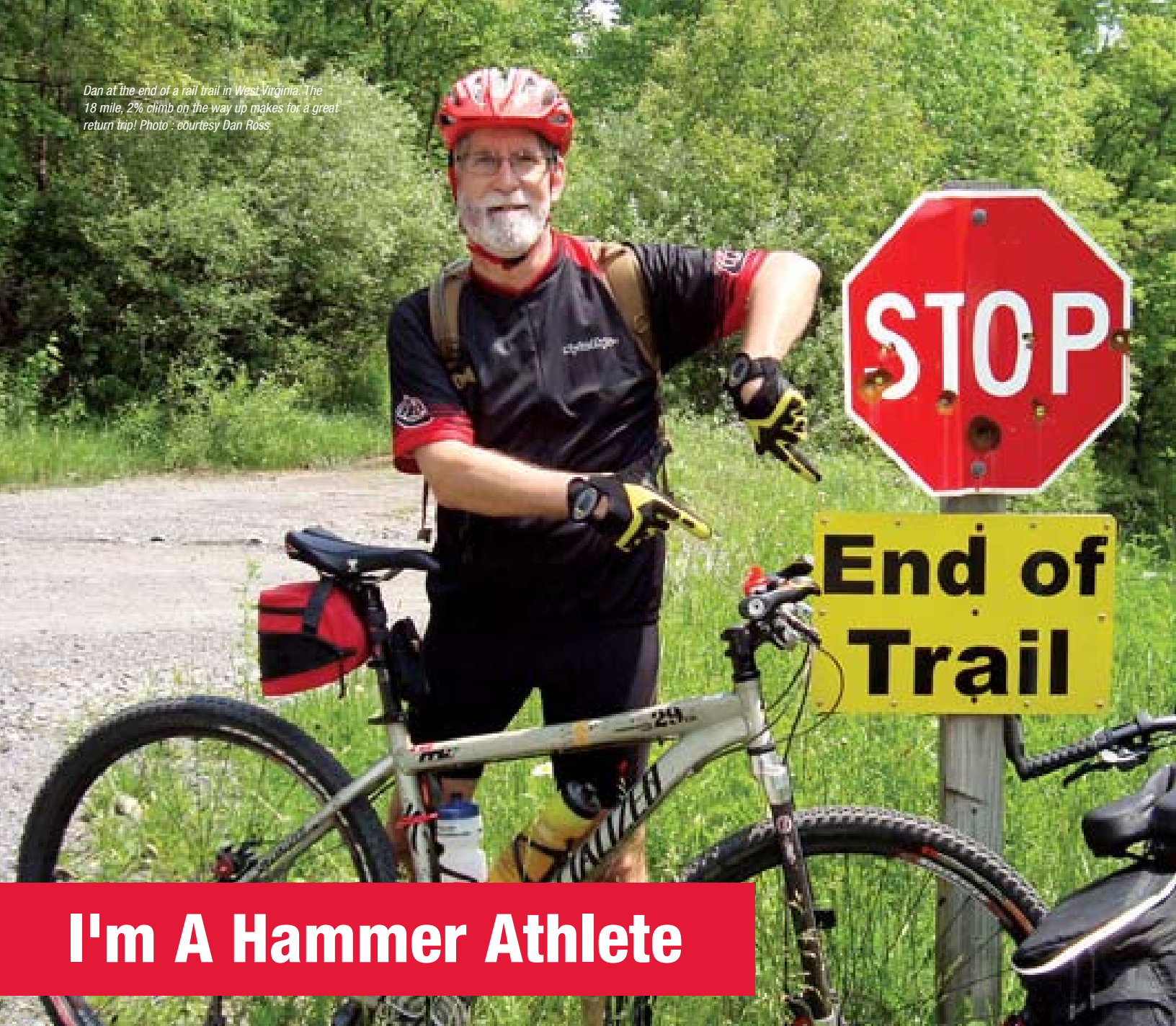
- CW3 Jim Watson



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"I have to tell you that I was pleasantly surprised at how quick you responded to my question . . . not to mention the depth of the information provided." - Joe S.

Dan at the end of a rail trail in West Virginia. The 18 mile, 2% climb on the way up makes for a great return trip! Photo : courtesy Dan Ross



I'm A Hammer Athlete

Dan Ross

Sport: Mountain Bike

Hammer Athlete Since: 2008

Goal: 1,500 miles in 2010

Current Hometown: Fairmont, WV

I began to seriously mountain bike in the early 1990's and I rode with a fierce passion for rocks, roots, and tough terrain here in West Virginia. I served as president of our local mountain bike club, The Gear Pushers, until I was diagnosed with colon cancer in 1993. So my mountain biking came to an early end but I vowed never to give up the fight and not only live but also ride again one day.

Cancer changed my plans again when it returned in 1995. This time it involved chemo and radiation treatments. During my 35+ treatments, I wore a chemo pump and received daily radiation

treatments. Despite the circumstances, I never missed a day's work. I had to be that inspiration to others in my family, fellow workers, and local community.

While undergoing treatments I worked hard with our local bike club and established the first lighted rail trail tunnel in the U.S. I headed up local bike races and donated the funds to our local parks and recreation department for use within our community. Then again in 1997 I found that cancer had returned in my lymph nodes, which is not a good thing. I vowed once again to fight the good fight and win the battle. Once again I received radiation treatments on a

daily basis but continued to work every day. I finished those treatments in 1998 and have been cancer free since then.

Obviously, because of where the cancer was located, it made it very difficult to sit on a saddle for any length of time. I tried time and time again but it was so painful I could not ride. In 2007 I decided it was time to ride again despite the challenges of overcoming pain in the "sit" portion of my anatomy. That first year I rode with great success to the tune of over 1000 miles. Again in 2008 and 2009 I rode over 1000 miles each year. My goal for 2010 is to ride over 1500 miles on our local rail trails.

In my early biking days I only drank sports drinks and never knew of the benefits of good nutrition and supplements. But at long last I found Hammer Nutrition products, after a friend told me about HEED, and I started using them on a regular basis. Wow, what great results I had using Hammer Gel, HEED, and other Hammer performance products! I can honestly say

that Hammer products have made me a better cyclist whether riding the local rail trails, country roads, or other bike friendly paths.

I am a strong advocate of bike helmet use and I was able to convince the local hospital where I work to purchase helmets to give out to kids who could not afford a helmet or simply did not

that they too can survive this terrible modern day disease that affects so many people. I have been featured in the Dirt Rag Magazine reader's section with my story. Now, I have the chance to reach even more readers by telling my story in Hammer Nutrition's magazine.

I hope that everyone who reads this will be inspired to help get the word out

Cancer changed my plans again when it returned in 1995.

have one to wear. I've participated in educational events advocating helmet use to children and adults alike. Currently, I have been working with our local parks and recreation to acquire land to open new trailheads and I am involved in the National Rails to Trails Conservancy. But most importantly I want to be living testimony to folks who are currently going through, or have gone through, cancer to show them

about cycling and get America healthy again. I believe with all my body and soul that I am all the better by using Hammer products. It's pretty obvious they work because look at me today, I'm riding better at 56 years old than I ever have in my life. I owe a lot to Steve Born and all of the Hammer products and staff for making life better for folks just like me! What else can I say but Hammer On, Hammer On! **HN**



Dan, far left in the back row, and his bike club.
Photo : courtesy Dan Ross



SAVE your SEAT!

"Today I ordered more of the Hammer Seat Saver and believe me, it truly is a "seat" saver if you know what I mean!" - Dan Ross

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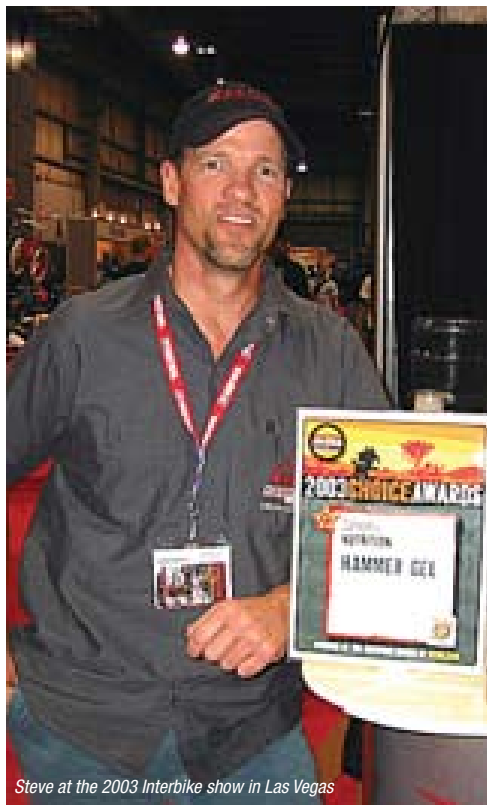
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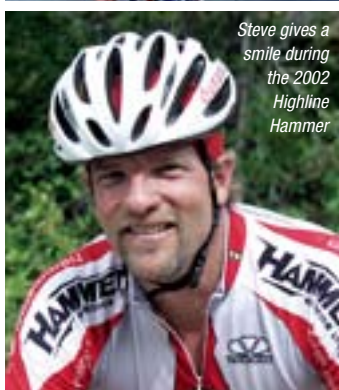
Congratulations, Steve, on 10 years of employment with Hammer Nutrition!



