

# ENDURANCE NEWS



October : 2004

Issue 044

The Newsletter For Endurance Athletes

An E-CAPS & Hammer Nutrition Publication

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Join the T.E.A.M.



## Mandarin Orange HEED : New flavor, now available

We've hardly finished telling everyone about the great taste and performance of the recently introduced and highly praised Subtle Citrus HEED, and we already have a new flavor, Mandarin Orange. And oh, does this stuff taste great! As with the original lemon-lime citrus flavor, the key word here is "subtle." With either HEED flavor, you get a full 100 calories per scoop, and a welcome change from the overly sweet or syrupy taste so common with other powdered sports drinks. You can buy the 4-serving "sample" size of either flavor for \$2.99, or dive in and order a big 32-serving canister for only \$14.95. That's less than fifty cents a serving, a price that's as good as the taste.



## Processed Simple Sugar Consumption : When will we stop tolerating it?

Bill Misner, Ph.D

In the last 100 years, consuming sugar has increased from a slightly modest 20 lbs to somewhere between 120-150 lbs processed simple sugar each year. W.B. Grant's summarized review implicated this annual increase of dietary processed sugar with ischemic and cardiovascular heart disease rate reported in sedentary human consumers:

"The mechanism linking sugar to heart disease seems primarily to be the production of triglycerides. Excess sugar, in the form of fructose directly or from sucrose, metabolizes to triglycerides, leading to large increases in serum triglycerides and is incorporated predominantly into very low density lipoprotein (VLDL) cholesterol. Both elevated triglycerides and VLDLs are risk factors for CHD. Simple sugars also cause a host of other problems, such as hyperglycemia, hypoglycemia, hypoxia, and impaired immune

system response, all of which can lead to cardiovascular problems. Simple sugars also replace foods rich in vitamins and minerals, and sugar metabolism involves several B vitamins. A deficiency in three B vitamins is linked to elevated plasma Homocysteine levels. Sucrose, in particular the fructose moiety of the sucrose molecule, as well as fructose itself, may induce oxidative damage through increased glycation of proteins (associated with complications of diabetes) and cross-linking of tissue proteins [1]."

At the rate of 120 lbs processed simple sugar annually calculates to eating 149 grams (5.2 ounces) or 600 calories sugar each day. What is the impact of 149 grams processed sugar once it traverses the gut and imposes a presence on blood glucose profile?

(see SUGAR on page 3)

## Dear Client,

Welcome to the 44th issue of Endurance News. As the summer racing season draws to a close, it's time to reflect back on the year for a moment and then start looking ahead to fall/winter activities like cyclocross, marathons, strength training, and xc skiing. As you enjoy your off-season sports, please remember that our products and knowledge are just as applicable for these as they are for your primary summer activities.

2004 has been a great year with growth far surpassing our expectations once again. It's kind of strange, but lately several clients have said that they hope we don't get too big because then we'll stop caring about them and just become another faceless corporate machine. As I told each of them, "That will never happen."

The suitors and investors have already been contacting us for a couple of years and I politely decline their offers. I didn't start this business over 17 years ago as a get-rich-

quick scheme. It was a labor of love and an enterprise that I hoped would have the "endurance" to provide employment opportunities for my children when they grew up, if they were interested.

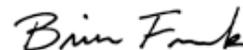
Amazingly enough, this has already happened. My 16 year-old daughter Jessica has worked here for several years and has moved up to Client Support. She now works three days a week in addition to carrying a full course-load at our community college. Ten year-old Madeline and eight-year old Miles empty trash, sweep the warehouse floor and do other odd jobs-as long as they get some Hammer Gel when they're done. Miles says he wants to run the business when he grows up. I think that's pretty cool.

What I'm trying to say is that this is still a family-run business, and we think of our 18 staff members and you as "extended family." Having fun and helping people are far more important to me than financial success. I have

no desire to do anything else any time soon.

I'm telling you all of this to assure you that we'll be here for a long, long time to come, providing you the best fuels, supplements, knowledge, and superlative service that have been our hallmarks for almost two decades.

Be healthy and fit!



*P.S. Got a suggestion? I want to remind all of you that I receive and personally respond to all e-mail sent to suggestions@e-caps.com. If you have ANY suggestions that you think would help improve our products, service, support, website, or anything else related to doing business with us, please let me know. Your suggestions and feedback help me keep my finger on the pulse, and it's the best way to ensure that we continue to meet your needs.*

## The New Website : We're open!

The store is open; come on in! We've just redesigned and enhanced our website, and we'd love for you to pay us a visit.

Where: [www.e-caps.com](http://www.e-caps.com)

When: Anytime, we never close!

We were thinking of you when we remodeled our new site. We especially wanted to streamline your shopping experience, giving you more control of the information. You can select what you want to review and hide the rest. Searching through volumes of information can be difficult; however, the expandable elements on each page help you quickly locate the information. Maybe you want to check the Nutrition Facts for a product, or maybe you want to read the articles, written by our in-house experts, that provide further details on how each product will help meet your needs. You can learn how other athletes are using the products and what results they have obtained. It's all there, ready for you.

If you already know what you want to buy when you log on, we have Express Order pages for both Hammer and E-CAPS products. These will have all of the products with a quick and easy interface to get what you need in your cart lickety-split.

Once you've placed items into your cart, we gently remind you of accessories you might not have thought about. For instance, if you

order a jug of gel, you might need a flask, or if you order Race Caps Supreme and Mito-R caps, you could certainly use a small capsule organizer or a quick coin dose dispenser. Checkout is quick, easy, and reliable.

We want you to be on top of your game. To do that, we like to keep you in the know on what works and even what doesn't. We feel strongly that what you put in your body will determine your race results. Articles and downloads will be available throughout the site just where you need them. Easy-to-print pages are packed with information vital for racers. We have even added a bookstore with some essential works on nutrition and natural healing.

Would you like to help select the next caffeinated Hammer Gel flavor? The website will also have user polls, so in a few minutes you can become a real part of our product development process.

You can order catalogs, send your friends referral messages (including Free Product), subscribe to our online versions of Journal Of Endurance and Endurance News (this newsletter) and register to get product discounts and free shipping along with your auto-shipped order (Join the TEAM).

Please do pay us a visit, at your convenience, anytime you want. We'll leave the lights on for you!

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*\*Articles written by Dr. Bill Misner are not proofed by David Levin*

### Our Mission

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

Endurance News features insightful articles on diet, nutrition, training and other topics of interest for endurance athletes — written by myself as well as professional and elite amateur athletes and other experts in the area of nutrition and exercise. In addition, Endurance News will include articles highlighting new and existing E-Caps products and how to get the maximum benefits from them.

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

Back issues of Endurance News are available online at:  
[www.e-caps.com](http://www.e-caps.com)

Legal disclaimer: The contents of Endurance News are not intended to provide medical advice to individuals. For medical advice, please consult a licensed health care specialist.

*The FDA has evaluated none of the statements in this newsletter.*

(SUGAR from page 1)

A single gram of sugar raises blood sugar significantly. Blood Glucose Rises @ Constant Rate Per Gram Sugar (Norms = 65-110 mg/dL)

In my opinion, responsible health care should direct their patients toward consuming natural food fibers, healthy Omega-3/Omega-6 fatty acids, to accompany any form of simple sugar in order to reduce blood glucose levels from peaking excessively high. Both dietary fat and fiber reduce simple sugar absorption rate. The sweet tooth, comfort-food craving resolution should be to substitute whole fiber-rich, calorie-sparse natural fruit in place of calorie-dense processed sugar. That a food

processor or professional dietetic organizations would promote or permit sugar as an additive for enhancing taste pleasures is akin to promulgating cigarette smoking in children and adults. No? Armstrong et al., (2) associated sugar consumption's Correlation Coefficients (CCr) related to Ischemic Heart Disease and mortality in 30 countries as 0.76 for men and 0.69 for

women, while the condemned cigarette's CCr was a mere 0.41 for men and 0.55 for women.

We need to run from the siren's craving sugar moiety, as did "Ulysses writhe, in hemp fast bound..."[3].

**References**

[1] Milk and Other Dietary Influences on Coronary Heart Disease by William B. Grant, Ph.D. In *Alternative Medicine Review* - Volume 3, Number 4, August 1998. free text @ : <http://www.thorne.com/altmedrev/full-text/milk3-4.html>

[2] Armstrong BK, Mann JI, Adelstein AM, Eskin F. Commodity consumption and ischemic heart disease mortality, with special reference to dietary practices. *J Chron Dis* 1975;28:455-469.

[3] Processed Sugar Intake Negatively Influences Health, Bill D. Misner Ph.D. *bmj.com*, 26 Mar 2004 @ : <http://bmj.bmjournals.com/cgi/content/full/328/7442/730-a?ecoll>

Per lbs Weight 100-Up	1 Gram Carbohydrate Fasting	Blood Glucose Points* 65-110
100	1	Fasting +5
150	1	Fasting +4
200	1	Fasting +4

\*Within upper and lower restricted limits

**16th Annual Client Appreciation Sale : November 15th - December 15th**

*Brian Frank*

Once a year we have a special sale to show you our appreciation for your support. **This year the sale dates will be November 15th to December 15th.**

Some of you may think that this sale is an inventory reduction sale or a means to unload old product that is near its expiration date. This is definitely not the case. My motivation for having the sale has always been a true client appreciation sale that enables those of you who are inclined to do so to stock up on your favorite products for the upcoming season.

When I first began offering this annual sale in 1989, November, December, and January were our slowest months, so we benefited as well. However, with the increase in sales to winter sports participants, a much broader product line that includes many year-round products, international sales (it's Spring in Australia!), and our growth in the retail sector, slow sales during the winter months have not been an issue for the past six or seven years.

Growth begets change and, unfortunately, more rules and exceptions. I want to mention now a couple of sale features so you have advance notice. They'll also be detailed in the sale flyer.

**Here's the scoop:**

**1 :** Since this is truly a client appreciation sale, the sale prices will not be offered to the general public and will not be displayed on our website. When you call or place an order on line, you will need to use this key code: **CA04**. The website shopping cart will not reflect the sale prices even after you supply the key code. We will apply the sale pricing AFTER we import your web order. You must supply the key code at the time of your order to receive the discount pricing. We won't be able to apply the discount retroactively as we have in the past. I know it sounds like we're being rigid on this, but hopefully you will agree that giving us a four character code when you order, in exchange for a 20-30% discount, isn't really asking that much!

**2 :** The sale will be limited to E-CAPS supplements and a few Hammer products. Most of the Hammer products will not be included in the sale, but we will be offering a 20% discount on both flavors of HEED and on Recoverite, since those are new products and not too many of our dealers carry them yet. If you know what's involved in a business that sells directly to customers and also supplies retail outlets, you'll understand why we have these limitations, and you'll also

gladly comply with this simple request: Please do not ask your local retailer to give you a 20% discount or match our sale price on HEED or Recoverite (as, regrettably, some of our clients have done in the past). Either buy from us at the sale price and pay shipping, or buy from your local retailer at their current price.

