

ENDURANCE NEWS

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The Newsletter For Endurance Athletes
An E-CAPS / Hammer Nutrition Publication

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PSA Caps : Premium Protection For Prostate Health

We here at E-CAPS are very particular about which products we select for production because we are committed to manufacturing and selling only the most beneficial and effective supplements you can use. We've never been about jumping onto the latest craze supplement bandwagon (you know, the "here today, gone tomorrow" money wasters) and we don't plan on ever getting caught up in that practice. We consider, discuss, and review many candidates for potential inclusion into the E-CAPS product line (and believe me, there are p-l-e-n-t-y of possibilities!), but only a handful pass all of our stringent criteria for health, safety,



legality, effectiveness, marketability, cost effectiveness, etc. When we do have a new product unveiling, we're sure we have a winner, and we like to announce it with appropriate fanfare.

That's why we're excited to introduce our newest product, Prostate Specific Advantage (PSA) Caps. PSA Caps confirms our position that we stand for general health as well as athletic performance. Now, this is not a supplement that's going to help you to a PR, at least not

(see PSA Caps on page 4)

HEED & Perpetuem : Flavorless "Plain" Versions Available

Although our flavored fuels – HEED, Perpetuem, and eight of the nine varieties of Hammer Gel – are wildly popular, many athletes prefer their fuel unflavored. That's one reason why Sustained Energy has been such a hit with endurance athletes for well over a decade and keeps growing in popularity. A great number of you have asked us to make unflavored versions of our other fuels, to go along with Sustained Energy and Plain Hammer Gel, and we listened!

It is with great excitement that we announce the arrival of unflavored, plain HEED and Perpetuem. Both of these contain functional ingredients identical to their flavored counterparts; they only lack the flavoring. Plain HEED is available in the 32-serving size and plain Perpetuem in the 16-serving size. We are considering adding single-serving packets of both unflavored

products. We'll keep you updated on that.

If "Plain" is your preference when it comes to fuels, your wish has been granted. Both HEED and Perpetuem in unflavored, plain versions are available now, so give us a call or go online and order today!



Dear Client :

Welcome to our 49th issue!



This year marks our 19th year in business and our 14th year of publishing this newsletter. As usual, this issue is chock-full of good information, which I believe you will find useful in helping you achieve your goals for 2006.

One of the topics we are covering that I find most intriguing is the “balanced diet” myth. Do you find yourself, or those near and dear to you saying, “I don’t need to take vitamins, I eat a balanced diet”? If so, Dr. Bill’s article on this subject should give you reason to reconsider. If the results of the 2005 Inside Triathlon reader survey are accurate, that would be about 45% of you.

It turns out that this is a sacred cow for many nutritionists and most doctors. They get very annoyed when you press them to show you an example of a diet that would provide 100% of the RDA of 10 vitamins and seven minerals, because they can’t do it. The amazing part is that there has never been a single scientific study to verify that it is possible to meet your minimum RDA requirements from whole (not enriched) foods alone. It is just accepted as a fact. Like the “replace what you lose” myth and the “all carbs are the same” myth, the “balanced diet” myth needs to be critically examined. As with any controversial topic we cover in Endurance News, I encourage you to take this ball and run with it by doing more of your own research.

Also in this issue you will find follow-up stories on the Uganda cycling mission and Cycling House articles that appeared

in issue #48, plus a bevy of articles explaining the finer points of our new products. Nate Llerandi’s and Tony Schiller’s articles should also give you some things to ponder while you are doing your long base-training workouts. I know I always find their articles thought provoking.

In closing, I’d just like to remind you, and inform new readers, that I continue to personally monitor suggestions@e-caps.com. If you have any suggestions or constructive comments that you think would help to improve our products, service, website, or anything else, please write us and let us know.

Now, go out and make 2006 your best year ever!

Happy Training,
Brian

2006 Additions : New Clothing! New Accessories!

A new year means new softgoods, and we have gone all-out this year. We have a completely new look in our Voler clothing as well as new t-shirts, sweat-shirts, hats, gloves, and many others. Let’s get started . . .

Voler Cycling and Tri Clothing

Our Voler cycling and tri kits are redesigned for a cleaner, sharper look than in past years. We’ve also made some technical improvements. All jerseys now have a full, exposed zipper. The cycling shorts chamois has been upgraded with Voler’s popular Ion pad. Also, in response to client suggestions, we have widened the armholes in the tri tops to eliminate chafing.

Other Softgood Additions

As you look through our catalog or visit our online store, you’ll notice a variety of new products. Among them are the Gel-Bot, an ingenious bottle that carries both gel and water, Saltstick, a unique capsule holder, SweatVac winter beanies and ventilator caps, Giordana winter cycling gloves, embroidered polo shirts,

redesigned t-shirts, and much more. We’re thrilled to offer you an expanded line of quality softgoods for 2006. Check it out!



Check out
the web for
color photos

Many more
styles available!

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Our Mission

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

Endurance News features insightful articles on diet, nutrition, training and other topics of interest for endurance athletes — written by myself as well 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

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.

2006 Highline Hammer : We Want You To Come!

Brian Frank

The date has been set and plans are already underway for the 5th annual Highline Hammer Weekend. This year's event is extra special because it will also be Dr. Bill's "retirement party." You are cordially invited to join my staff and me August 3-6 for four days of riding, eating, and learning in beautiful Northwest Montana. If you have been thinking about joining us in previous years, this is definitely the year to come. However, space is limited and we have a growing number of clients who have so thoroughly enjoyed themselves that they now make the event an annual pilgrimage. Of the 30 slots we have available, at least 10 are already committed to returning clients.

If you are a new client, let me tell you more about The Highline Hammer Weekend. In addition to giving you the opportunity to ride in one of the most scenic parts of the U.S., with local guides and full sag support, it's a chance for you to get to know my staff and me on a personal level and see our headquarters and our operation. You will also learn a lot about diet, nutrition, and fueling and be able to put everything to the acid test in one of the toughest, yet most enjoyable, one-day rides in the world. Yes, I said the world. Our weekend is built around the "Highline Hammer" loop, which is 136 miles with 8,800 feet of climbing. This ride takes us on the legendary Going to the Sun Highway in Glacier National Park, crosses the Continental Divide twice, and provides vistas that are beyond description.