Steve at the 2003 Interbike show in Las Vegas



Steve before the record-setting Double Furnace Creek 508



Steve gives a smile during the 2002 Highline Hammer

44,000 Meters For Charity!

On 2/26/2010 I completed my goal of a 44,000 meter indoor row for charity (and corresponding to my 44th birthday). The event was aptly called "44 on 44!".

I utilized HEED and Perpetuem fuels throughout this very difficult distance; I have only been training for it for 4 months, but I was able to complete it in 3 hours 32 minutes and 46 seconds. Next year, I plan to be under 3 hours and 10 for this event, which will actually be longer . . . it'll be 45 on 45!

I can't say enough about your products, I speak of them often and enthusiastically!

Regards, Patrick Kercheville



Hello Hammer,

I'm sending a picture of the tattoo I recently had put on my calf. My passion is doing endurance events for charities and I have started calling my effort "Hammering For Cures". I used the awesome Hammer Nutrition crank in the artwork. When people ask about it I am always able to tell them about my cause and about Hammer Nutrition. Love those Hammer products! Keep up the good work.

- Steve F.

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Shadow's Story

BY BART & EVE SMITH

In the middle of January 2010 my wife, Eve, and I found a dog wandering along the Blue Ridge Parkway (BRP). He was weak, cold, hungry, and frightened. He had obviously spent at least one night out in the forest near the BRP during one of coldest winters we have had in the area in years. We jettisoned our running plans for the day to stop and help this abandoned canine. We were determined we were not going to leave him without doing everything in our power to get him to safety where he could be cared for and hopefully reunited with his owner. The trick was getting him into our van so we could drive him to the local animal shelter. The only things we had with us in the way of food were our energy gels. We had two types: one of your competitors, which is a honey-based product, and the other was Hammer Gel. We tried the honey-based product first since we thought all animals loved

honey. Our canine orphan took one sniff and that was it. He would rather go hungry. I cracked open a Hammer Gel packet and the smell alone had his ears up and his eyes wide open. He licked it up as fast as I could squeeze it out. Getting him into our van when tempted with a second Hammer Gel packet was easy. Off to the animal shelter we went, stopping at a local store to pick up some regular doggie food which was practically inhaled. I don't believe I have ever seen a more thankful and appreciative animal of any sort than this dog was that day.

To make a long story short, the dog's owners never claimed him, but a few days later, we did. Shadow is now a member of our family and we feel fortunate to have him in our home. We still are not sure how we would have gotten Shadow in our van that day without our Hammer Gel. **HN**



"Love the new Montana Huckleberry Hammer Gel!" - David M.

P.S. Shadow, who is part Lab and part Huskie, loves to run and is one of your most appreciative Hammer consumers. Shadow says, "Thanks Hammer! Because of you guys, I have a happy new home where I am loved and care for."

Tissue Rejuvenator

The safe and effective alternative to over-the-counter pain relievers

BY STEVE BORN

It's still early in the season as I write this (mid-March), which is when a lot of us are starting to dial up the mileage and increase the duration of our workouts. Oftentimes, when one "ups the ante" in terms of their workout duration, one of the unpleasant by-products is sore muscles and joints. That's where Tissue Rejuvenator comes in and boy, does it work; and not just for when you're already injured, but as a preventative, "pre-emptive strike" against achy joints and muscles.

Check out the following testimonials that we recently received regarding the effectiveness of this amazing product:

"I just picked up a new client last night. He has been in cycling for a bit over a year, including attempting and just about finishing Climb to Kaiser here in Central California. He started taking Tissue Rejuvenator on a regular basis as prevention. He stated that he has not had to use any standard over-the-counter or prescription anti-inflammatories since then." – Steve G.

"Now that you mention it, I haven't [used over-the-counter or prescription anti-inflammatory medications] either. I have been taking the "maintenance & preventative" dose of two Tissue Rejuvenator in the morning and two in the evening for the last six months. Since then, I haven't had a single OTC anti-inflammatory. On long training days (4+ hrs) I'll increase the dose and add two right before and two after the workout. Thanks TR & Hammer." – Tiff K.

"I, too, have found that TR has a beneficial anti-inflammatory effect similar to OTC products like Advil. I usually have low back pain on long rides (2+ hours) so I include TR in my workout/race nutrition to reduce or eliminate the discomfort. I usually take four TR's along with three RCS (Race Caps Supreme) one hour before the start of the ride. I then take two TR's every hour, starting at hour two, along with my other Hammer supplements. This usually gets me through the ride without back pain. I have also used TR to help overcome bursitis of the knee. While the pain-relieving effect was not as immediately noticeable, the time for recovery was actually shorter using TR. Good stuff. I take four every morning as part of my daily routine of supplements." – Chris M.

"This product has an amazing anti-inflammatory effect. It's been a godsend for reducing reliance on over-the-counter NSAIDs." –Mike H.

"Shoulder (marathon canoe racer) and back for me, I no



Team Hammer/CMG member, Willy Zellmer, gets in a few practice miles in the mountains.
Photo : Tom Robertson, www.tomrobertsonphoto.com

longer need anything else for pain or inflammation. I take a couple [of Tissue Rejuvenator capsules] with each meal and a couple after a hard workout.” – Don W.

When you look at the ingredient list of Tissue Rejuvenator, you can see that it's a goldmine of anti-inflammatory nutrients:

Glucosamine sulfate is classified as an amino sugar, a type of carbohydrate used for structural tissues instead of an energy source. It is the basic building block/raw material in joint cartilage, ligaments, and tendons. Glucosamine sulfate plays a major role in the synthesis of collagen, cartilage, bone, skin, and various lubricating fluids in joints. Glucosamine sulfate helps promote elasticity of joint movement and also functions as a mild anti-inflammatory.

Chondroitin sulfate is a natural component of several tissues in the body. Like glucosamine, chondroitin sulfate is one of the important building blocks for the repair of damaged cartilage. One of chondroitin sulfate's important functions is its ability to block the activity of enzymes that break down cartilage. This helps reduce inflammation and protects cartilage from further damage. Chondroitin sulfate also promotes lubrication and cushioning in the joints.

Methylsulfonylmethane, better known as MSM, is a metabolite of

dimethylsulfoxide (DMSO), a well-known solvent, which has been used topically as an analgesic and anti-inflammatory. MSM is an organic form of sulfur, which is necessary for proper synthesis and maintenance of tissues such as skin, hair, nails, tendons, and cartilage. MSM has been reported to reduce arthritic joint pain, enhance wound healing, and reduce allergic symptoms.

Tissue Rejuvenator's Enzyme Blend of peptidase, bromelain, papain, amylase, lipase, cellulase, and phytase not only aids in the complete absorption of the nutrient components in the product, it provides its own potent anti-inflammatory benefits.

Boswellia serrata is an Ayurvedic herb that has been used extensively as an anti-inflammatory for the treatment of arthritis. Its primary active ingredients are triterpene acids, which may also be useful for treating exercise-induced asthma and irritable bowel syndrome.

Devil's Claw is a South African herb containing substances called iridoid glycosides that have anti-inflammatory properties. It is also purported to help relieve mild stomach upset.

Yucca Root is frequently used to combat osteoarthritis and rheumatoid arthritis symptoms. It contains high levels of beneficial phytochemical compounds known as saponins, which may provide anti-viral, anti-fungal, and

antibacterial benefits as well.

Turmeric (Curcuma longa) contains a substance called curcumin, which has not only anti-inflammatory properties but also liver protecting, antibiotic, and antioxidant properties as well.

Quercetin is a water-soluble flavonoid typically found in onions, apples, leafy vegetables, and other food sources. It is both a potent antioxidant and anti-inflammatory and may also act as an antihistamine.