Look for a Client Appreciation Sale flyer in your mailbox around the middle of November. It might be a good idea to mark your calendar now, so you'll remember in case you don't get a flyer. Please also notice the accompanying article about our being closed the week between Christmas and New Year's Day.

Check out our  
**BLOWOUT  
PRICES**  
on discontinued products  
and clothing!

*Article on page 8*

# Marriage of Mind & Body For Peak Performance

*Reece Haettich*

It's the day of the race you've spent months been preparing for. You worked smart through the off-season and correctly periodized your training. Seemingly nothing can stand in your way, until a peer poses the question, "Are you ready?" Then, much like your \$1,000 pair of wheels rolling downhill, negativity flows from your mouth.

"I didn't get much sleep last night." "They changed the course from last year." "There are more hills" "The rubber band broke on my profile design bottle." And the list goes on.

Where's your faith? Physically you're prepared; mentally you're lacking! Where does one's ability to believe come from?

Some seem to be blessed with an innate ability to have unshakable focus and single-minded purpose, but for those who do not, there's still hope. Add these 10 tips to your mental tool chest, and you'll start building a stronger resolve to accomplish your goals and extract the most from your ability.

## 1. Walk before you run.

Hey, let's face it; this is an instant gratification society. We want it and we want it now-ah, patience my friend. Set a goal; devise a plan. If you do not possess the knowledge to do so, then have a qualified professional help. Now begin your journey. The body is subject to unchangeable laws; it will adapt to stimuli and it will progress. Embrace them and be rewarded, but remember, it's a journey.

## 2. Eliminate distractions.

We all have to juggle career, family life, social life, and other daily activities. However, you must decide what's trivial and what's important. If an activity does not contribute to your well-being, reconsider the time you allot it. Stay focused on your goals-daily, weekly, and monthly.

## 3. Create a positive atmosphere.

Negative thoughts lead to negative words, which lead to negative results. Power, real power, resides in your thoughts and spoken words. Think and speak life, not death.

## 4. Train like you race.

I remember it like it was yesterday-high school track practice and my coach screaming at me, "Run through the finish line!" I had this bad habit of slowing down about five meters before the finish and being passed by my peers. This created a pattern that would carry over to race day. Yielding to those

training day results on race day was not what I was trying to accomplish.

Adhere to your workout protocol, and do it with intensity and purpose. If your run workout calls for three five-minute intervals and you set the goal of 1:30 per 400 meters for five minutes, don't begin to bargain with yourself. Don't say to yourself, "I'll give two hard efforts and slow a little on the last interval," because, lo and behold, race day will pay you off the same way-you won't have it in the end. Prepare and train as if it is RACE DAY!

## 5. Play mind games.

During my stint in the U.S. Army, I was subjected to many cruel and unusual training situations. One I remember well was the circle drill. This exercise consisted of approximately 7-10 items lying on the ground and a squad of 10-11 soldiers running around them. The instructor at this station would have us looking straight ahead and at his command we would have 30 seconds to locate and remember each item in painful detail and then be able to give a description upon request. Now this usually happened at the height of sleep and calorie deprivation. The eyes send some pretty freaky messages to the brain in this condition. Needless to say, we would be there for quite a while. What is the purpose of this sick kind of training? FOCUS!

My years in the Army are long gone, but I still do some pretty sick things to myself, all in the name of performance progression. One of my favorites is the SPEED DRILL, which, after ample warm up, calls for maintaining a particular pace on my bike, let's say 20 mph. I steadily increase my speed until I reach 21. At this point I don't allow myself to drop below 20; when I reach 22 I won't allow myself to drop below 21, and so on until I reach a desired speed or distance. WOOOO HOOOOO, I'M PUMPED JUST THINKING ABOUT IT! This will bring about some FOCUS, BABY. There are a few others, but I don't want my readers to try and Baker act me upon disclosing them.

## 6. Conquer a fear.

Vince Lombardi once said, "Fatigue makes cowards of us all." Hey, nobody likes pain, and we almost always seek to avoid it at all cost, but does it ultimately cost you? Fear can paralyze and fear can motivate; what's your approach? Did fear put men on the moon? Did fear drive a man to be the first to climb to the top of Mt. Everest? Did fear enable a man with cancer to win six consec-

utive Tour de France titles? Did fear send us a Savior by the name of JESUS CHRIST? Fear only exists because of past experiences, or being uneducated or misinformed. Create new experiences, educate yourself, and base your training on proven research. By the way, FAITH is the opposite of fear, and faith enables achievers to do what they have done. Prepare, do the work, and believe.

## 7. Use your weakest time to become strong.

When your body is exhausted and it screams to stop, when technique becomes sloppy and efficiency is no longer part of the equation, this is the time to allow the mind to exploit the situation and grow stronger. As a kid, one of my favorite quotes came from Georgia tailback Herschel Walker: "My body is a tank and my mind is the general." Your body will do whatever your mind tells it: endure the pain, maintain correct form, and stay POSITIVE.

## 8. Finish the final set better than the first.

Mentally and physically, a trained body remembers its last effort. To revisit point four, let's just say you had decided to coast on your third interval and slowed down a bit. You have now transmitted a message of failure. The mind thinks, "Due to my body's lack of muscular endurance, I was unable to accomplish my goal." The body says, "Due to a lack of mental toughness, I was unable to accomplish my goal." Now this is a simplified version of what's going on, but realize a synergistic relationship exists between mind and body. Your next workout will reflect your last effort and will hinder your next performance; therefore it is imperative to finish strong. Strive to perfect your final effort, and you will leave your session with a head-start on your next training or race.

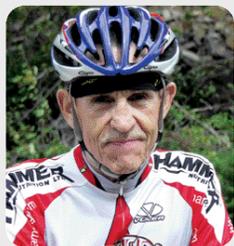
## 9. Success lasts but a moment... create a day!

Victories and PRs are nice; enjoy them for what they are, appetizers to the main course of consistency. The mental strategy of one seeking performance synergy with the body does not rest on past accomplishments, but uses them as a guide towards improvement. I critique victories more than losses because, although I won, it may not have been my best performance. Enjoy your success, but be careful to not become satisfied, for once that happens, progress ceases.

## 10. Be a pioneer.

It was a week before the state track meet.

*continued on page 5*



## Ask Dr. Bill

Bill Misner, Ph.D.

**QUESTION :** What is the rationale behind taking antioxidants (Super AO) after training/competition? It seems if they were taken before a workout, they could neutralize free radicals as they are produced. Is there a reason that taking them after is better than before?

**ANSWER :** You could take Super AO's before a workout when the body's 3 endogenous cellular antioxidants - Super Oxide Dismutase, Catalase, and Glutathione - present a formidable neutralizing barrier to free radicals (FR) produced up to 30% VO<sub>2</sub> Max HR. Once exercise intensity approximates 50-85% VO<sub>2</sub> Max HR, free radical volume reaches between 12-20 times above sedentary levels. Initially, endogenous antioxidants are overwhelmed with cleanup of this excessive FR implosion proportionate to intensity multi-

plied by duration. A small amount of free radicals are not bad. In fact, the human body uses FR's to destroy a variety of consumed or airborne viral bodies and perhaps other microbial invaders, such as bacteria or fungi. However, 1200-2000% post exercise FR-excess levels require only 1-2 Super AO's to assist the body with their removal.

If you were doing a workout last less than 3 hours you could take Super AO before the workout, but then you run the risk of not efficiently neutralizing the free radical excess following. For sure, longer workouts present less of an option, requiring timing your dose to immediately after the workout. Athletes doing rides or runs lasting longer than 6 hours have reported good results taking Super AO during the event. Steve Born was one of the first RAAM riders to test this hypothesis for timing dose on the ride to reduce FR's created during the ride. That makes perfect sense to using Super AO's no sooner than 3 hours into a longer event. It therefore is better to let a few FR's lose in metabolic straights since the body's immune system uses them against invading microbes. Their (FR) excess stimulates the body to build its 3 endogenous antioxidant enzymes stores making it stronger for future stress as opposed to reducing their invasive predicted presence before excesses are produced.

*continued from page 4*

The mile medley team, which I anchored by running the 800, was practicing. The coach called me over and explained how the other members of the relay team were concerned about my ability as the anchor, the reason being we had an open 800 runner who was a shade faster than me, and they wanted him at the anchor position. Coach decided to settle it by having a run-off three days prior to state; the winner would run anchor. As I said, the open 800 runner was slightly faster. He had run a 2:07 to my 2:08; we were that close, and all year we went back and forth during workouts and races. In my mind we were essentially equal, so I had no reason to believe he would take my place.

Well the day came, and the coach had us run the 800 separately; Brian went first. He blazed a 2:01! I couldn't believe it; I had to respond or I was out. Here's a guy who all year had the same workouts I did, at the same speed. We were practically mirrors of one another; how could he run six seconds faster than his previous PR? I lined up with the whole team watching: ready . . . set . .

..GO! It was do or die. Boom! 60 seconds flat for the first 400. I had to hang on! The second 400 shaped the rest of my competitive career. I crossed the line and dropped. What seemed like a distant voice echoed, "2:00 minutes!"

It wasn't until some years later that I realized the lesson I learned from that day. We had come to the end of the season with no real time drops for weeks. We both, for the most part, thought we had peaked. We just thought that was as fast as we could go, or as fast as I could go . . . until he nailed a 2:01. Brian BELIEVED. I won, but Brian was the pioneer, I saw him do it first, which broke the barrier of doubt. Physically I was capable, mentally I didn't believe. Be a pioneer, be the first!

*Reece Haettich is a C.H.E.K. Level 1 Practitioner, Certified Personal Trainer and the Triathlon Specialist at the Peaks Coaching Group. Reece is a two-time Florida State Clydesdale Division Sprint Distance Triathlon champion and continues to compete at the highest levels of the sport locally and nationally. To find out more about Reece, check out his bio at [www.peakscoachinggroup.com](http://www.peakscoachinggroup.com) or contact him directly at [reece@peakscoachinggroup.com](mailto:reece@peakscoachinggroup.com).*

## Hammering the Nordic World

Even though it's still October as I write this, we're already in full swing planning our sponsorship for the 2005 Nordic skiing race calendar. We're honored to continue supporting this great sport, and we look forward to another great year of involvement.

If you're fortunate enough to live where winter means continued groundcover snow, chances are you already Nordic ski, which I believe is one of the greatest workouts you can ever get. If you're a recreational skier, plan a move up to fitness skiing. If you already are a fitness skier, try the competitive level.