We kick off the weekend with a short spin on Thursday, followed by a meet-and-greet mixer at our headquarters before we head into Whitefish (we're located just outside town) for dinner at one of our many fine restaurants. We greet Friday morning with a two-hour spin around the valley, and then we get started on our "Endurance School," which will offer classes for first-time participants and veterans as well. The

day ends with a big feast. Saturday's main event is the epic Highline ride, where you get to practice everything you learned on Friday. Saturday night is another big dinner party, and we guarantee you'll sleep well that night! Sunday starts with breakfast followed by two ride options. Ambitious riders can do the 87-mile loop (4,400 feet of rollers) around Flathead Lake, and those who prefer a milder course will opt for the 60-mile Star Meadows ride.



Riding along St. Mary's Lake
in Glacier National Park



Highline regular Troy
DeLong leads the pack in
East Glacier

We all meet up for brunch afterwards to conclude the weekend.

We also plan to spike the field with some of our sponsored athletes, including RAAM champion Allan Larson (who is also one of the videographers) and double and triple iron distance veteran Suzy Degazon.

The fee remains a modest \$300 per person, which only partially defrays our expenses (this is not a profit venture for us; it's for fun and friendship) for gour-

met, semi-organic food (prepared mostly by my staff and family), transportation to and from the airport and all during the weekend, sag support on all rides, staff for sag vehicles, gas, two photographers and two videographers, and all of the E-CAPS and Hammer products you can use. Plus, you'll get a CD photo album of the weekend, a 30-minute DVD, special pricing on clothing and products you purchase while you are here, and a lot more. The fee does not include your transportation to and from Whitefish, Thursday night dinner in town, or your lodging costs, although we do have a block of rooms reserved at a discount price for you.

In the past, many clients have passed on the event out of concern for the daunting miles and the fitness level needed. While a certain degree of fitness is necessary, you do not have to ride every mile. In fact, having a good time and not being too trashed to enjoy the socializing is the primary goal. In terms of difficulty, these rides can be as challenging as you make them. You can mix it up with the fast group, ride your own pace, or sweep at the back-it's your choice.

For the rest of the details including itinerary, comprehensive logistics information, photo gallery of the 2005 event, and links to local Chambers of Commerce, go to www.e-caps.com/highline. This link also has an online registration form. If you prefer, you can call us to reserve your space. If you have any questions, call 800-366-1977 or email us at

highlinehammer@hammergel.com.

I'm looking forward to welcoming back all of our returning clients and making some new friends.



A small portion of the
incredible scenery from the
Going-to-the-Sun Road

(PSA Caps from page 1)

directly. It will, however, directly benefit some vital areas of male functioning that vintage guys and endurance cyclists could use some help with. If you're a male over 40 years old, if you ride a bike regularly, or if you'd like an ounce of protection, PSA Caps is a must-have supplement for you. (To our female clients: If you have an SO in one of these categories, please put this article under his nose!)

The Rationale For PSA Caps

As a man ages, it's common for the prostate gland to become enlarged; at some stage in life almost all men are affected. When this occurs - the condition is called benign prostatic hyperplasia (BPH) - it puts pressure on the urethra, the canal that carries urine and semen out of the body. Increased pressure on the urethra causes urinary tract discomforts such as retention and urgency. Over time, severe BPH can cause serious problems, including urinary tract infections, bladder or kidney damage, bladder stones, and incontinence. While the cause of BPH is not well understood, it is an extremely important issue for all men to address and resolve before it becomes problematic. PSA Caps is an all-natural formula that helps reduce the symptoms of BPH and other prostate disorders.

What Causes BPH?

The specific cause(s) of this nearly universal disorder of older men is unknown, but most likely involves hormonal changes. The following three theories, in some combination, are the main culprits currently being investigated for BPH. The formula of PSA Caps addresses all three.

1. Higher estrogen levels within the prostate gland - Throughout their lives, men produce testosterone, an important male hormone, and small amounts of estrogen, primarily a female hormone. As men age, the amount of active testosterone in the blood decreases, leaving a higher proportion of estrogen. Studies done with animals have suggested that BPH may occur because the higher amount of estrogen

within the prostate gland increases the activity of substances that promote cell growth. For centuries it has been known that BPH occurs mainly in older men and that it doesn't develop in men whose testes were removed before puberty. For this reason, some researchers believe that factors related to aging and the testes may spur the development of BPH.

2. Increased levels of DHT - Dihydrotestosterone (DHT) is a substance derived from testosterone in the prostate, which may help control its growth. Most animals lose their ability to produce DHT as they age. However, some research has indicated that even with a drop in the blood's testosterone level, older men continue to produce and accumulate high levels of DHT in the prostate. This accumulation of DHT may encourage the growth of cells. Scientists have also noted that men who do not produce DHT do not develop BPH.

3. "Reawakened" cells - Some researchers suggest that BPH may develop as a result of "instructions" given to cells early in life. According to this theory, BPH occurs because cells in one section of the gland follow these instructions and "reawaken" later in life. These "reawakened" cells then deliver signals to other cells in the gland, instructing them to grow or making them more sensitive to hormones that influence growth.

BPH Symptoms

Many symptoms of BPH stem from obstruction of the urethra and gradual loss of bladder function, which results in incomplete emptying of the bladder. The symptoms of BPH vary, but the most common ones involve changes or problems with urination, such as:

- Hesitant, interrupted, and/or weak stream
- Urgency and leaking or dribbling
- More frequent urination, especially at night

The size of the prostate does not always determine how severe the

obstruction or the symptoms will be. Some men with greatly enlarged glands have little obstruction and few symptoms, while others, whose glands are less enlarged, have more blockage and greater problems. Sometimes a man may not know he has any obstruction until he suddenly finds himself unable to urinate at all. Taking over-the-counter cold or allergy medicines may trigger this condition, called acute urinary retention. Such medicines contain a decongestant drug, known as a sympathomimetic. A potential side effect of this drug may be to prevent the bladder sphincter from relaxing and allowing urine to empty. When partial obstruction is present, alcohol, cold temperatures, or a long period of immobility also can bring on urinary retention.