Undenatured Type II Collagen (UC-II™) is a patented, extensively studied dietary ingredient derived from chicken sternum cartilage. Through a complex process called oral tolerization, UC-II™ works with the immune system to promote healthy joints and increase joint mobility and flexibility.

As you can see, Tissue Rejuvenator's arsenal of anti-inflammatory nutrients makes it an ideal pain reliever – before exercise, especially after exercise, and even regularly during prolonged bouts of exercise. Want even more inflammation relief? AO Booster's tocopherol/tocotrienol blend, among its many benefits, provides excellent anti-inflammatory ones as well. And now that Premium Insurance Caps contains a nice 50 mg dose of quercetin per capsule, it too provides anti-inflammation support, which is but one reason to take some of your daily dose of this particular product after a workout. **HN**

JOINT HEALTH SECOND TO NONE!

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- Increase joint integrity and mobility
- Stop NSAID use

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Ben Parsons and teammate, Brandon French, during the Pierra Menta.
Photo : courtesy Ben Parsons

The Randonee Chronicles - Part II

BY BEN PARSONS

Oh how the seasons fly by! It feels like just moments ago that I was carrying my skis on my back through thousands of feet of brush, trying to find a few inches of fluff to train on for the Randonee Race season. And now the race sticks are already collecting dust! Last you heard from me I was on my way to Bozeman for the Skin to Win Rally, fighting the “road munchies” with Recoverite and Appestat. It worked, and I am happy to report that I had a super successful race battling it out with fellow racers for the podium. Thankfully, I never gave up hope and made a last minute pass on the downhill to grab the final podium spot.

Weeks later, with very generous support from Brian Frank and the boys and girls at Hammer Nutrition, friends and families, and the wonderful community of Flathead Valley, teammate Brandon French and I raised enough money to jump the pond to Europe for the 2010 World Ski Mountaineering Championships and the Pierra Menta (a four day Ski

Mountaineering stage race).

Let me begin by prefacing that though we didn’t even come close to snatching a podium in over 7 days of racing (unless of course we could’ve competed with the women, in which case we might have got one), we had our eyes opened to the possibility of the sport. European national teams were kitted out with team jackets, nutrition coaches, race gear that weighed as much as one of my race boots, and coaches to wax their skins! Whoa, those folks are serious! So many Europeans grow up in the mountains that there is a mountain culture there all its own. At one point in a race, we were 5000’ above the starting village and I witnessed 5 year olds skinning on homemade planks and 70 year olds with nicer gear than me! It was awesome! Families in the mountains don’t just drive to the city to shop for a weekend of fun, they hike to the top of the mountains with cowbells, accordions, harmonicas, and flags to cheer their fellow countrymen (and women) along. The atmosphere was truly ecstatic! At one point in the Pierra

Menta, Brandon and I were gaining ground on a ridgetop working our way up to around 30th place out of 200 teams when we reached the summit of a peak that had over 3000 fans cheering, dancing, and partying as hundreds of racers passed by in a moment's notice. I've never beamed a bigger smile, not even on the deepest of powder days.

The racing itself was incredibly arduous. Our first week of racing at Worlds in Andorra was the initial eye opener. My first race was a 4000' climb to the top of the mountain, twelve hours after arriving in Andorra. I found out I'm not immune to jet lag. Further on in the week, things started to come together and culminated as Brandon and I snatched North America's best men's result with 19th place in the teams race (Brandon and I raced as a team). Eight men and six women raced for the U.S. and managed to rank 9th in the world with the accumulation of everyone's race results . . . not bad considering most other nation's top racers are professional athletes making a living by racing, and in the U.S. it's more of a hobby!

Our second week of racing was the crown jewel of the trip. Each day for four days straight Brandon and I raced over 9000 vertical feet and tens of kilometers through the heart of the Alps. The weather was absolutely perfect and the snow conditions, well, they were "stable" (European for 1/16" edge penetration). The course brought us over countless Alpine summits, up 60 degree couloirs, along 3rd class Via Ferrata, and extremely steep descents all in the shadow of Mount Blanc. It was

epic! I thought to myself on numerous occasions, "If any one of the 50 guys in front of me falls, we're all rolling down this mountain like bowling pins!" Fortunately, everyone kept it together and through the course of the race, Brandon and I got stronger each day and managed to finish 36th out of 200 teams. Not bad for a couple of hooligans from the States! We were lucky enough to receive massages after each day of racing, and with ample amounts of French pastries and Hammer Products, we kept our health and left the race even stronger. It was a great experience to successfully apply our knowledge of fueling and recovery needs to this extreme test of mental and physical metal. Each day we divvied up HEED, Perpetuem, Hammer Gel, Anti-Fatigue Caps, Endurance Aminos, and Endurolytes between us. Four hours later we crossed the finish line with plenty in the tank even though each race day was bigger than any training day we did all season! Our post-race routines included lots of oranges, Recoverite, and an evening session with the Globus, which is a new tool I've discovered. I'm convinced that massage, Globus recovery sessions, and stretching was key to starting every morning at 7:30 a.m. with snap in the legs. All said and done we left France thirsty for more and with a serious education in what is possible in the future of the sport. Next year we hope to take it to the next level! For now, it's time to start riding! See you on the trails.

HN

*Ben in the summit transition
area of Le Grand Mont.
Photo : courtesy Ben Parsons*



Hi Hammer,

Here are a couple of photos taken by Bill Warburton from the ITU Winter Triathlon World Championships in Norway. Thanks for the support from Hammer Nutrition. You powered our women to individual gold and the team title!

The US team was comprised of Jay Henry, Neal Henderson, Brian Smith, Emma Garrand, Heather Best (pictured here), and Rebecca Dussault.

- Zach Stegeman



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Hot Tip

MAKE IT EASY TO GET MORE PROTEIN!

"I mix Hammer Whey into natural peanut butter. It stabilizes the oil in the peanut butter and makes for a more protein-rich snack or sandwich food. I use unflavored Hammer Whey and it goes down easy."

- Chris M.



How much protein do endurance athletes need?

Numerous studies have demonstrated that endurance athletes in heavy training need more protein than recreational athletes do. This chart gives you a good reference as to how much protein you should consider consuming daily from all sources. More information can be found in <i>The Endurance Athlete's GUIDE To SUCCESS</i> and in the Knowledge section of our website.	Weight	Off-season and/or light workouts*	In-season and/or long workouts*
	100-110 lbs (approx. 45-50 kg)	64-70g	77-85g
	120-130 lbs (approx. 54-59 kg)	76-83g	93-100g
	140-150 lbs (approx. 63-68 kg)	89-95g	108-116g
	160-170 lbs (approx. 72-77 kg)	102-108g	124-131g
	180-190 lbs (approx. 81-86 kg)	115-121g	139-147g
	200-210 lbs (approx. 91-95 kg)	127-134g	155-162g
	220-230 lbs (approx. 100-104 kg)	140-146g	170-178g
	240-250 lbs (approx. 109-113 kg)	153-159g	185-193g

*All measurements are shown in grams needed per day

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Century Riding

Cycling 100 miles in one day on 100 hours of training

BY CHRIS KOSTMAN

Cycling's number one goal for the masses, bar none, is the century ride. No organized events are more popular, more rewarding, or more practical. Centuries are also infinitely do-able: anyone with a modicum of basic fitness, cycling ability, and determination can comfortably conquer, or cruise, the distance. In fact, with as little as 100 hours of training, spread out over five to ten weeks, any cyclist can notch a century achievement into his or her belt. Here's how and why.

Some centuries are loops, some are out-and-backs, and some are clover leaf-shaped. Some string together every conceivable hill, or mountain, in the region, sometimes totaling 8,000 or more feet of cumulative elevation gain. Other centuries are so flat that packs of riders churn up the miles like there's no tomorrow. Most centuries fall somewhere in between, offering enough variety to keep things interesting. You should pick one that fits your schedule and intrigues you with its location.

Once you've picked your event and registered for it, plug it into your calendar and work back to the present



day, to design your Grand Plan For Success. Here are your goals for that plan:

- Improve base fitness.
- Get used to long hours in the saddle.
- Develop your ability to ride faster.
- Prepare for the terrain of your specific century.
- Dial in your bike and how you fit to it.
- Find out which foods and drinks work for you on the bike.
- I use a mix of Perpetuem and HEED together in one bottle.