We sponsor a variety of races throughout the country (see schedule below), but we're always looking for additional Nordic marathon ski races (25-50 km or longer) to support. If you know of a race that we should be involved with, please email me directly ([steve@e-caps.com](mailto:steve@e-caps.com)) with all the pertinent info (Name of race, race director's name, email address/contact information).

### 2005 Nordic Ski races sponsored by Hammer Nutrition :

- 1/22 : Great Nordeen, Bend/Mt. Bachelor, OR
- 1/22 : Pepsi Challenge, Biwabik, MN
- 1/29 : Craftsbury Marathon, Craftsbury Common, VT
- 1/29 : Subaru Noquemanon Ski Marathon Ishpeming/Marquette, MI
- 2/05 : Alley Loop Marathon, Crested Butte, CO
- 2/05 : Wells Fargo Boulder Mountain Tour Sun Valley, ID
- 2/08 : Idaho Nordic Tamarack Loppet, Tamarack Resort, ID
- 2/12 : Subaru North American Vasa, Traverse City, MI
- 2/19 : Minnesota Finlandia, Bemidji, MN
- 2/26 : Payette Lakes Marathon, McCall, ID
- 3/05 : Banknorth Rangeley Lakes X-C Ski Loppet, Rangeley, ME
- 3/06 : Banknorth Great Glen to Bretton Woods Nordic Adventure, Gorham, Bretton Woods, NH
- 3/13 : Great Bear Chase Ski Race, Calumet, MI
- TBA : Nicolet Norski Classic, Lakewood, WI
- TBA : OSCR Seeley Lake Nordic Marathon, Seeley Lake, MT

# Dietary Fructose Or Fructose-Containing Sweeteners Negatively Impact Human Health

Bill Misner, Ph.D.

Consuming as little as 40-50 grams or slightly over 1.5-ounce fructose over a 10 hour period may increase blood pressure, blood triglycerides, reduced insulin binding & insulin sensitivity, and increase fat weight gain. The disturbing fact is that the general population has been consuming more than that amount every day for the past 34 years. Total fructose consumed per person from combined consumption of sucrose and high-fructose corn syrup has increased by +26%, from 64 g/d in 1970 to 81 g/d in 1997. As Body Mass Index increases (fat weight gain), the increased risk of insulin resistance, impaired glucose tolerance, hyperinsulinemia, hypertriglycerolemia, and hypertension may occur.

Fructose consumption as reported from animal studies has been associated with:

- Increased Lactate**
- Insulin Resistance**
- Impaired Glucose Tolerance**
- Hyperinsulinemia**
- Hypertriglycerolemia**
- Hypertension**

## THE PATHWAY:

### How the liver disposes of fructose

Both plasma insulin and leptin act in the central nervous system in the long-term regulation of energy homeostasis. Because fructose does not stimulate insulin secretion from pancreatic  $\beta$  cells, the consumption of foods and beverages containing fructose produces smaller postprandial insulin excursions than does consumption of glucose-containing carbohydrate. Because leptin production is regulated by insulin responses to meals, fructose consumption also reduces circu-

lating leptin concentrations. The combined effects of lowered circulating leptin and insulin in individuals who consume diets that are high in dietary fructose could therefore increase the likelihood of WEIGHT GAIN with its associated metabolic disorders. Fructose, compared with glucose, is preferentially metabolized to lipid in the liver.

Hepatic fructose metabolism begins with phosphorylation by fructokinase. Fructose carbon enters the glycolytic pathway at the triose phosphate level (dihydroxyacetone phosphate and glyceraldehyde-3-phosphate). Thus, fructose bypasses the major control point by which glucose carbon enters glycolysis (phosphofructokinase), where glucose metabolism is limited by feedback inhibition by citrate and ATP. This allows fructose to serve as an unregulated source of both glycerol-3-phosphate and acetyl-CoA for hepatic lipogenesis. P, phosphate.

The hepatic metabolism of fructose has important effects on both glucose and lipid metabolism. Absorbed fructose is delivered to the liver via the portal vein. Fructose is phosphorylated in the liver by adenosine triphosphate to form fructose-1-phosphate. The reaction is catalyzed by the enzyme fructokinase. Fructose-1-phosphate is split by aldolase B into glyceraldehyde and dihydroxyacetone phosphate. Both can be converted to glyceraldehyde-3-phosphate. Thus, the fructose molecule is metabolized into 2 triose phosphates that bypass the main rate-controlling step in glycolysis, 6-phosphofructokinase. By contrast, hepatic glucose metabolism is limited by the

capacity to store glucose as glycogen and, more importantly, by the inhibition of glycolysis and further glucose uptake resulting from the effects of citrate and ATP to inhibit phosphofructokinase. The products of fructose metabolism in the glycolytic pathway of the liver are glucose, glycogen, lactate, and pyruvate. Because fructose uptake by the liver is not inhibited at the level of phosphofructokinase, fructose consumption results in LARGER INCREASES OF CIRCULATING LACTATE than does consumption of a comparable amount of glucose.

Elliott et al., hallmark review of the literature reported several harmful effects from habitual consuming of processed fructose-containing sweetener agents. They report that regular consumption of processed fructose negatively impacts blood pressure, blood lipid triglycerides, insulin resistance and glucose metabolism, with fat weight gain proportionate to time and total dose. (Editor's note: The study is represented in the tables shown)

## CONCLUSION :

Only a modest amount of processed fructose sugar is associated with harmful consequences to human subjects and more precarious interventions imposed in animal research. Healthy normal athletes should NOT therefore impose a known health risk during exercise or during sedentary mealtimes by consuming a processed fructose-sugar sweetener.

References available upon request.

## Negative Effects On Blood Pressure

Species	Amount fed	Length	Effects on blood pressure
Rats	35% of energy as fructose and 35% as starch or 70% starch or 59% fat	4 wk	Increased mean arterial pressure with fructose
Rats	5%, 10%, or 20% fructose in drinking water	$\geq 1$ wk	Fructose-induced hypertension with 10% solution by end of 1 wk
Rats	66% of energy as fructose with or without sodium chloride	3 wk	Systolic BP increased in fructose-fed rats receiving the high-salt diet
Dogs	60% of energy as fructose or dextrose	20-28 d	Mean arterial pressure increased with fructose
Humans <sup>1</sup>	0%, 7.5%, or 15% of energy as fructose	5 wk ea	Systolic BP slightly higher with 0% fructose; no difference in diastolic BP

## Negative Effects On Fat Weight Gain

Species	Amount fed	Length	Effects on fat gain
Rats	15% of energy as fructose or cornstarch	15 mo	No differences in body weight or relative food intake
Hamsters	60% fructose or sucrose	2 wk	Increased energy intake, weight gain, and adiposity with fructose
Humans <sup>1</sup>	1150 g soda sweetened with HFCS or artificial sweetener	3 wk	Increased energy intake and body weight with soda sweetened with HFCS
Humans <sup>2</sup>	50-60 g fructose/d	24 wk	Increased body weight
Humans <sup>3</sup>	28% of energy as sucrose or artificial sweetener	10 wk	Increased energy intake, body weight, and fat mass with sucrose intake

BP, blood pressure

Humans<sup>1</sup> : Males with or without hyperinsulinemia

HFCS, high-fructose corn syrup

Humans<sup>1</sup> : Males and females

Humans<sup>2</sup> : Middle-aged males

Humans<sup>3</sup> : Overweight males and females

### Negative Effects On Triglycerides

Species	Amount fed	Length	Effects on lipids
Rats	68% fructose	100 d	Increased TGs that were reversed when a chow diet was reintroduced
Rats <sup>1</sup>	Fructose or starch as the sole carbohydrate source	4 wk	Increased TGs with fructose; increased total cholesterol with fructose plus copper
Dogs	60% of energy as fructose or dextrose	20-28 d	Increased fasting TGs with fructose
Humans <sup>1</sup>	0%, 7.5%, or 15% of energy as fructose	5 wk ea	TGs in hyperinsulinemic men increased as fructose increased
Humans <sup>2</sup>	20% of energy as fructose or cornstarch	5 wk ea	TGs increased in both groups with fructose but not with cornstarch
Humans <sup>3</sup>	Consumed either sucrose, fructose, or xylitol	2 y	No differences in plasma cholesterol or TGs
Humans <sup>4</sup>	40 g fat with or without 50 g fructose	10 hours	Fat plus fructose led to higher postprandial TGs; increased TGs correlated with baseline TGs
Humans <sup>5</sup>	1 g fat/kg body wt plus 0.75 g/kg body wt of either fructose or starch	6 hours	TGs rose more slowly but were higher after fructose than after starch 4-6 h after the meal; increased TGs positively correlated with fasting insulin
Humans <sup>6</sup>	17% of energy as either fructose or glucose	6 wk	Higher fasting and postprandial TGs in older men with fructose
Humans <sup>7</sup>	30% of energy as fructose or glucose with 3 meals	24 hours	Higher postprandial TGs with fructose and higher fasting TGs the following day

*TG, triacylglycerol*

**Rats<sup>1</sup>** : Copper replete or deficient

**Humans<sup>1</sup>** : Males with or without hyperinsulinemia

**Humans<sup>2</sup>** : Males with or without hyperinsulinemia

**Humans<sup>3</sup>** : Males and females aged 13-55 y

**Humans<sup>4</sup>** : Males and females

**Humans<sup>5</sup>** : Males & females with or without type 2 diabetes

**Humans<sup>6</sup>** : Males and females

**Humans<sup>7</sup>** : Females

**Rats<sup>1</sup>** : Copper replete or deficient

**Humans<sup>1</sup>** : Males and females

**Humans<sup>2</sup>** : Males with or without hyperinsulinemia

### Negative Effects On Insulin Resistance and Glucose Metabolism

Species	Amount fed	Length	Effects on insulin resistance and glucose metabolism
Rats	54% of energy as sucrose or cornstarch	11-13 wk	Increased insulin response to meals and reduced insulin sensitivity with sucrose
Rats	35% of energy as fructose or glucose	4 wk	Reduced insulin sensitivity with fructose
Rats	15% of energy as fructose	15 mo	Increased fasting serum insulin and fasting serum glucose with fructose
Rats <sup>1</sup>	62% fructose or starch	2 wk	Increased plasma insulin with no reduction of plasma glucose with fructose
Rats	66% of energy as fructose	2 wk	Plasma glucose and insulin responses to oral glucose load greater in fructose-fed rats
Hamsters	60% fructose or sucrose	2 wk	Decrease in glucose disappearance rate with fructose feeding
Dogs	60% of energy as fructose or dextrose	20-28 d	Fasting insulin concentrations increased and insulin sensitivity decreased w/ fructose
Humans <sup>1</sup>	4.18 MJ (1000 extra kcal) as fructose or glucose	7 d	Reductions in insulin binding and insulin sensitivity with fructose
Humans <sup>2</sup>	0%, 7.5%, and 15% of energy as fructose	5 wk ea	15% fructose resulted in higher insulin & glucose responses than did the other diets

## Hammer Pouches : Lots of changes going on

### New Hammer Gel Pouches

Having pioneered the bulk-packaged gel and flask system, we have been somewhat reluctant to “keep up with the Jones’s” regarding single-serving pouches. However, we have accepted the fact that pouches are here to stay, so, according to our usual business practice, we set out to do pouches better than anyone else.