It is important for men to tell their doctor about urinary problems such as those described above. In most cases these symptoms suggest BPH, but they also can signal other, more serious conditions that require prompt treatment. These conditions, including prostate cancer, can be ruled out only by a doctor's exam. Severe BPH can cause serious problems over time. Urine retention and strain on the bladder can lead to urinary tract infections, bladder or kidney damage, bladder stones, and incontinence. If the bladder is permanently damaged, treatment for BPH may be ineffective. When BPH is found and treated in its earlier stages, there is a lower risk of developing such complications.

Who Needs PSA Caps?

- Males in their 30s, primarily to help prevent prostate-related problems from occurring - Up to 10% of men in their 30s already experience enlarged prostate.
- Males age 40 and above (with increasing importance every decade) - BPH occurs mostly in men over 50, with 90% of men 85 and older having BPH.
- Male cyclists - Cycling may increase the risk of nerve damage, impotence, impaired urinary flow, and disorders to the male genital organs, especially the prostate gland.

The PSA Caps Formula

Beta Sitosterol - This plant sterol inhibits 5-alpha reductase, the enzyme that converts testosterone to harmful dihydrotestosterone (DHT) and aromatase, an enzyme that catalyzes the conversion of testosterone to unwanted harmful estrogens, estradiol and estrone, elevated levels of which are an underlying cause of enlarged prostate. Beta sitosterol has been reported to reduce BPH-related symptoms, including cancer growths in the prostate gland. Beta sitosterol has been demonstrated to improve urine flow velocity in men with enlarged prostate, while also providing anti-inflammatory effects in prostate tissue, which helps reduce BPH symptoms, enlarged prostate, and potential cancer cell mutations.

Saw Palmetto extract (Serenoa repens) - The extract from this plant (a creeping palm with a trunk that lies on or just below the ground surface) is arguably the most frequently used herbal treatment for prostate problems, with several research studies demonstrating that a 45-90 day treatment for enlarged prostate leads to a significant clinical improvement. Saw palmetto (320 mg per day) inhibits 5-alpha reductase, the enzyme that catalyzes the conversion of testosterone to dihydrotestosterone (DHT), reducing DHT by 66% in the periurethral region of the prostate gland, and by 50% in the prostate gland. Saw palmetto also reduces epidermal growth factor (EGF). Men using saw palmetto for the treatment of enlarged prostate generally begin to notice relief from their symptoms within the first 30 days of use.

Stinging Nettle (Urtica dioica root extract, 4:1) - The active ingredient in this herb-like shrub inhibits the ability of epidermal growth factor (EGF) to bind to its receptors in the prostate and to subsequently stimulate the growth of prostate tissue (a key underlying factor in the progression of enlarged prostate). Other uses for stinging nettle include treatment for urinary tract infections, kidney stones, and hay fever.

Epilobium (small flower willow) -

Epilobium contains two polyphenols (Oenothien A and Oenothien B) that inhibit the 5-alpha reductase enzyme conversion of testosterone to DHT. Epilobium also inhibits aromatase from converting testosterone to estrogens, which happens in older males as they age, helping to reduce harmful DHT, estradiol, and estrone levels, which are known to contribute to prostate-related disorders. Epilobium also inhibits two types of prostaglandins, especially E-2, which have undesirable pro-inflammatory effects.

Lycopene - This important phytochemical in the carotenoid group produces the reddish colors in tomatoes, watermelon, pink grapefruit, guava, and papaya. It's a powerful antioxidant that protects the deoxyribonucleic acid (DNA) in lymphocytes (cells found in the blood, lymph, and lymphoid tissues) from oxidative damage. It interferes with the ability of insulin-like Growth Factor-1 (IGF) to stimulate the proliferation of various types of cancers in breast, endometrial, and prostate tissues.

Lycopene can remediate male reproductive disorders (erectile dysfunction, reduced sperm motility, and reduced sperm counts) resultant from endurance cycling. In one study, 50 volunteers with low active sperm counts received 8 mg/d of lycopene for one-year. Thirty-five experienced improved sperm count, and 30 had improved functional sperm concentrations. There was a 36% pregnancy rate among the participants' partners by the end of the study.

Alanine, Glutamic Acid, Glycine - These amino acids, when taken for 14 days or more, minimized the symptoms of enlarged prostate. In order to positively affect/influence several hormonal pathways involving prostate health, these particular amino acids should be consumed at least one hour before other amino acids (or protein-containing foods) are consumed.

SUMMARY

From product formulator Dr. Bill

Misner: "I conclude that the PSA Caps formula predictably prevents or reduces prostate enlargement and the associated disorders reported to occur in males age 40 and over, especially masters cyclists. This formula presents substances to reduce harmful hormones dihydrotestosterone, estradiol, and estrone both in fatty acid-soluble and water-soluble cellular mediums. Reducing excess age-related 'outlaw' hormones (dihydrotestosterone, estradiol, estrone) will advance a healthy prostate environment and positively affect anabolic muscle growth and recovery cycles."



Supplement Facts

Serving Size: 2 Capsules • Servings per container: 30

Amount Per Serving	%Daily Value*
L-Alanine	100mg †
Glutamic Acid	100mg †
L-Glycine	100mg †
Beta-Sitosterol	250mg †
Stinging Nettle 4:1	250mg †
Saw Palmetto Ext 40-45%	320mg †
Epilobium (small flower willow)	50mg †
Lycopene 5%	200mg †

* Percent Daily Values are based on a 2,000 calorie diet.
† Daily Value not established.



**Stay healthy
& strong all
season long!**

Daily Essentials Kit

Mito-R Caps, Premium Insurance Caps,
Race Caps Supreme

Dr. Bill Misner: Thanks For The Ride

Brian Frank

Dr. Bill's impending retirement is one of those things that I always knew would come some day, but hoped it would not. For those of you who may not be aware of this, he is far more than an employee to me. During the almost 20 years that I have known him, he has been a client, sponsored athlete, collaborator, friend, mentor, role model, inspiration, and father figure. I have a strong feeling that he has touched many of you in one or more of these ways as well. His immense knowledge is surpassed only by his kindness and humility.