Consistency is paramount to success, so ride three to six times a week, if only for 30 to 45 minutes on occasion. Indoor cycling classes can also be a solid component of your work day training for a century. In your classes, focus on hill-climbing technique whenever possible (rather than just spinning and sprinting madly all the time like so many classes do), with heavy resistance and using your whole body to “take you up the mountain.” One 45-minute class, done properly, can be the equivalent to a two-hour outdoor ride. Just be sure you ride outside at least three days a week.

At an overall average of 12mph, 100 hours will allow 1200 miles of training to do for your century. That's plenty for just about anybody with the right attitude. It's up to you to plug the following training program specifics into your calendar and implement them in the real world of your life. Here is what you need to know and do:

Training specifics

- Make fitness your focus! Being healthy and at an appropriate weight will be your strongest assets in accomplishing your century goal.
- Do at least one "long" ride a week. Depending on your current fitness level and cycling background, that will be about 35 miles now and will build up to a 75 miler one or two weeks before your century.
- Do one "short" high intensity ride a week, perhaps 10-25 miles as fast as possible with 20 minutes each of warm-up and cool-down bookending that time trial.
- Do speedy group rides with a club, ride hills, ride trails, and try to never repeat any one particular workout or route in any given week.
- Ride at all hours, in all kinds of places, in all types of weather. This will improve your adaptability and keep things fresh and interesting as the weeks go by.
- Ride 50 to 100 miles a week now and add miles each week until you reach 150 to 250 miles a week, two or three weeks prior to the century. That will be six hours per week for the first two weeks, building to fifteen hours in later weeks.
- Your schedule must include a minimum of three hours per week for core strengthening and flexibility work.

- One and two weeks before your event, you will do your longest rides to get used to the hours in the saddle and the wear and tear on the body. However, never ride more than 75 miles in one day in training, or there will be no challenge in actually doing the century!

Century day

Be smart and ready when your big day arrives:

- Have your bike inspected and repaired before event day. Make sure your tyres and brakes are in excellent shape, derailleurs are working smoothly, wheels are true, and your chain is lubed and not too worn.
- Don't be afraid to use a medium-sized saddle or handlebar bag to carry what you might need, including clothes like arm and leg warmers, a wind vest, rain jacket, two tubes, pump, patch kit, and multi-tool, not to mention your nutritional products. You should be prepared for the elements and for mechanical problems.
- Find out in advance what foods and drinks will be served at the event. Bring all the Hammer Nutrition products you need so you can fuel properly all day.
- Be well rested by getting to bed early and staying near the start line.
- Get up and go through registration early or do it the day before if possible. Don't let a long line or last minute pinning of numbers make you late for the start.
- Drink at least a bottle an hour and consistently consume 200-250 calories an hour (depending on your weight and riding intensity). Do not pig out at the checkpoints! Keep it simple and do the majority of your fueling while you pedal.
- Don't stop for more than 5-10 minutes at each checkpoint (they are NOT “rest stops”). Make “beware of the chair” your motto: don't sit down and get comfy, except on your bike!
- Stick to a time schedule, probably a 7-8 hour pace for first timers.
- Avoid squirrely, dangerous pacelines, but do try to work with others with whom you are comfortable and compatible.
- Follow the rules of the road and common sense and courtesy, even as you see others doing the opposite.
- Stay relaxed and loose in the upper body. Tension is wasted energy.
- Be attentive to your surroundings and the route sheet, while enjoying the scenery and the camaraderie of the other riders.

Finally and most importantly, have fun and reap the rewards of your 100 hours of training! **HN**

"I had an awesome season in 2009, thanks to Hammer Nutrition. Energy levels were amazing, recovery was great; no cramping or bonking whatsoever." - Jim B.



Team Waste Management rides strong during 24 Hours Of The Old Pueblo.
Photo : Steve Cullinan

Endurance Racing

Strategies for "shorter" events - Part 2

BY RANDY PROFETA

In the first article, we discussed and outlined an endurance cyclist's fueling needs and provided some basic guidelines for nutrition, hydration, and supplementation when doing shorter events such as the 4- to 12-hour solo mountain bike races. In Part 2 we will notch it up a bit and talk about some of the most challenging races you may ever do: 50 and 100 mile mountain bike solo events and yet another way to get your all-night racing fix: racing as a member of a 24-hour relay team. Bear in mind that these strategies will also work for many road events, but there are several differences as you will see as we get into the details.

50-mile marathon races

UCI classifies a mountain bike race as a Marathon if the total distance is between 37 and 62 miles (60-100 km). Many of these races are point-to-point and are not generally contested on a circuit or looped course. These races may be held on trails that are linked into one long loop or simply on a one-way course that starts and ends in different locations.

While 100-milers are more commonplace, there are several 50-mile events that will challenge even the toughest riders. The Tahoe-Sierra 50, The Silver Rush 50, and two of my local favorites in Southern California: Vision Quest (56 miles) and the Traverse (46 miles). What makes these events a challenge is that while there may be designated feed zones and timed control points, the racer does not have the benefit of

interacting with their support team after every one hour lap as is the case with multi-hour races on closed loop courses.

I generally race unsupported at these events, and many times I will plan on being self contained and self-sufficient for many of the 50-mile races. This adds a new dynamic to your racing. While racer safety is always paramount for the promoters, you are out there on your own for most of the race. This is at the heart of endurance cycling. You will need to plan ahead and have most of your nutritional supplies either on board in a hydration pack pocket or premixed and stashed at a feed zone or check point in an ice chest. Sometimes I will carry the extra mixed bottles with me on the bike. Multi-hour bottles are again my choice. If I know that I will have the time, I will take some powdered mix in zip-lock bags and prepare it at a checkpoint. More on this later.

Here is where knowing your ability and the intricacies of the course will come into play. Whenever possible, one of my training rides will be on the course route well in advance of the race. This helps me determine the best fueling strategy.

A 50-miler can take anywhere from four to ten hours to complete depending on the course, your navigation skills, mechanical issues or other unplanned delays, and your fitness and skill levels. My fuel for these races will be virtually 100% liquid and gel; no solid foods at all. Perpetuem is my primary choice, either an unflavored multi-hour bottle with some Hammer Gel to add some variety to the taste, or Sustained Energy mixed in a similar fashion. Since experience has shown that I need to ingest 250-260 calories an hour, I will do the math and work backwards to determine how much I will need to mix to last the entire race.

A word of advice: if you are using an insulated bottle, try your mix beforehand to make sure that the bottle is flexible enough and that you have a strong enough grip to allow you to squeeze the multi-hour mix from an insulated water bottle. The multi-hour mixes in the higher caloric-yield amounts have a consistency and viscosity somewhere between pancake batter and oatmeal. I have never had a mix that would not squeeze from a non-insulated bottle but certain insulated bottles posed some challenges. The same thing goes for a Gel flask filled with a multi-hour Perpet-HG mix. Try it before race day.

For this year's 56-mile Vision Quest, I calculated my finish time to be right around 9 to 10 hours. I took 100 ounces of water, a 20-ounce multi-hour bottle (four hours), a 24-ounce bottle (six hours), two Hammer Gel flasks, three Coin Purses, and a few plastic baggies filled with spare supplements and Perpetuem. I stopped twice on the course to refill my hydration pack with water. I had Endurolytes, Race Caps Supreme, Endurance Amino, Anti-Fatigue caps and Tissue Rejuvenator on board. Yes, it was a lot of stuff to carry but my stops were deliberate and quick.

To make the multi-hour bottle a bit easier to sip from, as soon as it hit the 50% mark, I filled it with some water from my hydration pack to dilute the remaining mix. The math is pretty easy to do. The 24-ounce bottle was mixed to yield three hours and was 50% down. The now-full bottle would still last three hours, so I just doubled my sips from the bottle and ingested a little more water with each gulp.

If you plan to bring some powdered mix in a plastic bag, you will be somewhat limited to the yield strength you can make while on the trail. I can usually mix up a 2-hour, 2-serving mix of Perpetuem by shaking vigorously. For higher concentrations, I am combining the mix with a whisk or a blender at home. My guess is that you don't have room in your hydration pack for a mixmaster.

The plastic bags I use are standard sandwich-size zip-lock bags. I will use smaller 3"x5" reclosable Poly Bags that hold just over one serving of most Hammer mixes such as HEED, Sustained Energy, or Perpetuem. You can order them online or pick them up at many of the office supply retailers. The ones that I use have an opaque, off-white write-on block that allows me to label the bag with a permanent felt-tip marker.

One other tip: I will break Hammer bars into three bite-size chunks and put one chunk into a poly bag. If I feel the need for solid food, I will grab a chunk of Hammer Bar and chow down.