Our new pouch is completely up to industry standards with a gusseted base and a smaller overall size. Instead of the tired old bottle shape, the new design features a distinctive claw hammer shaped neck and top. We also color-coded each flavor to brighten the display and help consumers quickly and easily identify each of our flavors.

We already have the new pouches here for direct orders, and very soon our retail partners will also have them in stock. As you may have discovered, our pouch inventory had been pretty sketchy for the past six weeks or so, due to some “teething” problems with the new pouches.

We want to assure you that this will not be an ongoing problem and that we will be fully stocked again very soon, if not by the time you are reading this. Thank you for your patience during this time.

### 12-Count Pouch Boxes

Now that we have these snazzy new pouches, we also went ahead and updated the box that they are packed in as well. So, in the near future when you see Hammer Gel on display at your favorite bike shop or specialty store, the pouches will be displayed in these new 12 count boxes. Honestly, I thought that the refillable 48 unit display was better for the shops since their counter space is at such a premium. However, we’ve had a consistent and unanimous stream of requests from the retailers and our distributors to “conform” to the industry standard in the form of self forming POP (Point of purchase), one time use, displays. It’s more expensive and wasteful, but the customer, in this case the retailer, is always right.



## It Has To Go! Discontinued products

In an effort to make room in our warehouse we’ve come up with some killer deals on product that we are no longer offering but still have inventory of.

**\* Cardio Caps and Enduro Caps :** Two potent products for increased energy levels during training and racing. These were replaced in combination by Race Caps Supreme. **\$10.00 for 1 bottle Cardio Caps and 1 bottle Enduro Caps (was \$37.95)**

**\* Shark Cartilage :** An aid in reducing pain, stiffness, and swelling. This excellent joint product was rolled into the newly formulated Tissue Rejuvenator. **\$8.00 per 100 capsule bottle (was \$24.95).**

Another area that needs cleaning out is clothing. We have a variety of styles and sizes of our previous clothing design (red and white) that are taking up too much space. Listed below are the items that we have and their sale prices.

All orders for these products and clothing items must be placed via phone.

### Products

Shark Cartilage : \$8  
Cardio Caps / Enduro Caps : \$10

### Clothing

Short Sleeve E-CAPS tee (olive) : \$7.50 : *S, M, L*

Women’s Tri Skinsuit : \$20 : *L, XL*  
Women’s Tri Shorts : \$10 : *L, XL*  
Women’s Tri Shimmel : \$10 : *XL*  
Men’s Tri Skinsuit : \$20 : *L*  
Men’s Tri Top : \$10 : *S, M, L, XL*

Arm Warmers : \$10 : *XXL*  
Cycling Skinsuit : \$20 : *S, L*  
Long Sleeve Jersey : \$15 : *S, XXL*  
Wind Jacket : \$20 : *XL, XXL*  
Wind Vest : \$15 : *M, XL*

Men’s Red Cycling Shorts : \$15 : *XL*  
Men’s Black Cycling Shorts : \$15 : *S*  
Men’s Red Bib Cycling Shorts : \$15 : *XL*  
Men’s Black Bib Cycling Shorts : \$15 : *XL*

Women’s Red Cycling Shorts : \$15 : *L, XL*  
Women’s Black Cycling Shorts : \$15 : *XL*  
Women’s Cycling Jersey : \$10 : *L, XL*  
Women’s Red Bib Cycling Shorts : \$15 : *M*  
Women’s Sport Top : \$10 : *S*

*Prices good while supplies last.*

## Christmas is Coming!

Put E-CAPS & Hammer Nutrition products on your list

Have a hard-to-buy-for athlete in your life? Is your family stumped when it comes to buying presents for you? This Christmas, give the gift of health and improved athletic performance with E-CAPS & Hammer Nutrition products.

*Gift certificates  
available*

**Don’t be left out in the cold!**  
**1.800.336.1977 : [www.hammernutrition.com](http://www.hammernutrition.com)**

## Nate's Corner : End of Season Plan

*Nate Llerandi*

Some of us have raced our last race of the season. For others, the last race is right around the corner. We train hard and focus even harder for that final event, hoping for results that will make all the sweat and exertion worth the while, but once that race is over, what do we do?

I recommend taking at least two weeks completely off. That's right, no training whatsoever. When I raced as a pro, I would lay off a complete month at the end of every triathlon season. Both your body and mind need time to recover from the long season, but the mental break is actually more important, if you've been smart with your training plan throughout the year. All internal batteries need time to recharge.

If you're adamant about not taking time off, then I recommend transitioning into sports other than your primary training. Cut back to fewer than 50% of your normal training volume, keep your effort sub-aerobic (below

70%), and enjoy sports and activities you don't normally have time for. For example, run or hike instead of cycling. Or swim instead of running. If you're a triathlete, then avoid swimming/running/biking and rollerblade instead. You can remain active and still allow yourself a break from the normal grind.

If you do decide to keep exercising (it's NOT training at this point-be clear on this), then I recommend a five-week transition phase. If you want to get back into your primary sport after that, ease into it. You'll be surprised how quickly your top level of fitness will return and how excited you'll feel about tackling your training for the 2005 race season.

*Nate Llerandi is a former national champion class swimmer/world class triathlete. He has been coaching since 1990 and creates programs for athletes of all sports and ability levels. You can contact him at [natellerandi@yahoo.com](mailto:natellerandi@yahoo.com)*

## Hammer Gel Wins Readers Choice Award : Two Years Running

At the recent Interbike trade show in Las Vegas, we were pleasantly surprised to receive the MTBReview.com award for the highest rated nutrition product based on consumer reviews in a category that includes all energy bars, drinks and gels. Hammer Gel regularly receives the coveted "5 chili pepper" rating and is also the highest consumer rated energy gel on [roadbikereview.com](http://roadbikereview.com) as well. If you've submitted a review to either of these web sites, we really appreciate it!



## The E-CAPS Bookstore : Open for business

*Brian Frank*

We're not trying to compete with [amazon.com](http://amazon.com), and we won't be offering dozens and dozens of titles. However, for several years now I've wanted to provide a very short list of books that I feel are classics in their field, titles that every health-conscious athlete should have in their library. Some of these books are the originals that spawned the health food and sugar awareness movement and others are simply hard to find. You won't find any trendy titles or the latest New York Times bestsellers in our bookstore.

So, without further ado, here are the titles and brief descriptions of current offerings, available either through our new website or by calling our toll-free number.

**Food Is Your Best Medicine** by Henry G. Bieler, M.D., \$6.99 - This is the book that started the health food revolution. Hundreds or thousands of books have been written since then on this subject, but this is the original. This book features a fascinating interpretation of how the body functions to maintain good health, and it addresses all kinds of ailments with specific nutritional approaches. An essential volume for any health library.

**Sugar Blues** by William Dufty, \$6.99 - Over 1.6 million copies in print. The classic #1 health bestseller that exploded the sugar myth and inspired a health revolution.

**Water: The Shocking Truth That Can Save Your Life** by Paul C. and Patricia Bragg, \$8.95 - What is the best type of water to drink? This book tells everything there is to know about water and its central role in your health and longevity.

**The Artificially Sweetened Times**, 50¢ - A community service publication sponsored by The Idaho Observer newspaper and produced in cooperation with Mission Possible and Vaccination Liberation. The intent of the editors is to present a balance of information regarding the synthetic food and beverage sweetener aspartame.

**Treat Your Own Back** by Dr. Robin McKenzie, \$10.95 - Dr. McKenzie is the grandfather of conservative (non-surgical) back care. Help yourself to a pain-free back. This easy-to-follow book presents over 80 pages of education and clinically proven exercises. The simple and effective self-help exercises in this book have helped thousands

worldwide find relief from common low back and neck pain. It will help you understand the causes and treatments, along with a system of exercises that can help you relieve pain and prevent recurrence.

**Treat Your Own Neck** by Dr. Robin McKenzie, \$10.95 - For those of you with chronic neck pain and headaches, this is the book and exercise program for you.

**Nutrition For Endurance: Finding Another Gear** by Bill Misner, Ph.D., \$19.95 - This book explains, in terms we all can understand, how our muscles and bodies really work, what fuels endurance, which nutrients and minerals are essential for athletic performance, and how their depletion causes premature exhaustion. Our very own Dr. Bill tells us why, what, how, and when to use athletic supplements, nutrients, micronutrients, and fluids to find another gear-and live better, too.

We'll be adding more titles soon, so check the bookstore in a few weeks for more great books.

## Why we use a 3:1 ratio in Recoverite

Bill Misner, Ph.D.

Research supports the concept for utilizing 4 parts carbohydrate to 1 part protein during the 120-minute window-of-opportunity in order to exogenously impact lean muscle mass growth and glycogen restorage. Shortly after Ivy and Burke and several others specified results with a 4:1 ratio, a patented product was then marketed. Another research paper using elderly subjects in a strength exercise (weights) found conclusively that when these subjects lifted weights 3 days per week and consumed 1 part carbohydrate to 1 part protein, they positively achieved lean muscle mass growth gains. This later study skews the conclusion of the former calling for the question of what ratio protein to carbohydrate best supports lean muscle mass growth and glycogen restorage post-depletion workout. In other words, research is inconclusively leaning toward the 4:1 ratio, but has not excluded the 3:1 or 5:1 ratio's due to not having studied them as much as the patented 4:1 ratio. This leaves me with the opinion that as far as conclusive research data go, the jury is still out waiting for more papers to be published on other ratio values.

An endurance exercise session lasting more than 3 hours depletes muscle glycogen and likely cannibalizes around 50-60 grams of

lean muscle proteins, and probably around 500-600 grams glycogen which should be replaced. The total dietary replacement ratio then is at least 10:1 Carbs:Pro. Since the glycogen synthase enzyme released during glycogen depletion has a short half-life effective for 90-120 minutes, but most effectively available at 30 minutes post exercise, it behooves us (according to Colgan, Costill, Noakes, Hawley, Ivy etc) to drive replacement proteins on the insulin-glycogen synthase "train" for effective maximal replacement. If you try to replace all the glycogen in one or two meals spaced an hour apart with all the protein, too much carbohydrate in one meal will produce excess adipose fatty acid storage. Cutting the carbs down to small dose will produce the insulin and provide maximum storage rate for the protein fraction delivery into the muscle cell for the lean muscle mass rebuilding process. Replacing all of the 70-90 minutes glycogen stores may actually require a 3-day taper with frequent carbohydrate snack/meal intake.