I would be remiss in bidding him farewell if I did not include a brief history of our relationship. It was late 1987; I was 20 and had just started the business. Bill was one of the first (of very few) athletes to respond to a test ad in *Runner's World*. We talked often and developed a strong phone relationship. It was easy at the time, since I answered every phone call myself (I miss that!)

Bill quickly became a regular customer, and he was one of the first athletes to request sponsorship. Besides regular ultra running events, he did two televised man vs. horse 50-mile races. I agreed to supply him with product for those two events and for his other ultra running exploits. As is often the case with our sponsored athletes, I continued to sponsor him year after year. In the mid-nineties, he tired of ultra running and began cycling. Riding either a 45-pound cruiser or a 49cm Oschner track frame, he proceeded to crush the competition as he had for so many years running.

The "million mile ultra" virtual race caught his attention 1997, and he began putting in mega running miles. So much so, that despite giving everyone else a six-month head start (Bill didn't even start until June!), he was the first in the world to reach both 10,000 kilometers and 10,000 miles. Fortunately, he stopped running 200 miles a week before it killed him.

Going back to the early days, one of our re-occurring conversations was about the absence of effective fueling products for ultra distance events. In

1991, Bill approached me and asked if I'd be interested in marketing a drink he had developed. I said I was, and in short order I had the first prototype of "Wild Bill's XXX Mega Fuel." I used it on several centuries and road races and was most impressed because I no longer needed to eat solid food. It had no flavor or sweetener, just complex carbs and soy protein. It tasted like soggy Cheerios®. Who would be crazy enough to market a product like that? Me, I guess.

I thought the formula would be even better if we added some "bells and whistles," like l-carnitine and chromium. I had a sample made up with all of the micronutrients I thought would complement Bill's basic triple-carb and protein blend. I sent him a sample, and he concurred that it was a vast improvement from the original formula. We launched "Wild Bill's XXX Mega Fuel" as "Energy Surge" in 1992 and it quickly became popular amongst ultra runners and iron distance triathletes. In 1995, I changed the name to its current, and hopefully most accurately descriptive name, Sustained Energy.

Over the next four years, Bill returned to school to earn his Ph.D. in Holistic Nutrition. In 1996, as soon as the ink was dry on his diploma, I hired him as our full-time director of research and product development. As many of you know, this has been only a fraction of Bill's role in the company. He has been a prolific writer, both for this newsletter and his own *Journal of Endurance*. Most impressive to me, and most helpful to you, has been his timely response to literally tens of thousands of questions via e-mail with thoughtful, comprehensive, and effective answers.

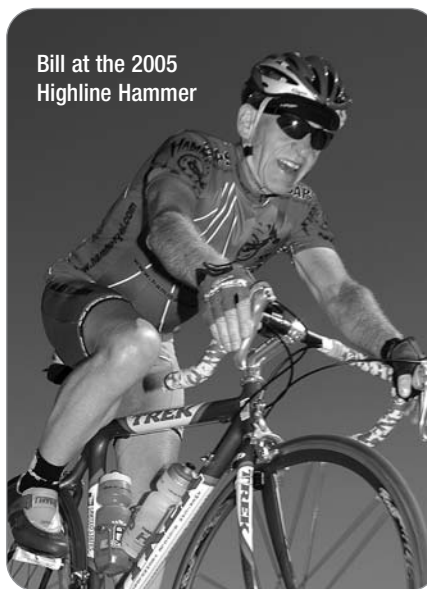
With Bill's help, our product line has

grown rapidly since 1996. It's not really accurate to say we "collaborated" on the products that followed Sustained Energy, because my part was usually just asking him to develop the best possible formula for a given application. For instance, I requested "the most effective electrolyte formula possible," and in two weeks Bill produced Endurolytes. I gave him the same marching orders for the most effective multi-vitamin and antioxidant, and he responded by creating Premium Insurance Caps and Super AO. REM Caps, Digest Caps, Appetat, Race Day Boost, Mito-R Caps, and PSA Caps are all lasting contributions from Bill's knowledge of what works and what doesn't.

Bill also updated (actually completely revised) the Race Caps/Enduro Caps/Cardio Caps formulae to give us Race Caps Supreme. Tissue Rejuvenator, Anti-Fatigue Caps and Xobaline also got major upgrades as well. On the Hammer side of things, Bill developed Perpetuem, HEED, and Recoverite.

There is so much more he has done for me and my company over the past 10 years, that no matter how many of Bill's contributions I list, more than a few will be missing. However, just think of the products listed above, and the hundred thousand or so endurance athletes throughout the world who trust in them daily for peak health and performance. That consideration alone is ample testimony to what Bill has meant to all of us.

We have a funny exchange now and then where we both just shake our heads and wonder how each can manage to do what the other does. To me, my job seems easy compared to all that Bill does. Apparently he sees it the same, only the other way around. As



Bill at the 2005 Highline Hammer



you can see from the Job Ad article in this issue, we are actively searching for a new staff nutritionist. Note that I did not use the term "replacement," because Dr. Bill is irreplaceable.

When a faithful and long-serving employee retires, it's customary to commemorate the person with some type of party. Knowing that Bill is not exactly the party animal, I struggled for a long time trying to figure out what kind of send-off would be appropriate. Then it hit me - we could dedicate the 2006 Highline Hammer weekend to him. That way we could honor Bill with three days of epic riding, eating, and fellowship. You can read more about this planned event in the Highline Hammer article on page 3.

In closing, I find myself at a loss to adequately express the thoughts and emotions that course through my brain when I think of Bill and his departure from this company. I'm struggling to fight back the tears as I write this. As I have said to many people on many occasions, if I can be half the athlete he is when I am 66, I will feel extremely blessed.

You may think this is all rather mushy and sentimental for just an employee, and you are right. Bill Misner is not just an employee; he is family.