100 miles of dirt

As a point of reference, a 100-mile dirt race is akin to riding a double-century

on a road bike in both time and in effort. In fact, DCs are great training for these MTB events. While doing this distance is closely related to a 24-hour race in pace and speed, you cannot waste time either or you will be pulled in many races. Like the 50s, you may need to be self-sufficient and carry a lot of extra weight with you, including a light. The last 100 mile event I did had taken me over 15 hours to complete. I started in the dark and ended in the dark. This means lugging the extra weight of your lighting system.

Go to www.ride424.com and you will find no fewer than twenty 100 mile races that are scheduled through October 2010. They are literally being held all over the map, from Florida to Oregon. In 2006, I did the Endurance 100 in Park City UT (no longer contested). Without a doubt, it was the toughest race that I have ever done. The race covered 100 miles with about 20,000 feet of climbing. Participants had to clear certain timed checkpoints or risk a DNF and being pulled. I made the last checkpoint with 20 minutes to spare. My elation turned to anguish when I realized that, after riding 80 miles and climbing over 16,000 feet, I still had roughly 4,000 more feet of climbing to do and 20 more miles to ride before my day was done. I placed third in my class and was elated.

There was no way that I could have hauled the required amounts of Perpetuem, Hammer Gel, water, and riding accessories such as lights, tools, spares and warm clothing unless I had a trailer in tow. The promoter had two checkpoints that riders had to pass four times: two times on the way out and the same two as you returned. It was easy to use these as drop-off points and staging locations for my supplies. I could also jettison any unneeded gear as I rode through these control points.

I had four 4-hour bottles prepared in advance: one was on my bike at the start and three stashed in ice chests at the check points. As is my custom, I carried some Perp powder in poly bags and two flasks of Hammer Gel in my jersey pockets for added insurance.

In essence, fueling and preparation for a 100-mile solo is exactly like the 50 from a nutritional standpoint. The biggest difference is that, in

a 100, there are almost always several locations where you can have bottles and supplies waiting for you; you do not need to be as self-contained as when you do a 50. Granted, the 50s I have done all had drop points too. But I could save some time by not stopping and just cruising through a checkpoint.

24-hour relay teams

The very first race I did on a mountain bike was as part of a 5-person team with two of my sons and two friends. We placed 33rd out of about 45 teams in our class. It was tough. At that time, I could never have imagined myself doing a 24-solo. I thought that the riders who did them had to have a screw loose. Maybe I was right.

Teams come in many varieties, from two-person all the way up to corporate teams with 10 or more racers. By far, the most popular are the four- and five-person teams, so I will focus on strategies for these two popular categories.

Let's also assume that average lap times will run somewhere around 70 to 90 minutes. I have done courses where the average times were just over 30 minutes (Castaic CA, 6.5 miles per lap) and those whose times were closer to 2 hours (24 Hours in the Old Pueblo, 14 miles per lap on singlespeeds).

If you are on a 4P team, this means 80 minutes of riding (1h, 20m) followed by 240 minutes (4h, 0m) of off-time. Note that I did not say "rest" time since some of the time will be consumed just getting back to your pit area, taking care of bike prep and maintenance, and getting back again to the transition area. So, actual down time may be closer to 3 hours. As a rule in our race camp, the rider coming off of a lap is charged with making sure that the next "up" rider is awake, getting ready, and down at the transition area ready to go when the rider who is on-course finishes their lap. Let's just say that down-time will be at least three hours long in this race example.

For team events, I will sometime take a small hydration pack filled with clear water or carry two 24-ounce water bottles and no pack. The difference is that since I now have time to fuel between laps during the off-periods, my

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"I recently placed an order and had a bunch of questions. Everything I needed to know was explained to me. Many thanks to all!" - Chris C.



Dear Hammer,

My kids recently participated in the JCC Spring Slash and Dash. All three took 1st place in their respective age groups! Check 'em out poolside - fueling up with HEED Strawberry.

- Jennifer Lynn

Pictured L to R are: Cody (Age 8) - 1st place Girls 7-10 AG, Ryan (Age 5) - 1st place Boys 6 and Under AG, Kiley (Age 11) - 1st place Girls 11-12 AG



bottles are filled with HEED. We'll talk about fueling choices in a minute.

Supplements are by and large the same as those I rely on for a solo effort. I will always start with two Endurolytes (one dose for me) and carry some in a change purse during each lap as backup. I will also take one dose immediately after I finish a lap. Assuming three or more hours between each lap, I will look for some antioxidant support. Steve Born suggests (in order of Steve's personal "importance ratings") - one Race Caps Supreme, one Mito Caps, one AO Booster, one Super Antioxidant, two Endurance Amino, and one or two Premium Insurance Caps.

As far as fueling, so long as you will have at least three hours in between laps, there is plenty of time to have a two or three scoop serving of Recoverite without having to deal with any of the issues associated with the glutamine and some of its side-effects. Glutamine's benefits are well documented. Unfortunately, it initially produces some ammonia as it is assimilated during the digestive process. Fortunately Recoverite will then scavenge its own ammonia buildup. Nonetheless, it will still take about three hours for this to occur. Hammer recommends taking glutamine-containing fuels only when you have three hours or more between laps or activities.

It is OK if you want to take in some solid foods between laps. Just make wise choices (low-to-no refined sugar

or saturated fats). Do not consume too much food during your down time; you do not want to start your next lap with food still digesting in your stomach. If at all possible, try to adhere to the pre-race meal regimen and avoid ingesting foods during the three-hour span before your next lap. This has some advantages. As you know, your body can super-compensate for glycogen loss as long as you refuel within about one hour of ceasing activity. So, do not wait to eat; get back to your pit area and eat as soon as you can. This even applies if you plan to take a catnap.

Before I head down to the transition area, (usually about 15 minutes before my lap), I take one dose of Endurolytes (two capsules for me; your dosage may vary), two Endurance Amino, and one Race Caps Supreme. While I am in the transition area, I will continue to hydrate, sipping some water. I may have one serving of Hammer Gel if I feel the need.

One easy trick for having Hammer Gel ready to go at a minute's notice while on the bike is to tape some one-serving packs to your top tube or stem with electrical tape. Tape it across the "hammer head" tear-off so that all you need to do is grab it and give the packet a good yank to open it. If you did it properly, the small tear tab stays attached to your bike and the empty gel wrapper can be placed in a jersey pocket when you are finished (no littering!).

While this does not relate to nutrition,

sleeping can be a challenge during a team event because of the limited amount of off-time between laps. A strategy we have used very successfully is to stagger night laps so long as it does not violate the rules of the event. If we are doing a 1-2-3-4 rotation, we will switch to a 1-2-1-2-3-4-3-4 evening rotation. In this way, all riders will have some down time between their brick laps, but their bodies are still warmed up and their lungs still expanded from riding hard. There may be a slight time penalty, but riders 3 and 4 will come back fully energized after their sleep break and will usually make up any lost ground. This rotation allows some of the riders to get 6 to 8 hours of uninterrupted sleep. These riders are typically the weaker night riders and the younger guys that need their rest more than the more "experienced" riders on the team.

How far and how long you plan to race is really up to you. The only deterrents will be your equipment and your fitness. As long as you have Hammer products along for the ride, nutrition is a sure thing. If you have not done a 50-mile mountain bike marathon race, do not discount it. They can be a lot tougher than you think. Have fun! Enjoy. Never give up. And never unclip! **HN**



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"I just wanted to drop a quick note of thanks. I had a goal of getting a PR at a half ironman distance triathlon in 2009. I chose a race that used Hammer products because I knew that would help me meet my goal. I used HEED, Hammer Gel, and Endurolytes during my race and had a PR by 39 minutes!" - Adrienne O.





Tao Of Triathlon

BY SHANE EVERSFIELD

Movement patterns profoundly affect the brain's function. Case in point: I practice T'ai Chi daily. Using a book briefly in the beginning to "estimate the basics", I have continued to practice and refine the movements on my own for over 30 years now. Primary guidance comes from a diligent quest for perfect balance and orientation - a deep challenge as I move very slowly through the form, often with my eyes closed. After 8 years of self-guidance, I read a book about Taoism, an ancient Chinese way of life inextricably linked to T'ai Chi. The yin-yang symbol? Taoist. It expresses the cosmic dance of polar opposites - essentially, the animation of our universe. Not really a religion, or a philosophy, "Tao" translates as "the Way". Engaging an inquisitive "beginner's mind", the Taoist disciple embarks on a lifelong quest to investigate functional principles of our universe and to diligently train their application. Taoism is a way of perceiving, responding to and moving through the world around us. So is Triathlon.