The 3:1 carbohydrate:protein post-exercise protocol is rational for the endurance athlete, especially if lean muscle mass recovery is the objective. Adding 1 more part carbohydrate raises the carbohydrate component (to 4:1) and may be beneficial for athletes

who are free from carbohydrate-induced fat weight. Of the two ratios - 3:1 or 4:1 - the low-carb Recoverite appears to be favorable for endurance lean muscle gain than the 4:1 higher carb patented formula. Recoverite is formulated for your convenience. Altering the formula in any direction toward more protein or more carbohydrate should be monitored by fat weight gain and lean muscle mass gain accordingly.

Since we saw the research that showed positive lean muscle mass growth in older subjects using 1:1 Carb:Pro recovery refueling, our opinion is that the lower carbohydrate version is superior to the higher carbohydrate version. Younger athletes with higher Basal Metabolic Rate, however, can "get by" with consuming higher carbohydrate calories than those of us over age 35...and counting.

## Real Gains Happen When You Recover Right!

### RECOVERITE

Glutamine Fortified Recovery Drink



32-serving \$39.95

The real gain of exercise occurs during recovery, but only in the presence of adequate rest and optimal nutritional support. That's where RECOVERITE comes in, providing unsurpassed nutritional support to ensure you obtain the maximum value from your workouts and complete recovery after each training session and race.

- Ideal 3:1 carbohydrate to protein ratio
- 100% whey protein isolate - no inferior proteins
- Enhanced muscle glycogen synthesis
- Optimal immune system support from 3 grams of L-Glutamine/serving
- You get only what's good for you - No artificial anything!
- Replenish lost electrolytes
- Pleasant, light citrus flavor

Ensure superior recovery with Recoverite!

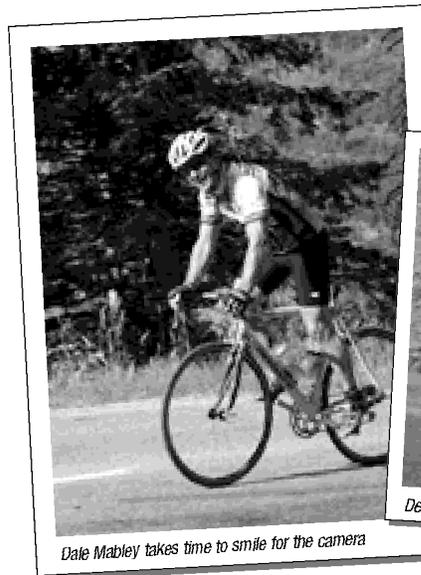
1.800.336.1977 : [www.hammernutrition.com](http://www.hammernutrition.com)

## 2004 Highline Hammer Re-Cap : A weekend full of food, fun & fellowship

Steve Born

Great riding, great food, great information, great weather, and great company... those qualities defined this year's Highline Hammer event, which took place from Friday, July 30th - Sunday, August 1st. Unlike last year which saw the Flathead Valley filled with smoke from neighboring fires (causing the riding venues to be moved around a bit), we had wonderful weather each day this year, which made for lots of excellent riding. While there were many highlights - including Dr. Bill's great presentation, the incredible food in plentiful supply (we ate well!) - arguably the primary highlight of the weekend is the unforgettable ride around Glacier Park, a 130+ miler with lots of climbing and spectacular views, which we all did on Saturday. We were all pretty tired after that effort but a great meal at the Rising Sun Bistro was a wonderful "reward" that evening.

The Highline Hammer is just a wonderful event to be a part of and we hope you'll consider coming out to beautiful Montana and joining us for next year's edition. Keep your ears tuned in the months ahead for announcements regarding the 2005 Highline Hammer.



Dale Mabley takes time to smile for the camera



Denise Croucher roars down the east side of Logan Pass

### What the riders had to say :

"Brian, Soni, Joe, Steve, Dr. Bill, Tony & the rest of the team at E-CAPS & Hammer Nutrition have created a wonderful event that brought together a wonderfully eclectic and diverse group of cycling enthusiasts. Thank you for the personal care and great educational experience. I am proud to be part of the group and I have a much better understanding and appreciation for the value of nutrition and sport."

Jamie Holmes  
Greenough, Montana

"A big thank you to Brian and his crew at Hammer Nutrition. There is no doubt in my mind of the great quality and class of every-

one involved in the Highline Hammer. I learned something new from everyone I met and will definitely be back"

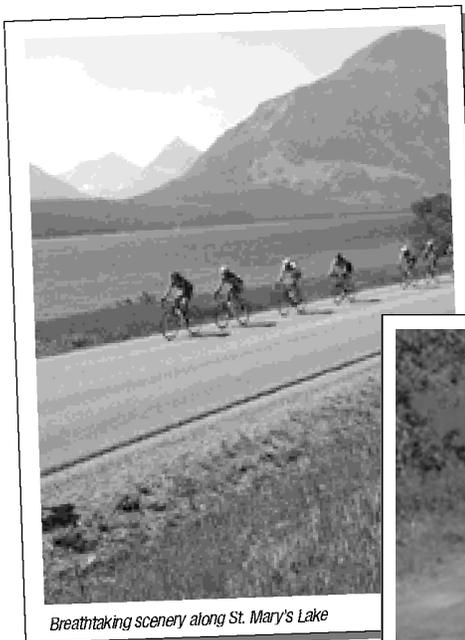
Troy & Jana DeLong  
Elko, Nevada

"Great people at Hammer Nutrition...good athletes, knowledgeable, professional, accommodating, caring, excited about what you do! The weekend was very enjoyable with all of the riding and the conference and the food too!"

Bob Dwenger  
Olathe, KS

"We came, we ate, we rode, we sweated a bit and we laughed a lot. Joe was the sheep dog on wheels, pushing me up Lookingglass Pass, popping electrolytes into cramped hammer heads and swinging a mean spatula. The seminar presentations by Dr. Bill and Steve were highly informative. The scene around the restaurant garden with everyone literally twitching over the appetizers still makes me laugh. My friends and I agree, you can't explain to people what it was like, you have to be there. See you all next year."

Bill Nicolai  
Vancouver, Washington



Breathtaking scenery along St. Mary's Lake



Dr. Bill puts the hammer down on Logan Pass

All photos courtesy of Angela Nock



Steve Born : Senior Technical Advisor

Welcome to the autumn issue of Endurance News! It's been an incredible summer for us in many ways, especially with the introduction of HEED and Recoverite, two products that have received tremendously positive feedback. We're also very excited about the introduction of the newly restyled Hammer Gel pouch. Our revised website is another cause for celebration (please see the article on page 2 for more details).

#### **New Website Articles - Beyond the Basics**

Speaking of the new website, I want to let you know that we've added new articles to the site, some of which augment articles already present. Let me back up a bit though, before I talk about the new articles and information. Whether you're a long-time E-CAPS/Hammer Nutrition client or you're just getting started with us, the place to start when you first visit our website is either the KNOWLEDGE section or the "Getting Started" link in the PRODUCT section. Here you will find several articles that discuss all the E-CAPS and Hammer Nutrition products. The first article, "The Hammer Nutrition Fuels - What they are, how to use them, when to use them," provides complete information about all the Hammer products, the differences between the various fuels, and usage suggestions. If you're not sure what product to use, when to use it, or how much to use, this article will provide the answers you seek.

The next article is called "The E-CAPS Daily Essentials Formula - A protocol for optimal endurance and health." This article answers the frequently-asked question, "Of all the supplements in the E-CAPS line, which ones should I start with, and why?" The answer to that question is Premium Insurance Caps, Race Caps Supreme, and Mito-R Caps. This article details the rationale behind this recommendation and also provides usage suggestions.

A new series of articles - "Beyond the Basics: Taking your supplement program to a new

## **From The Saddle Of Steve Born : The end of summer**

level" - addresses the remainder of the E-CAPS supplements, the products you should consider next after you have incorporated the three Daily Essentials into your supplement program. Part One of this three-part series lists supplements belonging to the category we call "VERY IMPORTANT." These supplements do not replace the three Daily Essentials, but would be the next logical step, complementing the Daily Essentials products wonderfully by providing additional support and benefits. The products listed in the Very Important category are ones that can be used daily or on an as needed basis.

Part Two discusses the next category, "IMPORTANT." Overall, for most people most of the time, these products are not crucial in comparison to those found in the first two categories (Daily Essentials or Very Important), but they do provide additional benefits beyond the nutrient strength of the products in the first two categories. If you're seeking the ultimate supplement program for enhancing your athletic performance and overall health, then you should consider the products listed in this category.

Part Three in this series discusses supplements listed under the category "SPECIFIC," meaning those products not taken on a regular basis, but which may actually become essential for certain athletes under specific conditions.

#### **Secrets To Triathlon Success**

About a year or so ago, triathlon coach Nate Llerandi and I collaborated on a booklet we called "Secrets To Triathlon Success." This 22-page booklet contains Nate's expertise on race strategies and tactics; I provided detailed information and suggestions regarding supplements and fuels the triathlete should consider both in training and on race day.

We've recently completed the updated version of this triathlete-specific handbook and it's now available on our web site as a pdf. We've added a substantial amount of new information, so this new booklet is over twice the size of the original. You can find this new guide in the KNOWLEDGE section of the website, under the "Free Downloads" link.



#### **PAC Tour**

I recently had the opportunity to join my good friends Lon Haldeman and Susan Notorangelo on the first five days of their Ridge of the Rockies

PAC Tour, which started in Kalispell,

Montana on September 8th and finished in El Paso, Texas on September 25th (average 108 miles & 4722' of climbing daily). Lon and Susan are truly two ultra-cycling legends (they're two of the handful of people who played an integral role in my getting into the sport) and their PAC Tours are well known for being meticulously organized, challenging, and about the most fun you can have on a bike. E-CAPS/Hammer Nutrition enthusiastically supports PAC Tour.

Their website says it all: "PAC Tour (Pacific-Atlantic-Cycling Tour) was started in 1981 by cross country record holders Susan Notorangelo and Lon Haldeman as a way to offer the long distance cyclist the ultimate cycling vacation. Lon and Susan will offer their experiences from over fifty transcontinental rides to make your PAC Tour as smooth as possible. The support staff is made up of the most professional individuals including many former Race Across America veterans. PAC Tour is rated by BICYCLING Magazine as "the toughest tour in the world". PAC Tour does not follow the flattest, smoothest or easiest route across the country. PAC Tour routes are designed to offer the best cycling routes each day between motels and points of interest. If you are looking for an easy, flat, tail-wind tour across America, do not sign up for PAC Tour."