Nate's Corner : Skewed Perceptions



Steve's Note: As I usually do, I go through my archive of Nate's "Tip of the Day" articles that I've kept over the years to find one that I find particularly useful for a given time of the year. Even though this article is three years old, I find Nate's advice to be right on and timeless...I think you'll agree.

I hope you all enjoyed the year-end holidays and are looking forward to a great new year.

OK, by now we all realize (hopefully) that we should be structuring our season training plans to help us peak for our most important races of the year. You want to be 100% fit and ready at that time, not here in January, right?

Along those lines, you must also realize that as you build up your fitness toward your big goal of this year, your training will also be building up and improving. Just as we cannot race at 100% year round, neither can we train at 100% fitness year round. So many athletes seem to "forget" this pertinent factor.

If you are not ready to perform at 100%, then why do you expect your training to be faster than ever before? "I just ran a 10k and my time was so slow compared to what I did last July." Well... of course. It should be. It's January! It's cold, you aren't (shouldn't be) doing any race-specific intervals, your body is naturally experiencing a period of hibernation and you're getting back into your routine after a period of down time after your last season came to an end. So, with all of these factors working against your ability to perform at 100%, why do you expect a PR at a race in January?

Sure, you can compare the same race year-to-year to possibly - possibly - gauge your fitness. But even then your performance is affected by weather conditions. One year's Super Bowl Shuffle 5k might be greeted with temps in the

50s while the next year it could be 20 and snowing. You shouldn't expect a better or even similar result in less favorable conditions, but how many of us refuse to cut ourselves that slack? Not too many of us.

Maybe this will help you get through the winter and spring. Think of your training during this period as a slow and gradual progression that holds you over until it is time to turn the screws and get down to business. While it is true that you gain the majority of your fitness during the initial 3-5 months after a prolonged break from training (4+ weeks), you can still view your improvement curve as one that rises gradually now and then spikes in the weeks approaching your most important race(s). That spike is resultant from the addition of race-specific training that sharpens your fitness, smoothes the rough edges and brings everything in your program together to a nice, solid peak performance.

Now, that being said, I don't mean that you should simply dawdle along until June. You can't afford to shoot your plan full of holes. But your resolve can be more relaxed and you can cut yourself some slack at this point. If you are too focused now, then you run the risk of hitting the brick wall called Emotional Burnout just about the time you should be getting excited about what you're trying to accomplish. Bad news when this happens.

Training is the means to the end. If you're training faster than ever before right now, be careful. You may not be leaving yourself anywhere to go but down (meaning slower) when it really comes time to kick things into a higher gear.

So, cut yourself some slack! As long as your training is improving during these upcoming months and your Plan is on track, then relax and enjoy.

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

Uganda Mission Update : Cycling In Africa

Brian Frank

In the last issue of Endurance News, I introduced you to Pastor David Ssebuufu and his cycling ministry in Uganda, which he operates as part of his Jinja Miracle Centre. It is a ministry I have enjoyed supporting because of the cycling focus. I also feel a special connection to and appreciation for this outreach, having lived in Chad for four years while growing up. After sending over a couple of large packages of old miscellaneous cycling clothing, HEED, Endurolytes, and enough old stock of our 2003 clothing for most of their riders to be in matching kits, David contacted me again on his most recent fundraising trip to the states. I thought some of you might enjoy helping him out in this way, too. Many of you did, and your generosity led to the events related below.

In the article, I suggested that if any of you were interested in donating used cycling clothing, bike parts, and/or bikes, that they would be gratefully accepted. This prompted a group of our clients who belong to the International Christian Cycling Club (IC3) to organize a collection effort. A call for donations went out to their fellow IC3 members, and in a few weeks they had collected enough to fill five 100-pound boxes. With six sets of wheels, several bike frames, parts, and clothing, they were concerned that they had amassed too much swag for him to carry back, and they were right.

Getting everything to Maryland, where David was staying on the last leg of a fundraising trip, was the easy part. They knew the excess baggage fees would be steep, so it was not a huge surprise when the ticket agent said it would cost \$1,800 to get the boxes all the way to Uganda. IC3 covered \$1,000 and David paid the other \$800.

However, upon arriving home in Uganda, Pastor David was notified that his five boxes were sitting in a storeroom in Brussels and would not be sent on to Uganda unless another \$2,000 was paid. Furthermore, if the fee were not paid within three days, everything would be tossed in the garbage. Of course this isn't right, but it's a very common practice. Through negotiations, the fee was reduced to \$1,200 (also very common). However, even that amount, or anything

close to it, was simply impossible for David to come up with.

It looked like everyone's effort might all be for naught. With the clock ticking down, the IC3 guys tried to raise the money, but time was too short and everyone was already tapped from the items



they had previously donated and the freight charges to Maryland and beyond. They called me on the last day and asked if we could cover it, which I did as a tax-deductible donation through IC3 to cover the "ransom."

As you can see from the photos that Pastor David sent us in December, they're putting everything we've sent over to very good use. I'd like to thank everyone who donated, and especially recognize Darryl Smith, David Haar, and Gary Pennington for organizing the effort. If any readers donated anything to the ministry outside of the IC3 group, I thank you as well.

They are still in need of bikes (frame and forks) as well as parts and accessories like old helmets, shoes, and the like. At this writing, I am not sure when David will be back in the states again, but if you have an old frame or anything else lying around, feel free to contact him or his contact in the U.S., Lisa Parks. They will be able to tell you how and when donations will be most effective.

Minister Lisa J. Parks
Joy Of God Ministries
P.O. Box 40758
Philadelphia, PA 19107-0758
Joyofgod@earthlink.net

Pastor David Ssebuufu
davidsssebuufu@gmail.com
Jinja Miracle Centre



Fast Facts

Official Name: Republic of Uganda
Population: 26,219,000
Capital City: Kampala (1.3 million)
Currency: Uganda Shilling
Languages: English (official), local dialects
Highest Point: Mt. Stanley - 16,765 ft.
Land Area: 199,550 sq km (77,046 sq miles)

The Cycling House : Fun in the sun

Joe Arnone

In the last issue of Endurance News we told you about an exciting cycling destination in Tucson, Arizona. The Cycling House is having a fantastic first season with many happy clients already. One such cyclist is Silke Wunderwald who spent some time at The Cycling House this past December. Here's what she had to say about her stay...