As I read this book on Taoism, I realized that I was . . . well, Taoist. This didn't

happen from reading ancient texts or from living in a remote Chinese village with Taoist sages. (Heck, I was a young hippy-artist living in the northeast US.) My Tao transformation occurred through the movements of T'ai Chi. Taoism is now intrinsic to the way I think, perceive and respond - to the way I live. So is Triathlon.

As triathletes, we're on a path to enjoy and master three basic activities from childhood. Each of these involves a repetitive movement pattern, coordinating opposite arm and leg movements through pelvic core stabilization. (Yes, even cycling.) Equally important, each of these childhood activities requires a unique and complex orientation with gravity. This is profound, given that up to ninety percent of your neurological energy is invested in balance - orienting your body to gravity. (Contemplate balance and orientation deeply while you train.) Like T'ai Chi, each of these basic childhood activities affects the way we perceive and interact with ourselves and the world. Put 'em together, and you've got a powerful kinetic trinity. Tao of Triathlon.

Just like juggling, triathlon is a feat of timing, dexterity and balance, dynamically orchestrating three elements. Training effectively towards ambitious performance goals requires vigilance and honesty in the ongoing assessment of one's strengths and weaknesses. It demands a continuous response that is equally evidence-based science and creative intuition. Humility, self-honesty, curiosity and knowledge are essential.

Human nature provides us with nesting instincts; we gravitate towards our strengths, stay within the comfort zone, and avoid the dark forests of uncertainty. Well, there's no "nesting" in multisport. We're all familiar with that humbling "day-of-reckoning" feeling on race morning, as we toe the line with pale, tender feet. I wonder, is that what makes us so friendly and cooperative in the transition area before the big showdown?

Tao says embrace vulnerability and imbalance as opportunities for improvement well ahead of race day. Triathletes who are weak cyclists often elect to participate in group rides with experienced road cyclists. Criticism, embarrassment and humility be damned, the rewards of experience gained outweigh the rookie's discomfort. Drop the fear; embrace uncertainty as the ultimate opportunity.

In the real world, versatility ultimately triumphs specialization: Change is inevitable.

Beyond the relentless quest for swimming, biking and running mastery, experienced triathletes know there is a fourth element in triathlon: the art of transition. More than a quick gear and clothing change; it's an instant transition from sleek efficient swimmer, to strong efficient cyclist, to swift efficient runner. In under a minute, it's possible to transform from one movement pattern, from one orientation with gravity, from one integration with equipment to another one entirely.

Athletic excellence in a single sport trains mastery of a single identity. The swift transitions of multisport challenge the athlete to fully engage, and then completely detach from each identity. Ego is the collection of identities one

- continued on next page

assumes in the roles of every day life. A well-balanced individual chooses his/her identities functionally - as tools in a constructive, brilliant life. Dis-functionality is a strong attachment to a specific identity, an unwillingness to let go of one role when it no longer serves in the moment.

A ludicrous example of such an attachment: Tommy Triathlete rolls into T2, fastest bike split of the day, and transitions to run. However, Tommy just can't let go of his prowess as a cyclist and insists on wearing bike shoes and carrying his bike for the entire run. Even with the fastest bike split, that finish line is a long way off lugging a bike. Multisport transition develops a functional relationship with ego through the capacity and the will to engage and detach.

Function and brilliance - Tao of Triathlon: Swim, bike, run. Balance, orient, transition. **HN**



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Hello Hammer!

Just wanted to let you know about my breakthrough Philadelphia Marathon performance this past November 22, 2009. I am happy to report that at 45 years of age, I ran my fastest marathon to date in 3:06:44. My previous marathon best was 3:10:00. Though my finishing places were nothing of particular note (363/7,494 overall; 28/464 age group), having gone this fast as a master is extremely encouraging. Using Hammer products throughout the year in preparation for Ironman Canada in August and then in November for Philadelphia kept me healthy and energized. Several of my staple products were: Tissue Rejuvenator, Premium Insurance Caps, Norwegian Salmon Oil, and Endurance Amino. On marathon race morning, my magic pre-race breakfast was: 2 Hammer Bars, 6 Endurolytes, 1 bottle of HEED, and 2 Espresso (my fav!) gels just prior to the start. Many thanks for all of your help and providing me with great products to help me do great things.

Eric Marquard
Bernardsville, NJ

Photo : Island Photography

"I had my first taste of the Chocolate Recoverite today and it was excellent. No question as to the flavor of my next Recoverite order!" - Chris M.



Stephen Armes (#33) takes on at the start of the Pasadena Duathlon. Photo : Karla Armes

EVENT CALENDAR

Events, events, and more events!

If only based on the number of events that we're sponsoring in the next couple of months, it's obvious that we're heading into the busiest part of the year. As I write this article (late March), we've already got 525 events on our Sponsored Events Master Calendar for the months of May and June, and it seems as though we're adding to that number daily!

It would take even more pages of Endurance News to list all of the events—and the various types of events—that we're sponsoring in May and June, but here's a list of some of the ones where Hammer Nutrition products will be available.

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

MOUNTAIN BIKING

MAY 1 – Syllamo's Revenge MTB Challenge

(Arkansas) – www.syllamosrevenge.com

MAY 2 – Peak Sports Mudslinger

(Oregon) – www.mudslingerevents.com

MAY 2 – 24 Hours in the Canyon

(Texas) – www.24hoursinthecanyon.org

MAY 8 – Flagstaff Frenzy

(Arizona) – www.mbaa.net

MAY 8 – Stump Jump 12

(Wisconsin) – www.wemseries.com

MAY 12, JUNE 2, JUNE 16 – Prairie City Races

(California) – www.racemtbikes.com

MAY 16 – Crying Wolf Challenge

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

MAY 22 – 12 Hours of Tsali

(North Carolina) – www.goneriding.com

MAY 29 – BURN 24 Hour Challenge

(North Carolina) – www.burn24hour.com

MAY 30 – JUNE 5 – The Trans-Sylvania MTB

Epic (Pennsylvania) – www.transsylvaniaepic.com

JUNE 6 – Afton Avalanche

(Minnesota) – www.mnscs.com

JUNE 12 – 12 Hours of Temecula #2

(California) – www.socalendurance.com

JUNE 19 – Lumberjack 100

(Michigan) – www.lumberjack100.com

JUNE 20 – Test of Endurance 50

(Oregon) – www.mudslingerevents.com

JUNE 27 – The Wayne Ultra

(Ohio) – www.wvmba.com/races.php

TRIATHLON

MAY 1 – White Lake Half #1

(North Carolina) – www.setupevents.com

MAY 1 – Siouxperman Triathlon

(Ohio) – www.sioxperman.com

MAY 2 – TriZou Triathlon

(Missouri) – www.ultramaxtri.com/races

MAY 8 – New Jersey Devilman Half Iron Triathlon

(New Jersey) – www.piranha-sports.com

MAY 15 – Turtle Crawl Triathlon

(Georgia) – www.gamultisports.com

MAY 15 – Whiskeytown Duathlon

(California) – www.sweatrc.com/Duathlon

MAY 15 – Florida International Triathlon (FIT)

(Florida) – www.fitriathlon.com

MAY 15 – Peachtree International & Super Sprint Triathlons

(Georgia) – www.tri4gold.org

MAY 22 – Black Bear Triathlon

(Pennsylvania) – www.cgiracing.com

MAY 23 – Singer Island Triathlon

(Florida) – www.multirace.com

MAY 29 – Triathlon at Rigby Lake

(Idaho) – www.pb-performance.com/pb/

MAY 29 – Daybreak Triathlon

(Utah) – www.ustrisports.com

JUNE 5 – Grandman Triathlon

(Alabama) – www.thegrandman.com

JUNE 5 – YMCA Rocky Gap Triathlon

(Maryland) – home.comcast.net/~rockygaptri.2009

JUNE 5 – Salem Spring Triathlon

(Utah) – www.racetri.com

JUNE 12 – Flat as a PANCAKE Tri & Duathlon

(New York) – www.greenbrookracing.com

JUNE 12 – Escape the Cape Triathlon

(Massachusetts) – www.maxperformanceonline.com/escape-thecaperace.html

JUNE 19 – Quad Cities Triathlon

(Iowa) – www.qctriathlon.com/main.html

JUNE 20 – Tri it in Spanish Triathlon

(Texas) – www.alamotriseries.com/TriSpanish2010

JUNE 20 – Long Island Gold Coast Triathlon

(New York) – www.ligoldcoasttri.com/

JUNE 26 – Loveland Lake to Lake Triathlon

(Colorado) – www.lovelandlaketolake.com/index

JUNE 26 – Tupper Lake Tinman Triathlon

(New York) – www.tupperlakeinfo.com

JUNE 27 – Vermont Sun Triathlon

(Vermont) – www.vermontsun.com/triathlon.html

JUNE 27 – San Diego International Triathlon

(California) – www.kozenterprises.com

RUNNING/ULTRA RUNNING

MAY 1 – Collegiate Peaks Trail Run

(Colorado) – www.collegiatepeakstrailrun.org

MAY 1 – Cornbelt Running Club 24 Hour Run

(Iowa) – www.cornbelt.org/r/24hr10app.pdf

MAY 8 – Jenkinson Lake 50k

(California) – www.ultrarunner.net/raceseries/jenkinson_lake.html

MAY 8 – Journeys Marathon

(Wisconsin) – www.eagleriver.org/journeys.asp

MAY 8 – Pacific Crest Trail 50 (PCT 50)