I wanted to take this opportunity to thank Lon and Susan for their hospitality during the time I was on the tour. Though I was only able to stay for five days, it was a most memorable five days, and I had an absolute blast of a time. If you're into long distance cycling, you owe it to yourself to do at least one PAC Tour in your lifetime. Lon and Susan offer a variety of tours each year; get all the details at [www.pactour.com](http://www.pactour.com)

#### **Furnace Creek 508**

Well, if it's autumn that means it's Furnace Creek 508 time. As most of you know, this race is a very special one for me (Who was that crazy man who did two of these back-to-back!?!). Seriously, this is an epic race and one that we at E-CAPS/Hammer Nutrition consider a great honor to sponsor.

This year's race, slated for October 16 - 17, boasts the largest, strongest field ever assembled. As of late September six women have entered, led by last year's runner-up Janet Christiansen. The particularly impressive solo men's field includes former 508 champions Justin Peschka (1997, 1999) and

*continued on page 13*

## Product Spotlight : i-Flora

Steve Born

In addition to developing our fine line of supplements and fuels, we here at Hammer Nutrition also carefully examine the market for offerings that have outstanding merit and value and meet our stringent criteria for safety, health, and integrity. A couple of recent terrific recent finds include the Compex Sport Muscle Stimulator and the Organic Vegan Food Bar; we've featured them previously in Endurance News.

Now I'd like to introduce you to a "guest" product in our supplement line: Sedona Lab's iFlora, arguably the "Rolls Royce" of probiotics. Believe me, we searched this product niche up and down, and in the world of healthy bacteria products, this supplement has no peer.

Okay, so it's great stuff, but why would an athlete want to consider a probiotic supplement? What is iFlora all about? Good questions, so let's take a closer look.

In the nutrition world there's a well-accepted train of thought that suggests, "Disease begins in the gut." In other words, intestinal health plays a crucial role in regards to overall health. One aspect of intestinal health is the battle between "good" and "bad" bacteria for colonization. Good bacteria fill important roles in digestion, while bad bacteria, of course, cause illness and disease. If your gut is unhealthy, the entire body is negatively affected. Infections, poor diet, stress, overuse of anti-inflammatory medications (NSAIDs), antibiotic use, and

even chlorinated water can deplete or destroy the healthy bacteria living in the human digestive system. This can allow undesirable bacteria to flourish and compromise digestive system function, nutrient absorption, intestinal health, and immunity.

Maintaining healthy intestinal flora should be a special priority for athletes. Dr. Bill Misner writes, "Poor diet, stress, antibiotics, and aging can tend to increase the "bad" (pathogenic) bacteria, which may be blamed for several gastrointestinal problems endurance athletes suffer from during extreme events. Probiotics are "good" bacteria that are healthful for normal intestinal function that prevents harmful bacteria from causing stomach problems or worse, disease."

One well-known nutritionist wrote, "Unhealthy flora can result in the liberation of abnormally high levels of ammonia as protein-containing foods are digested. This irritates the intestinal membranes. In addition, the ammonia is absorbed into the bloodstream and must be detoxified by the liver..." High blood levels of ammonia are linked to fatigue and every step that can be taken to minimize excess ammonia production and accumulation should be taken. For

many, many reasons, one of which is to help prevent excess ammonia production where it first manifests, the wise athlete will make sure the "gut is healthy" at all times.

Fortunately, there is an easy way to keep the all-important balance of intestinal flora in favor of the "good guys," especially after a course of antibiotics, which knocks out the good and the bad alike. That's where iFlora comes in, loaded with eight times more strains and 12 times the number of viable cells per gram than ordinary probiotics. In fact, iFlora is the most potent multiple probiotic known, checking in at 30 billion viable cells of 16 different valuable strains per gram. Simply put, there is nothing stronger or more beneficial for re-establishing optimal intestinal health. When we find a product like this, we add it to our line so that you can benefit.



iFlora is easy to use and inexpensive, too. After a course of antibiotics, or during times of digestive/intestinal discomfort or problems (such as candida), take two capsules daily for two weeks. After two-weeks of iFlora (which costs about 84 cents a day), we suggest a daily maintenance dose of one or two Digest Caps (22 or 44 cents daily), though continual use of iFlora is certainly acceptable.

*continued from page 12*

Eric Ostendorff (2002), 2003 Race Across Oregon (RAO) Champion Gregg Geser, current RAO champion Graham Pollock, and 38 other male ultra cyclists.

New this year is a fixed gear division. If you know the 508 terrain, this is truly incredible; nonetheless, four men have checked that box on their entry form. Equally challenging is recumbent division. James Shrike, who set the record last year at 33:43:15, returns to defend his title.

A new feature in the team divisions will make for an interesting race: teams will follow a fixed relay format. In the past teams were allowed to put one or more riders on the road at the same time, as desired. The new

format means that teams will race the event in stages, wherein each team member will race from one time station to the next, then pass the baton to another team member. Race director Chris Kostman writes, "There are seven time stations and thus eight stages on the course; two rider team members will race four stages each and four rider team members will race two stages each. Racers will switch off while stationary in the presence of the time station staff, passing a baton between them before resuming racing. Teams must complete the route in a fixed order." For the eight 4-person teams and the seven 2-person teams entered, this will be a new and exciting challenge.

Depending on when you receive this issue of Endurance News, the race may or may not have already taken place. You can follow the

race in progress or check final results at [www.the508.com](http://www.the508.com)

It's been a great summer here in beautiful Whitefish and, with autumn here, we're already thinking about a great winter of skiing. I hope you've had a safe, healthy, and successful summer as well. I do thank all of you, on behalf of everyone here at E-CAPS & Hammer Nutrition, for your continued patronage.

Have a great autumn!



## Chris Kostman

'Ultra'-Involved

*This issue's spotlight is on ultra athlete and race director Chris Kostman. Needless to say, a book could be written about Kostman's accomplishments; still in his mid-30's, he's done more than most of us will in a lifetime.*

*Of all his many athletic achievements, perhaps the most note-worthy one came in the 1987 Race Across America, which that year ran from San Francisco, CA to Washington D.C. (the second longest RAAM in history at 3127 miles). This was Chris's first attempt at RAAM, yet he finished in a solid 9th place (of 37 solo entrants). The most significant distinction about this accomplishment is that Chris did it at age 20. To this day he is still the youngest finisher to complete RAAM.*

*His involvement in ultra cycling and RAAM runs deep and Chris has crossed America twelve times - twice racing, three times officiating, once crewing, and six times as race director of Team RAAM. Other accomplishments include competing in the Iditasport in Alaska seven times, Ironman Canada twice, the Triple Ironman Triathlon in France, and the 24 Hours of Adrenalin in Laguna Seca and Idyllwild. Additionally, back in the 80's, Chris set or broke seven different ultra cycling (UMCA) records. WHEW!*

*Today, while Chris still trains regularly and competes on occasion, his primary involvement in endurance sports is as race director. And oh, what two distinguished races he's in charge of: the 135-mile Kiehl's Badwater Ultramarathon running race ([www.badwaterultra.com](http://www.badwaterultra.com)) and the Furnace Creek 508 ultramarathon cycling race ([www.the508.com](http://www.the508.com)), both of which are under the AdventureCORPS banner ([www.adventurecorps.com](http://www.adventurecorps.com)). In addition, Chris, along with partner Deborah Caplan, runs Planet Ultra ([www.planetultra.com](http://www.planetultra.com)), a series of meticulously organized, heavily attended long distance cycling events (primarily double centuries) in Southern California. E-CAPS/Hammer Nutrition enthusiastically supports & sponsors all of these events.*

**Steve:** Chris, as mentioned in the introduction, you've led quite the life already and I haven't even touched on your non-athletic accomplishments. What do you do besides ride and race and promote rides and races?

**Chris:** I've worked semi-regularly as an archaeologist in the Middle East and South Asia since 1989, both on land and underwater. I'm very slowly working on a PhD. and aspire to publish my own magazine and author books. My life is all about seeking and sharing adventure!

**S :** You're firmly ensconced in a variety of academic pursuits as well as working full time promoting your events. Do you have any thoughts about competing in ultra cycling or triathlon on a serious level again?

**C:** I race one Ironman Triathlon and ride three of our double centuries each year for fun and to maintain a base, but that's about it. I've just embarked upon a three year "reinvention tour" plan that includes a hi-speed tour of the Lewis & Clark route in 2005, organizing and also racing in an unsupported bicycle race called "Trans-America Cycling Classic" in 2006, then racing RAAM for my 40th birthday in 2007. I love putting it on the line!

**S:** To my best recollection, no one has even come close to matching your "youngest RAAM finisher ever" status. Do you ever think someone will break that record?

**C:** I'm astounded, and disappointed, that young participants are so rare in ultra events. One certainly doesn't have to be "old" to race ultras, but it seems that young people lack the desire and are distracted by video games, the X Games, and other things. You profiled Bevan Barton, the 16-year-old Furnace Creek 508 finisher, but we haven't heard of him since last year! Perhaps he'll resurface and be a trend-setter. But nobody better break my "youngest finisher" RAAM record!

**S:** You've done a number of races in a variety of disciplines. Aside from the '87 RAAM, which race has been the most gratifying to you?

**C:** The Triple Ironman ("Le Defi Mondial de l'Endurance") was the most fun race in which I've ever competed. Also, I really loved racing all those Iditabike/Iditasports in Alaska on bike or snowshoes. The blending with the winter snowscape, the serenity, the peacefulness, and the orienteering requirements really made those special. Too bad those races are gone...

**S:** In your experience as a racer, what was the most difficult situation you were ever in and how did you overcome those obstacles?

**C:** Well, the biggest challenge is always everything that has to happen before the start line. But I have had some interesting moments while "out there" racing.



Chris Kostman

In my first 100-mile snowshoe race at the Iditasport in Alaska, in 1993, I ran out of water in the middle of the night. My legs tightened up, I started getting the shakes, and my body started going numb, starting at the fingertips and toes, then working towards my core. Meanwhile, a pack of wolves was pacing me in the trees off to the side of the trail, then they attacked a moose ahead of me and left the remains of a literal "blood bath" in the snow. It was harrowing, but invigorating, too. What a night! What a race! That's living life, in my book.

**S:** It's perhaps not a fair question but I thought I'd ask anyway: Of the two primary events you produce - Kiehl's Badwater Ultramarathon and the Furnace Creek 508 - is either one more special to you than the other? Is one more difficult to "pull off" and if so, why?