"Dear Brian,

What a lucky day when the October issue of Endurance News arrived in my mailbox a couple of months ago. Living in the northeast of the US and dreading months of training in the freezing cold, the short announcement about the Cycling House naturally caught my eye and immediately conjured up images of riding through the desert in shorts and short sleeves. It sounded too good to be true, but as it turns out it was everything it promised to be and more.

To show my appreciation, I wanted to take the time to let you know that I was extremely happy with all the services provided by Evan Lawrence leading up to and throughout my stay at the Cycling House during the last week of December 2005. Staying at the house and riding with Evan was a wonderful experience. Evan not only provided great ride support (and I didn't even catch any flack for sitting on his wheel all day) and great tasting, wholesome food, but was also eager to dispense his extensive knowledge about nutrition, training and bike handling skills. Special thanks are also due to Owen Gue who drove the SAG car and took pictures during our ride up Mt. Lemmon!

I have to admit that during the off season I used to not take nutrition very seriously and 2- to 3-hour rides 'fueled' by water only were not uncommon for me. Afterwards however, I habitually found myself fighting fatigue for the

rest of the day. Experimenting with the Hammer products during my stay at the Cycling House showed me that proper nutrition during and after a ride can effectively eliminate this fatigue and I had plenty of energy left to do some sightseeing around the Tucson area and, even more importantly, get back on my bike the next day refreshed and ready to go! Now I am looking forward to this year's race season and



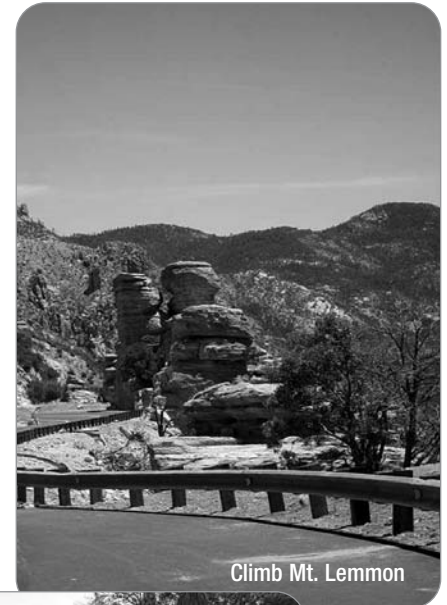
putting to good use everything that I have learned during my stay in Arizona.

Best regards and a happy, successful new year,"

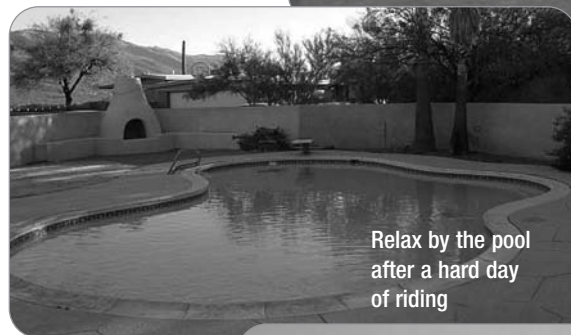
Silke Wunderwald

The riding has been perfect all winter and Evan and Owen have been giving guests the royal treatment. If you have the desire to train in sunny Tucson, and you want to take advantage of Hammer Nutrition products and the care of a couple of top notch young lads, book a trip to the Cycling House soon. The training, the food, the nutritional products and information, and the staff are all as good as you can find anywhere.

Check out
www.thecyclinghouse.com
 or email Evan directly at
evan@thecyclinghouse.com
 for more information.



Climb Mt. Lemmon



Relax by the pool
after a hard day
of riding



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Sport Model - \$899

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Order Today!
1.800.336.1977
www.e-caps.com



Compex® : No Longer A Secret Weapon

Tony Schiller

The people in my home state of Minnesota brag a lot about leading the nation in lakes, lutefisk, and liberals. I, on the other hand, am more impressed by our big bounty of massage therapists waiting at our race finish lines to flush away all the toxins and lactate from our aching quads, gluts and hams.

It was long ago that I stopped viewing post race massage as a luxury. Now I cross the finish and hone right in on those tables like an addict in search of his next fix. To me, there is no greater high than receiving a rejuvenating massage with endorphins screaming through your bloodstream as you revel in the afterglow of a hard fought race battle.

But as great as a post race massage feels, we all know its biggest benefit is it brings faster recovery so we can resume serious training for the next race (and massage) sooner. The bottom line is it works. That's why we all set aside \$5,000 a year for massage treatments after our hard workouts, especially those hill climb, interval and weight training sessions.

What's that you say? Not in this lifetime? Well if not, then what do you do to speed recovery between workouts? As a Hammer Nutrition client, I know you believe in good nutrition and natural supplementation. I also know you would never even consider using steroids or performance enhancing drugs. So what else can you do? Until recently, unless you lived in Europe or had the time and money for frequent massage, the answer was, "not much."

That's changed. Now, for about what you might invest in 10-15 massages, you can enjoy several years of faster recovery and improved strength by becoming a "Compex" owner.

Being a skeptic is normal

I remember teasing a good friend for "wasting" his money on one. Then I finished a race and went to the massage tent to get a pair of blown quads worked

on only to find they'd replaced the tables with cots for Compex® treatments. My obvious displeasure never fazed the young technician. He confidently started me on an "active recovery" session for my quads. "Just check it out."

Though not as enjoyable as a massage, after several tingling minutes I could tell the quads were releasing. At session's end I stood and was amazed. My legs felt better than before the race and I did a cool down as if having never raced. The same was true the next morning out running. After the great training week that followed, I had a Compex® on the way.

In truth, I placed the order as a test to see if it would have any positive effect on the 14-month calf-cramping problem that doctors couldn't seem to diagnose or help. After just two sessions on the calves, the cramps disappeared and - knock on wood - haven't returned. Needless to say, I'm now a bona fide believer.