(California) – www.pct50.com

MAY 15 – Bishop High Sierra Ultra Marathon

(California) – www.bhs50.com

MAY 15 – Mind the Ducks 12 Hour Ultra Run

(New York) – www.mtd12hour.org/home

MAY 22 – Timp Trail Marathon/Half Marathon

(Utah) – www.t3triathlon.com

MAY 22 – Scenic City Trail Marathon

(Tennessee) – www.rockcreek.com/trailmarathon/

MAY 29 – Sapper Joe Trail Race

(Utah) – www.fatpackracing.com

MAY 30 – Coeur d'Alene Marathon

(Idaho) – www.cdamarathon.com

JUNE 5 – Auburn Trail 25k/50k

(California) – www.ultrarunner.net

JUNE 5 – Newport Marathon

(Oregon) – www.newportmarathon.org

JUNE 6 – Chattooga River 50k Run

(South Carolina) – www.ultrasontails.com

JUNE 12 – Teton Dam Marathon

(Idaho) – www.dammarathon.com

JUNE 13 – Desert RATS (Race Across the Sand)

(Utah) – www.geminiadventures.com

JUNE 20 – Mt. Evans Ascent

(Colorado) – www.racingunderground.com

JUNE 26 – Old Gabe 50k/25k

(Montana) – www.math.montana.edu/~thayes/Runs/Runs.html

JUNE 26 – Logan Peak Trail Run

(Utah) – www.loganpeakrun.com

JUNE 26 – 24 Hours of Laramie/Laramie 100

(Wyoming) – www.geminiadventures.com

ROAD CYCLING/ULTRA CYCLING

MAY 2 – Cross Florida Ride

(Florida) – www.spacecoastfreewheelers.com

MAY 2 – 24 Hours in the Canyon

(Texas) – www.24hoursinthecanyon.org

MAY 8 – Central Coast Double

(California) – www.centralcoastdouble.com

MAY 15 – Smoketown Airport Criterium

(Pennsylvania) – pa.christiancycling.com/race/

MAY 15 – Tour de Blunt

(Tennessee) – www.racedayevents.net/Main_.html

MAY 16 – Crimson Classic

(Pennsylvania) – www.abraracing.com

MAY 16, 29, JUNE 20 – Zipp Speed Weaponry Colavita Time Trial Series

(Ohio) – www.colavitaohiocycling.com/time_trial_series

MAY 29 – Iron Horse Bicycle Classic

(Colorado) – www.ironhorsebicycleclassic.com

MAY 29 – das Tour de Frankenmuth

(Michigan) – www.tricitycyclists.org

MAY 29 – Heartbreak Hundred & Heartbreak Double Century

(California) – www.planetultra.com

MAY 29 – Lewis and Clark Ultra 12/24

(Washington) – www.lacultra.com

MAY 29 – Cyclesports Criterium and Junior State Championships

(California) – www.ncnca.org/road

MAY 30 – Auburn Downtown Criterium

(California) – www.globalbiorhythmevents.com/auburn-downtown-criterium

MAY 30 – Mountains of Misery & Wilderness Road Ride

(Virginia) – www.cyclingdoubleheader.com

JUNE 5-6 – Tour de Kingdom

(Vermont) – www.tourdekingdom.org

JUNE 5 – Sierra Century

(California) – www.sacwheelmen.org/sierracentury

JUNE 5 – Eastern Sierra Double Century

(California) – www.planetultra.com

JUNE 5 – O'Fallon Grand Prix - Illinois State Road Race & Criterium

(Illinois) – www.ofallongrandprix.com

JUNE 6 – Denver Park Criterium

(Colorado) – www.rockymountainroadclub.com

JUNE 12 – Alta Alpina Challenge: Riding the Wild Sierra Double Century

(California) – www.altaalpina.org/challenge

JUNE 12 – Michigan Mountain Mayhem

(Michigan) – www.michiganmountainmayhem.com

JUNE 12 – Wilmington Whiteface RR & Saranac Lake Downtown Criterium

(New York) – www.teamplacidplanet.org

JUNE 12 – Wildest Ride in the West

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

JUNE 19 – Best of the Bay (BOB) Century

(California) – www.cherrycitycyclists.org

JUNE 20 – Washington State Elite Road Race Championship

(Washington) – www.spokanerocketvelo.com

JUNE 26 – RATPOD

(Ride Around The Pioneers in One Day)

(Montana) – www.ratpod.org

JUNE 26 – Brownstone Road Race

(Pennsylvania) – www.proamcycling.com/events

JUNE 26 – Dead Dog Classic Stage Race

(Wyoming) – www.deaddograce.com

ADVENTURE RACES

MAY 1 – Talon 10 Hour Adventure Race

(Florida) – www.tamparaces.com

MAY 1 – Hueston Woods Adventure Race

(Ohio) – www.race-coar.com

MAY 1 – Big Scrambler Adventure Race

(Florida) – www.adventurousconcepts.com

MAY 8 – Desert Winds 24 Hour Classic Adventure Race

(Nevada) – desertwindsadventureseries.com

MAY 8 – Wild Adventure Race Spring Thaw

(Minnesota) – www.wildadventurerace.com

MAY 15 – The Urban Race for Fifty (TURFF)

(Pennsylvania) – www.rootsspace.com

MAY 15 – MayDay at Wayway

(New Jersey) – www.nyara.org

MAY 21 – The Longest Day

(New York) – www.nyara.org

MAY 22 – Chadron Adventure Race

(Nebraska) – www.angrycowadventures.com

MAY 22 – Spring Fury 8 HR Sprint & 12 HR Elite Adventure Races

(Michigan) – www.infiterrasports.com

MAY 22 – Bricks Killen's Pond Adventure Race

(Delaware) – www.bricksmultisport.com

MAY 29 – Odyssey Wild Wonderful 24 Hour

(West Virginia) – www.oarevents.com

MAY 29 – Spread Your Wings 12/24 Hour Adventure Race

(Texas) – www.toocoolracing.com

MAY 29 – Warsaw-Winona Adventure Race

(Indiana) – www.metzgeroutdoors.com

JUNE 5 – Omaha Urban Adventure Race

(Nebraska) – www.angrycowadventures.com

JUNE 5 – Siege at Fort Yargo

(Georgia) – siegeyargo.trailblazerar.com/index.html

JUNE 12 – Bushwacker Adventure Race

(Illinois) – www.bushwhacker.com

JUNE 12 – Spillway Adventure Race

(Louisiana) – www.gulfcoastadventure.com

JUNE 20 – SCAR Adventure Race

(Florida) – www.pangeaadventureracing.com

JUNE 26 – Jacksons Adventure Experience

(Utah) – www.milestoneadventure.com

JUNE 26 – Adventure Xstream Durango

(Colorado) – www.gravityplay.com

Ashley Randall

This was my first race at this distance. I entered it in support of the local running club who organized the race and to support the John B. Amos Cancer Center (where my mother has been receiving treatment for over five years). My goal for the 2010 triathlon season is to complete a Half-Ironman event, so this distance also gave me a PR for 13.1.

It was a very cold morning - temperature at the start was 21 degrees. Although I was not worried about getting dehydrated, I was concerned about having enough fuel to complete the course. Sucked down a Hammer Gel about 15 minutes before the start with a few swallows of water. Drank a Hammer flask of Perpetum at five-mile mark and a second flask at the 10-mile mark. I was able to finish strong. Drank another 20 oz. of Perpetum while waiting for the awards ceremony. The mocha flavor was great with the bagels that the organizers provided.