**C:** I've organized The 508 for fifteen years

*continued on page 15*

*continued from page 14*

and Badwater for five years. Although The 508 gets bigger and more challenging every year, it's down to a science thanks to the awesome staff. Badwater is a huge production, taking up more time and energy than all our other events combined. This is due to the international, invitational field, the many jurisdictions involved, the incredible media attention, the sponsors, the extra huge webcast, and so much more. It's a mammoth production, but I love it! First and foremost, I love the events and the athletes, and that's why I organize every event that we produce.

**S: What's the hottest weather you've had at Badwater?**

**C:** We had 133 in 2003, just two degrees below the world record for Death Valley. Plus it was windy and relatively humid. I was getting scorched while patrolling the race on a motorcycle! Imagine running in that, if you can!

**S: You're heavily involved in the Challenged Athletes Foundation (CAF). Can you talk a little about that and explain how you became so involved in this organization? If people are interested in donating how can they do so?**

**C:** CAF supports "physically disabled" ath-

letes who need prosthetic limbs, racing wheelchairs, hand-crank bikes, plus the coaching, support, and mentorship needed to realize their dreams. CAF organizes Ironman Revisited each year on Oahu, a remake of the original Ironman, to benefit their programs. While competing in the first one in 2002, Deborah and I decided to make CAF the Official Charity of all our events. It's a great organization with a small, awesome staff, low overhead, and broad-reaching impact. After three years, we have raised well over \$50,000 for CAF. We have info about our work with CAF on all our websites. Check it out!

**S: Do you have any other new events on the horizon?**

**C:** AdventureCORPS will produce the Trans-America Cycling Classic in 2006, but this will be a one-time deal so start training! We're also developing "The Technical Trials" as an annual event in Solvang, CA in November, 2005. This will be a three day "stage race" of sorts that tests bicycles, not riders, in the quest to develop better bikes for endurance cycling, hi-speed touring, commuting, and other pursuits. We're hoping to reinvent the bike industry and redefine "what's cool" to ride; it's astounding to me that people ride "racing bikes" when they don't race and when those types of bikes are

so inappropriate for non-racing use.

**S: Anything else you want to add about yourself or any of the events?**

**C:** Endurance sports, whether cycling, triathlon, running, snowshoe or otherwise, have so much in common. I encourage people to try something new, trusting that the principles involved in all these activities are the same. Lose the "cyclist" or "triathlete" label and just be an athlete who, like Gumby, is flexible and adventurous enough to do anything!

### Calling all athletes....

Our graphic department is always looking for good photos of our athletes to use in advertisements, brochures, catalogs, and other printed materials. If you have any photos of yourself that you'd be willing to share, email them to [graphic@e-caps.com](mailto:graphic@e-caps.com) or send them snail mail to the address on the back (attn. graphic department). Photos will be returned. Please be sure to include your name, the name and location of where the photo was taken, and to whom photographer credit should be given. One thing we ask is that you not send in any copyrighted photos.

*Thanks so much!*

## The Sports Drink That's Missing Something

### HAMMER HEED

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## Perpetuem To The Rescue : The tale of a shorts-eating goat

Joe Zwiller



*This summer, Joe Zwiller had a run-in with a wild animal and used Perpetuem to make a hasty exit. Here is a description of those events:*

### A Run In With A Goat Named "Sphinx"

OK, I'm a new ultra runner having just completed my 3rd ultra @ Catherine's [Editor's Note: Catherine's Big Butt 50K ultra run in Luray, Virginia on July 24]. As such, I've never written a race report as I don't really have anything to contribute to you "greats" out there.

But, I'm compelled to tell my story picking up around 24 miles...

There I was, on the trail by myself, having experienced my second wind a few minutes after the last aid station and leaving my previous running mates on their own. I was really feeling my stride and enjoying running on the tight single-track on my way to a place, which shall be burned into my memory now as "Goat horns" instead of bird knob.

I took a moment to enjoy the overlook. I returned to the trail. [This is not embellished, honestly]. What greeted me was a strange mix of mountain goat and billy goat. His beard 8" long. His horns not curly but going directly out like a bull, at least 3 feet wide & certainly wider than the trail. I stopped running. He was moving towards me, slowly, occasionally taking a bite of the leaves surrounding the trail. Toying with me.

I decided the overlook was really pretty and that I'd take another look. It's always good to give horned animals a wide berth.

After taking just two steps back toward the overlook, I looked over my shoulder only to find that the goat had closed the gap. He was directly behind me ~ 12" from me. Words of my childhood came screaming back to me "Dogs sense fear, don't show him you're afraid". Damn, this isn't a dog, that won't work. Well, all animals attempt to increase the appearance of their size when confronted in an attempt to win the psychological game.

I turned to face my adversary. In redneck speak, "I bowed up", looking less like a cobra and more like a drenched and sickly alley cat. It didn't work. He moved in closer.

He smelled me. He licked the salt off my leg. At this point, I swear he grinned... as if to say "oh yes, you'll taste great." During this lick assault, I was really able to get a close look at his horns. I thought about grabbing them ~ like you would attempt to grab the wrist of a blade wielding assailant to disarm him. I didn't think I could take his horns off.

My thoughts raced. "It's just a goat. But goats can be mean. How much force would it actually take to pierce a man's gut with natures head-mounted daggers? It's just a goat. But, I know goats can be mean sons-o-bitches too. Surely, I can kick a goat's ass if I'm rested and ready, but the goat clearly has the upper hand, I'm on a mountain after all (mountain goat)." I quickly decided to distract the goat. Sacrifice a pinky or ring finger if I have to, it's not as if I'd be giving up an opposable thumb.

Then the goat, in an attempt to either: (a) win the mental game or (b) undress me so that he could fill his gut with some stringy and stressed out human ATTEMPTED TO EAT MY SHORTS. As luck would have it, these were my Hammer Gel branded shorts. It ignited a thought in my mind. Quick as lightning, I pulled out my flask of Perpetuem. I showed it to him, squirted some on the ground behind me. The goat moved around me, eating the Perpetuem off the ground. I felt like Oedipus.

### Disclaimer for PETA fans:

1.) To those that would say I'm harming the goat's diet. Hammer Nutrition uses the best ingredients. I'm not a paid endorser either. It is wheat/gluten free, dye free etc. etc. It may be the best thing he's eaten in a long time. Let us not forget that goats will eat boots and the glue and paper off tin cans. I think his gut was fine as a result of our encounter.

2.) To those that say I'm teaching the goat that "humans = food". Dude, this goat CAME UP TO ME AND LICKED ME AND ATTEMPTED TO EAT MY SHORTS. My guess is that he already had a pretty damn good idea what was up.

3.) It was a life or death situation. My options were to avoid conflict and placate the

goat with some food or go man-to-goat. Given my close-combat skills, the goat didn't stand a chance. Clearly, it was better to feed him than to mount him on my wall.

Undoubtedly, I ran the last three miles juiced and passed 4-5 runners on my way to the finish as a result of my confrontation with nature and my victory over a dumb animal that tried to rob me in his woods. As I passed each one, I asked them if they too were assaulted by the goat. They all had been. Some chased him and hit him with branches or sticks. Others yelled at him as if crazed. But, each person also said the goat ran off & then doubled back on them, pushing them in the back (albeit with his head and not his horns). When I learned this, I thought perhaps other runners can learn from me.

At the finish line I caught my breath. I watched a runner come across with a crazed look on his face. He ran to his friends. He looked like he had just seen the devil. He gave an impression of the goat rearing back on his haunches. Apparently the goat had considered ramming heads with this runner (a la a Dodge truck commercial) in order to win mating rights to his running partner. Strangely enough, this man made it past the goat. I did not see the running partner he mentioned in his confrontation, however. The man continued to wonder from person to person doing goat imitations which can only be assumed to be a result of his post traumatic stress disorder.

All I could think was... man, that could have been me.

Joe Zwiller

Editor's Note: Joe had a great race, finishing in 7 hours, 5 minutes, 23 seconds.

*Joe Zwiller is running 20 races of 10-135 miles over 20 months to raise \$10,000 for the Autism Society of America. He is an MBA student at Johns Hopkins University, a U.S. Marine and father of two boys, one of whom has Autism. He resides in Columbia, MD & considers Hammer Nutrition & E-CAPS vital to his success, regularly using HEED, Sustained Energy, Perpetuem, Endurolytes, Hammer Gel and Tissue Rejuvenator. You can read about his efforts at [www.run4autism.com](http://www.run4autism.com)*

## Race Report : Catching up with a few amazing athletes

### Lynne Smith

#### A life-changing experience

I wanted to touch base with you and let you know how things are going. I've now been using Hammer Gel for 13 months and it has changed my life! It took me awhile to figure out what works best for me: I either took in too much or not enough. I finally figured it out and everything has fallen into place. I raced a half Ironman a few weeks ago in Lubbock, TX and won my age group (W35-39). Consequently, I'm Kona bound for the Hawaii Ironman. Thanks for helping me achieve my goals! I couldn't have done it without you! I'm doing what I can to spread the word on Hammer products!

Lynne Smith

### Evan Plews

#### Results

Just wanted to give you an update on my race results from this summer. I have been using my E-CAPS faithfully and I am enjoying your HEED (just what I needed!).

- Pedal Powder; Eden, UT — 4th Pro
- Oakridge Fat Tire Festival; Oakridge, OR — 1st Pro
- Squilchucker; Wenatchee, WA — 2nd Pro
- OBRA Oregon State Championships; Oakridge, OR — 3rd Pro (1st place Oregonian)
- Firecracker; Falls City, OR — 2nd Pro (2nd overall, points series)
- NCS XC #6/WIM XC #8; Sandpoint, ID — 31st Pro
- NCS XC #7; Snowmass, CO — 39th Pro

Thanks for all your support.

Evan Plews

### Lara Block

#### Treadmill training

##### From a press release:

North Miami Beach duathlete Lara Block of Team Hammer Nutrition, Best Female Duathlete in S. Florida in 2003 and 2003 All American Duathlete placed 4th in the 35-39 age group on Sunday, August 8, 2004 at the USAT Duathlon National Championships which took place at the Dannon Duathlon in Alpharetta, Georgia.

The race was a 10K run, 40K bike, followed by a 5K run. Block completed the distance in 2:23:01, placing 14th overall female. Says Block: "I was hoping for a stronger finish but after placing 5th at the World Championships in Belgium early in the summer, it was tough to be motivated enough to train in this intense Miami summer heat. I actually spent the last few weeks training indoors on the treadmill- that's a first for me! I was happy with a top 4 finish- the competition was strong."

### Amy Rappaport

#### Hammering On!

I finally finished my IM Lake Placid race report so now I can tell you what an awesome race I had. My goal all year was to go in LP and win my age group and be US Ironman Champion. I DID IT. YIPPY. And you ask why? Because I Hammered-On! Perpetuem is my new best friend. I could go on and on about how great the product is, but you guys already know that! I had a good race season last year, (I can't believe it) but so far this year is even better! I've really got the nutrition nailed!