What will you do in 2006 to take your racing to the next level? I'm branching out from the Compex® "active recovery" mode to add the strength and endurance building protocols from the Compex®. I'm even doing double duty right now: writing this piece while increasing my quad strength. Now how cool is that? Think about the possibilities. Stay tuned for more updates on my Compex® experiences.

In the meantime, why not test-drive a Compex® and see for yourself? What have you got to lose?

Tony Schiller is among less than a handful of men or women to be named Overall Amateur Triathlete of the Year ('95) and Master Triathlete of the Year ('02) by USA Triathlon. He's started 8 ITU world championship races and earned 8 medals (5 gold, 1 silver, and 2 bronze), and he credits being an E-CAPS client since 1988 for his amazing consistency. Professionally, Tony works with corporations as a speaker and consultant.
www.tonyschiller.com



Staff Nutritionist Needed : Work & Play In Whitefish, Montana

With the upcoming retirement of Dr. Bill Misner, we are actively seeking a full-time staff nutritionist. Please take a look at the requirements and responsibilities below and, if interested, apply to the address listed at the end.

I. Requirements

A. Education:

Applicant must hold a Master of Science or Ph.D. degree in Nutrition with a strong holistic emphasis. Formal education based on an alternative or complementary medicine (CAM) view preferred.

B. Research Skills:

Applicant will have a working knowledge of how to read, collect, evaluate, and interpret published research from various journals, online databases such as PubMed, and other standard bibliographic resources.

C. Writing Skills:

This will be a significant part of the job. Applicant must have fluent, easy-to-read writing skills to express technical concepts to our customers.

D. Knowledge:

Applicant will have a working knowledge of and experience with exercise nutrition and physiology, phytochemistry, supplement formulation processes, and prescription drug interactions with herbal supplements. Familiarity with sports medicine, anatomy, kinesiology, rehabilitation, and physical therapy is also desired.

E. Physical Fitness:

Being a fit endurance athlete is a requirement for this position. The individual chosen for this position must effectively "practice what he/she preaches."

F. Nutrition & Supplements:

The successful applicant will have developed a practice of balanced whole food nutrition and dietary supplement protocols.

G. Relocation:

This position is located at our company headquarters in Whitefish, Montana. Some travel for public appearances as listed below.

II. Responsibilities

The following is a brief description of the myriad activities that this position encompasses.

A. Write Articles:

Contribute articles on topical issues, new products, and/or relevant research of interest to customers to each quarterly issue of "Endurance News." Continue publication of the monthly "Journal of Endurance."

B. Chat Group Participation:

Answer questions and contribute regularly to the Endurance List and Compex List.

C. New Product Development:

Work with our team to develop new products to complement and enhance the existing product lines. Duties may include: conducting original research, bench work, and product field tests to determine performance-related gains based on open label, closed label, and double-blind trial methodology.

D. Quality Control:

Supervise random HPLC testing of samples from each product on a regular basis as a quality control measure beyond manufacturers' formal certifications.

E. Public Appearances:

Participate in speaking engagements, product support, and question-answering at expos, clinics, industry trade shows (e.g., Interbike) and other events. Supply content and meet author deadlines as requested for print media. Occasional TV/ radio interviews and formal presentations at the annual Highline Hammer cycling event are also a possibility.

III. Compensation

The successful candidate will become a key part of a relaxed, friendly team of colleagues focused on health and athlet-

ic performance. Starting salary is \$70,000 per year. Full benefits package, merit-based raises, and incremental increases in paid vacation. Our Pacific Northwest location is a year-round outdoor sports paradise and a wonderful place to live.

IV. Apply

Interested and qualified applicants should submit the following application package: cover letter, résumé, vitae, three letters of recommendation, and writing sample.

Send by email to jobs@e-caps.com or by land mail to

Brian Frank
E-CAPS/Hammer Nutrition
4952 Whitefish Stage Road
Whitefish, MT 59937

Holey Endurance News!

You'll notice that this issue of Endurance News is three hole punched for convenient storage. We'll be offering a 3-ring binder for you to keep all of your past editions of Endurance News. Stay tuned...

What are you doing August 3rd-6th?



Spend it with us at the 2006 Highline Hammer.

Read page 3 for all the details.



Shanna Armstrong A Triple Threat

Our Athlete Spotlight for this issue illuminates Shanna Armstrong, winner in the women's division (and 4th overall!) of the 2005 Ultraman World Championship, a three-day ultra triathlon in Hawaii (the Big Island), consisting of a 6.2-mile swim, 261.4-mile bike ride, and 52.4-mile run. Shanna, who also won the women's division of the 2003 Ultraman, beat the previous world record time by seven minutes. She is no stranger to the triathlon world, having competed in more than 100 triathlons over the past few years, and she's also making a name for herself in ultramarathon cycling. In 2005, as part of Team Endorphins, Shanna and her teammate, Dr. Guy Wells, won the two-person coed division of the Race Across America (RAAM), crossing the finish line in a solid time of 8 days, 17 hours and 36 minutes. This year Shanna is preparing for a solo effort in RAAM.

Steve: Shanna, congratulations on your tremendous win at Ultraman. How does this win compare to your 2003 win? Did you feel better prepared for this race than the 2003 one? If so, what did you do differently in your preparations and/or race strategy?

Shanna: I felt like 2003 was a better race since I was racing it for the first time (I did not know how bad I was going to hurt then). In 2005 since I had a little sponsorship, I felt a little pressure and was afraid I would not finish. I do feel like I was in better shape in 2005 than 2003, so maybe I just let it go to my head and underestimated the race. After training for RAAM I would have done more speed work so I could have

done as well as 2003. I wanted to break the overall course record and that was major pressure. I have never raced well when I have a time goal.

S: What were the high points for you in your 2005 Ultraman?

Finishing the run only 20 seconds behind second place (overall). I remember the 50+ mile run in 2003 being one of the hardest things I had ever done, including RAAM, and I was concerned if I would even finish it without walking. Running on hot pavement is extremely hard.