I'm proud to be a Hammer sponsored athlete through Team FCA-Endurance.



Lois Marquart

All - please share in my joy as I took a 2nd in my age group at the Xterra World Championships in Maui (dirt and all!). Thanks for such great products.



Hayley Benson

Here is a photo of me at the awards for the JCC Scottsdale Sprint Triathlon. I'm happy to announce that even though it was only a sprint triathlon, I managed to nail the win after a 6-month absence from competition. It meant a lot to me.



Anthony Chrisomalis

I've been boxing for the past six years at a gym in Manhattan. The first four years was okay, but I was ignorant about nutrition (all my life actually about nutrition). A friend recommended you guys to me and I thought "this isn't for me, I'm not a runner or cyclist like he is". After we talked more and more, I checked it out and gave it a shot. I never imagined taking any supplement pills etc . . . People down cookies and junk, I thought, what's a few capsules for your wellness?

It turned things around tremendously in my health and performance. The articles also informed me about eating right, hydration, the whole nine yards. I realized all the things I'd been doing wrong. I saw that boxing is an endurance sport too. It was awesome, the people at the gym couldn't believe my performance and how I was able to do what I was doing. They were always amazed. I was really Hammering, as I told my friend. I even broke a rib and I was amazed how quickly I healed without missing any training. Tissue Rejuvenator saved my wrists as well from the wear and tear of training.

I also enjoy basketball and woodcutting too, which Hammer helps me excel in as well.

I'm a healthy person now, who eats right and is physically fit. I figured I'd share my story with you and the Hammer folks, and let you know the positive impact you've had in my life. I hope you enjoyed it.

Take Care and Be Well,
Anthony Chrisomalis





A Family Affair

Here's a picture from the Gasparilla 15k and 5k, held in February in Tampa, Florida. Pictured left to right: Gavin Waite - 12 yrs old - 5k 26:48, Lois Waite - 15k - Overall Female Masters winner - 59:19, Miles Waite - 9 yrs old - 5k - 24:56 3rd in under 10 AG

Jonathan Davis

I raced in men's solo open 35-39 at Dawn to Dusk 12hr endurance race last weekend in Gallup, NM. I completed 10 laps of 100% single track totaling 124.05 miles in 10:55 which earned me 1st in my age group and 2nd out of all 125 solo racers. Once again Hammer products were the sole source of fuel for me and a major factor to my success. I started with 4 Endurance Amino, 4 Anti-Fatigue Caps, and 3 Race Caps Supreme before the race. Then each lap I took 1 Endurance Amino, 1 Anti-Fatigue, and 3 Endurolytes. My only source for fuel was 2 scoops of Caffé Latte Perpetuum in 25 oz of water and a shot of Huckleberry Gel each lap. I consumed no solid food the entire day and was never hungry. In fact Hammer fueled me so well that my last lap time was only 8 minutes slower than my fasted lap time, which after 10+ hrs at race pace is quite a testament to the performance of Hammer fuels. Thanks again for your outstanding products.

Bruce and Tanner Balch



Here's a shot from the March Muddy Buddy event in Las Vegas that I did with my son, Tanner. We were 4th in our age group and 6th overall. It was pretty fun stuff.

Jessica Koelsch

Thanks for always being there for us! I recently won the Gasparilla Mich Ultra Challenge-best women's time (combined) for 5k, 15k, and marathon! THANKS!



Terry Lansdell

Congratulations to Terry for setting a course record on a fixed gear bike at the Sebring 24 . . . 283 miles!!!

Way to go, Terry!



Jason Wolfe

Congratulations to Jason Wolfe for his course-record win at the 2010 Sedona Marathon. Jason took an early lead and finished the race in 2:44:22!



Greg Taylor

Congratulations to Greg Taylor on his 1st place age group finish at the Ford Ironman Arizona event last November!



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

Wendy Skean & Wendy Tynan

Here's a photo from the West Coast Marathon Championships, October 3, 2009 in Temecula, Calif. Wendy Tynan is on the left and Wendy Skean on the right. We had just completed the difficult course. Wendy Tynan earned 2nd in Sport Women and Wendy Skean 1st in 60+ Women. We really had a great time riding together showing off our Hammer jerseys.

Thank you for the very best products and customer service!



SNRGY Multisport Clinic

Thanks for providing product for our recent SNRGY Multisport coaching clinic! We support and love your products, so thank you.

- Jenny Smith



Bill Misner

I ran the 5-mile Rapid Rabbit Run race this Saturday (3-20-2010) at East Valley HS in Spokane Valley, WA. I won my age group, with a US National Masters All-American qualification time, nearly three-minutes under the USATF 5-Mile Road Race qualifying standard. This is my 5th All-American Road Race honors in three years, (3-times @ 5K & 2 times @ 8K/5-mile run).

It was such a good day, in spite of an unrealized desire to run much faster, like in the "good ol'-days"; nevertheless, I gratefully accept the results . . . Thank you, Lord Jesus.

Jabby Young

I just ran the Lost Dutchman Marathon in Apache Junction, Arizona. Hammer sponsored the event with HEED and gels. I ran 3:18 which was good enough for 25th overall and 1st in 60-64 age division. I also broke the course record for 60-64 age division by 31 minutes and qualified for Boston with 42 minutes to spare. (*My PR for the marathon is 2:36 and I have run under three hours in all but five of the 33 marathons that I've done!*)

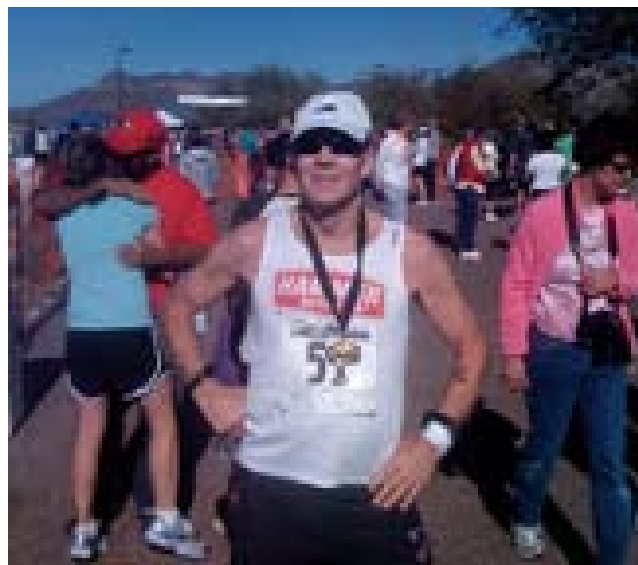
I have been running marathons for 28 years and have not found a better product than Hammer Nutrition!

Jabby's Pre-Race Prep and On-Course Fuel*

- 4 a.m. : Ate banana, half a bagel, and one scoop of Perpetuem.
- 5 minutes before race time (7:00 a.m.) : drank another scoop of Perpetuem in 8 oz. of water.
- HEED, Hammer Gel, and 2 Endurolytes every five miles. Consumed an Espresso Hammer Gel at mile 21.

This is how I trained and it worked great for me. It is hard to say what I could have run if I had used Hammer back in the day!

* *Be sure to test your pre-race prep in training!*



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• In December, I completed the Las Vegas Rock and Roll Marathon; not the best but I finished. I worked against myself that day. I am thankful I had an emergency stash of Sustained Energy with me or I would have been toast. However, I left my Endurlytes at home and boy did I ever need them. Six short weeks later, I did the Phoenix Rock and Roll Half Marathon. I made sure that I had all of my Sustained Energy and I now carry emergency stashes of Endurlytes in my hydration belt. Between mile 11 and 12, I started walking, grabbed two Endurlytes and washed them down.

12 my calf started cramping up. I started walking, I took capsules, broke them open and poured them in my mouth, washing them down with water. I finished the race cramp-free and missed setting a PR by 22 seconds. I love your products and, YES, they really work!

- Vicki S.

- * The Endurolytes saved me during a recent 10K. I was cramping about a mile into the race when I remembered I had an Endurolytes in my pocket. I broke it open and let it dissolve in my mouth. My cramp subsided almost immediately and I continued running without difficulty. I may not have believed it if it didn't happen to me. Love your products!

ORDER TODAY! 1.800.336.1



Brian Ricketts runs towards a 6th place age group finish during the PriddyPear S&L Photo Blaine Hether

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