Here's a little summary:

- Half Ironman Florida : *4th W40-44*
- EagleMan Half Ironman :  
*2nd Masters 4:57 PR*
- Ironman USA Lake Placid (US Ironman Championship) : *10:45 PR 1st Master, 1st W40-44, 4th amateur woman, 13 women*

Thanks so much for your continued support. You'll see an order from me today or tomorrow. I can't sleep if I don't have my Perpetuem in the house.

Hope your summer has been a successful as mine! Let me know if you'd like any further info from me, or if there are additional ways I can help support Hammer Nutrition. I am a big fan of the referral program and when people ask me how I can run so fast I tell them it's because I know how to fuel on the bike and I tell them to go to the web site and order, order, order. Hope that helps!

All the best in training and racing,  
Amy Rappaport

*[Steve's Note: If I've read the results correctly, Amy recently won the W40-44 division at Ironman Canada. Way to go Amy!]*

### Sgt. B.W. Dale

#### Wild in West Virginia

Charlie Roberts and I just returned from the Wild 100k MTB orienteering race in WV. We finished in 9hr 35 min. to take third in the two-person team category. Charlie used HEED and I stuck with Perpetuem to take us through. We had a strong ride...no cramps and strong climbing. We had a lot of teams inquiring about our Hammer jerseys and ran across another Hammer Adventure racer out of the trails. Once again thanks for supporting us!

Sgt. B.W. Dale  
Cary Police Department

Athletes....do you want the E-Caps/Hammer Nutrition community to know what you're up to? Have a great photo you want to share? Send a short email to [graphic@e-caps.com](mailto:graphic@e-caps.com) (*please put Race Report in the subject line*) about your recent accomplishments and we'll try to include it in our Race Report

## COMPEX EMS : Real athletes - Real results!

Not long ago we asked those clients who had already purchased a Compex Sport EMS unit to give us some feedback about how they've used the unit, what gains they've noticed, and whether or not they would recommend the purchase of a Compex Sport.

Here's what some of them had to say:

"Compex can be used when I only have 30-40 minutes and don't have time to exercise and shower. ... I have been impressed with immediate results achieved. For the amount of time, the payoff is great. ... I would highly recommend the Compex. It would benefit any sport. It complements all training routines and is easy to use." *Robert Dacus*

"So far I've focused on the active recovery program, especially in the evenings after hard workouts/races. ... I've used it in the evenings on my quads after I've put the kids to bed. The recovery program only takes 24 minutes, and I catch a few innings of a baseball game on TV or catch up on my work related reading. I even snuck in a session while on a business conference call from home. That's multi-tasking at its best! ... You have to evaluate it as an investment in your performance, and think about the tradeoffs you face and the other investments you make in your performance. I think E-CAPS

really believes in and stands behind what they sell, so I had a lot of confidence trying it, knowing that 1.) There were strong advocates who had seen real gains as a result of using it and 2.) If it wasn't working for me, they would take it back. Virtually no risk to try it with lots of potential upside."

*John McClellan, Road cyclist & runner*

"You can stay with the pack, or run away from the pack. It's up to you. Compex will make that difference."

*Paul Romero, Adventure racer*

"I was having extreme difficulty, at age 57, recovering from Ironman training last fall and the Compex helped get some life back into my legs. At the Rio Salado Triathlon in May I had the fifth fastest bike split out of about 300; at the Honolulu Triathlon in April, I had the 13th fastest out of about 600."

*Richard Tomlin, Triathlete*

"Buy it now. The Compex will allow you to achieve higher levels of performance with less effort and less impact than traditional methods." *Lynn Nicholson*

"Since I hate doing sit-ups, the Compex provides an alternative way to improve my core strength. ... My experience has been that the strength and endurance programs do

improve muscle tone and definition. I believe the Compex is a valid investment for the serious endurance athlete."

*Richard Simmons, Nordic skier*

"No regrets whatsoever, great training aid. ... Except for occasional strength training on my abs, I have used it almost exclusively for recovery from long and/or demanding bike or running training, and found that I have much less muscle soreness the day after. While I have trained less overall volume this season, I have been able to train more effectively, and perhaps more smartly. As a result, I have improved substantially my 10k bike time trial results, and ran a personal best half marathon. As a 47-year old age grouper, I am pleased that I can still improve, but most importantly, I am injury free and healthy, and my legs don't feel beat up, as was the case after past seasons."

*Dr. Michael Frommlet, Triathlete*

"It works; it's as simple as that."  
*Thomas Stroup*

Thank you to all who submitted feedback. For those of you who haven't ordered a Compex, check out our website to read more about it, or call and talk with one of our knowledgeable client advisors. Now is the time to take your performance to the next level.

# Take Your Performance To The Next Level

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*Go longer!*
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- Develop explosive strength  
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*Senior Technical Advisor*



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Each unit comes complete with 1 set of 2" x 2" electrodes, 1 set of 2" x 4" electrodes, leadwires, user manual, training planner CD, the electrode placement booklet, battery charger, and a carrying case.

## Client Service Update : The other end of the line

Angela Nock

Many of you who placed phone orders with us the past few years spoke with “Dennis.” That was the voice of Dennis Bain, a client advisor at E-CAPS/Hammer Nutrition since 2001. As of last February, however, he has been on assignment in Iraq as part of his duties with the National Guard. Thanks to the wonders of email, I recently wrote Dennis and asked him to give us a little update on how and what he is doing. Here is what he had to say...

“I am currently assigned to L Company, 151st Aviation stationed in LSA Anaconda, Iraq. We support various aviation units by performing maintenance on their helicopters. My specialty is turbine engines. As a secondary mission, we also pull guard and escort duties in and around LSA Anaconda.”

“I spend most of my spare time in the gym, making sure I have plenty of E-CAPS/Hammer products to help with my training and recovery.” (Always a joker, Dennis admitted that this was just a shameless plug, although it’s true; we do keep him supplied with supplements.)

Dennis’s assignment ends in February, 2005, at which time you just may hear his voice again on the other end of the line.



Dennis in front of headquarters on a recent 2-week leave from his duties in Iraq

## Duct Tape and the Perfect Energy Supply : Red Green\* would be proud

David Levin

All of you kitchen chemists and folks whose motto is “Every worthwhile job involves duct tape” will appreciate this recipe for what I consider the absolute ideal in fuel delivery.

### Assemble the following:

1 jug of Hammer Gel

1 container of Sustained Energy and/or Perpetuem

2 Hammer Flasks

1 mixing bowl or container with a pour spout, at least one-pint capacity. *A two-cup measure does fine.*

1 small rubber spatula

1 roll of duct tape

### Do this:

Take one flask and fill to the “2” mark with Hammer Gel. If you’re going to use only Sustained Energy with this, then you can use any gel flavor. If you’re going to include Perpetuem in the mix, then I’d stick to vanilla, orange, or plain.

Now dump the gel into your mixing bowl. Some will stick to the flask, of course, but that’s no matter, because your next step is to fill the same flask up to the “3” mark with water, swish a couple times, and dump into your bowl.

Next, spoon in four rounded scoops of Sustained Energy and/or Perpetuem, depending on your taste and application. Mix well with your spatula until smooth, and pour equally into the two flasks. The mixture is thick, so scrape out the bowl with your spatula to get it all into the flasks.

You’ve probably noticed that Hammer Flasks are unstable and fall over easily when being filled. Here’s where the duct tape comes in. Two flasks fit snugly into the cardboard core of a standard roll of duct tape. Place the flasks into your duct tape roll to secure them while you pour in your fuel mix.

Now, take a small amount of water, just a tablespoon or two, and carefully rinse the bowl, getting all your fuel into the flasks. You’ll have two flasks filled with just enough headroom to freeze them. I make my flasks in advance and keep them in the freezer. If you have larger bowl, you can easily double

the amounts and make four flasks at once.

Now you have a very concentrated fuel that’s easy to store, carry, and use. You need only plain water in your bottles and whatever supplements you use along the way.

Plus, you’ve added another duct tape use to your repertoire.

*\*For those of you unfamiliar with Red Green (and his show titled “The Red Green Show”), wander over to [www.redgreen.com](http://www.redgreen.com) and read all about him...there’s even a link for Scotch Duct Tape.*

Our office will  
**CLOSE**

Friday, December 24 at 5:00  
and re-open

Monday, January 3 at 9:00

*You may place orders on our website, however, they will not be processed until after the office opens on January 3rd. Happy Holidays.*

**Inside This Issue**

- Mandarin HEED  
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  - Athlete Spotlight  
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  - Product Spotlight  
Intestinal health with iFlora
- ...and so much more!!!

# The Back Page

## Join the T.E.A.M. : The E-CAPS Auto-Ship Method

If you have ever run out of your favorite Hammer Nutrition or E-CAPS products then come on and join the team. We'll do the work; you relax and know your product will be there on time when you need it with free shipping to boot.

**Benefits of T.E.A.M. membership:**

- **SAVE** - Discounted pricing on your favorite E-CAPS or Hammer products
- **HASSLE-FREE RESUPPLY** - Never be out of product again with an auto shipment every 90 days
- **FREE SHIPPING** - on auto shipment products as well as any items you choose to add to the order
- **FREE GIFT** - on your second auto shipment as our thanks for joining the T.E.A.M.

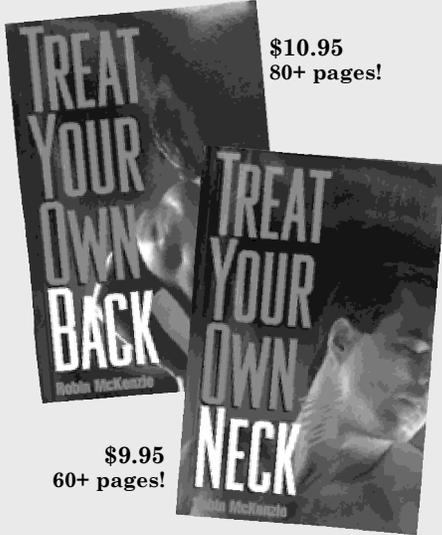
- **EXCLUSIVE OFFERS** - Be in the know with first offers and exclusive offers designed to save you money on your favorite products

- **AND MUCH MORE!**

**HOW TO JOIN**

Joining is easy and free. Next time you place an order with products that you would like to receive every three months, just let your client service representative know. They will ensure that you get the right amount of product to last three months and provide you with the details of the membership. If you just placed your order you can write to us at [team@e-caps.com](mailto:team@e-caps.com). Anytime you want to add items to your auto ship order, you can either e-mail us or call us before the shipment and we will gladly add the items with free shipping. You can cancel your membership at any time.

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