S: Any low points? If so, how did you work through them?

I wanted to break the course record and I knew I would need all the time I could get. I did a slower swim because of the currents, a slower bike since my head was not in the game, and I was really upset when I knew my goal was impossible after the first day. I did at one time think I was really doing well on the bike since I was riding with the pro Alexandro Robero, but then I found out he was seasick. Anyway, I decided after that day that I was going to race

for fun and had a blast after the pressure was off.

S: What was your fueling plan for Ultraman?

All liquid calories from Hammer Nutrition products. I had solid food on only three occasions in the eight days of RAAM and it was just a piece of pizza. I figured that for three days of Ultraman I could do the same; however, I stayed liquid the entire time and I had my liquid calories in the evening as well (Recoverite along with milk). My crew thought I needed solid food, but my liquid fuels were better and more nutritious than pizza.

S: It's probably not a real fair comparison but, if possible, how would you compare the effort that was required to win Ultraman with your effort in the two-person division in the 2004 Furnace Creek 508? (NOTE: Shanna and her teammate set a course record in their division at Furnace Creek)

Ultraman is by far harder on the body than two-person ultra cycling races. It is very hard to maintain fitness for all three disciplines at ultra distances, which means there is little room to miss workouts. Two-person RAAM is doable since you have someone else to lean on when you are down; at Ultraman it is only you! There are no breaks, and when you stop, you stop.

S: How do either of those two races compare with your effort in the two-person division in RAAM?

RAAM for me was very hard since I did not realize the drama that comes with it. When you put 13 people together for eight days some negative energy can come out. It was very hard emotionally to see my crew fall apart. I will say that on the bike I had a great time with my crew and that is why I am returning to do solo RAAM. The Furnace Creek 508 and Ultraman have a more fun atmosphere since the race is shorter and the fun energy is there from start to finish;

the competitors are also closer together and we are more like family. RAAM is a whole different ball game because you feel like you are out there completely alone after only a couple of days. The crew is tired and everyone is not the same after a few days.

S: Are you finding that you prefer triathlons/ultra distance triathlons over ultra distance cycling or vice versa, or do you have no preference?

S: For solo RAAM are you preparing differently than you did for two-person RAAM?

I am basically doing the same training. I trained last year like I would be doing it solo because you never know if something really bad could happen to your teammate. I even kept my running and swimming up while training for RAAM since I had the Ultraman in mind as well. I felt like last year, if I had to do RAAM solo, I had done the perfect training.

and what does your supplement /fueling plan for RAAM look like?

For fuels I use Perpetuem, Sustained Energy, HEED, Endurolytes, and Recoverite for both training and racing. For supplements I use Premium Insurance Caps, Race Caps Supreme, Mito-R Caps, and Tissue Rejuvenator on a daily basis. I am, of course, planning on using all these products consistently during RAAM.

I am not sure if anyone knew, but I did the two-person RAAM with extreme anemia and thought I was fixing it with iron tabs. I was still anemic about a month before Ultraman and had not gotten any better. I decided to get with Hammer Nutrition and use the supplements you recommended for my training and the race. Now I am healthy again. Ultra racing gets expensive and I had cut out the vitamins and supplements to save money. I paid a very high price of not feeling well for a long time, but I blamed it on all the hard training I was doing. I learned that when you train, you need to replace what you use up. I can tell you from experience that you just can't think you're getting what you need in your food; you have to supplement.



Shanna with fellow competitor, friend, and Hammer Nutrition sponsored athlete Suzy Degazon

Photo: Chris Kostman

If an event has the word "ultra" in it, I most likely have it on my list! I live for the training and can't wait for all the training that I have to do for RAAM or my other goals. I love to train!

S: Assuming that Ultraman, Furnace Creek, and RAAM are already favorites, do you have another favorite race or two that you like doing?

I want to do the Swiss Gigathlon in 2007. This is a race that is contested every four years and includes swimming, biking, running, inline skating, and mountain biking done over a week's time and covers 900+ miles. I also want to do the Furnace Creek 508 and the Badwater ultra run in the same year. If the Gigathlon does not happen in 2007, that will be my new goal.

S: What do you think will be your strong points that you can rely on in RAAM?

My attitude. I am a very bouncy person with a positive attitude most of the time. I have been dreaming of RAAM for years, and I have the right attitude for it now so I am going for it. I can't wait!

S: What do you think your main challenges will be in RAAM?

(Laughs) Wearing dirty clothes! I also hate the cold.

S: After the two-person RAAM you started focusing more seriously on your fueling and supplementation. What E-CAPS/Hammer Nutrition products are you currently using,

Thanks for your time Shanna and good luck in all your future endeavors!

**Say
goodbye
to the
3pm
fade**



*Read all about
Chromemate on
page 20*



Steve Born : Senior Technical Advisor

Welcome to the first 2006 edition of Endurance News!

I hope that you all enjoyed the holidays and that this year will be one filled with good training sessions, good race results, and most of all, good health. Sometime between this issue of EN and the next, I'll have completed my sixth year of employment with E-CAPS/Hammer Nutrition, and wow, what an incredible amount of growth we've experienced during that time! I want to thank you for helping make that growth possible, and I want you to know that our commitment to you only gets stronger every year.

It's been incredible being a part of a company whose products I believe in so strongly (and can thus recommend without reservation), and I've truly enjoyed getting to know so many wonderful people (you, our clients!) over the past six years. I am really looking forward to the next six and beyond. I'm excited about 2006 because we've got so many great things going on: new products, new clothing, increased event sponsorships, and so much more. It's going to be an awesome year for us, and I'm excited that you'll be such a vital part of it.

Dr. Bill

Last issue I wrote a bit about my friend and mentor Dr. Bill Misner in regards to his upcoming retirement. I'm sure there's a lot more I could write about someone for whom I have so much respect and admiration, but after reading what Brian wrote, there's really not much I would add to his reflections, as they are nearly identical to mine. I just want to once again add

From The Saddle Of Steve Born : It's gonna be a busy year

my personal and heartfelt thanks to you, Dr. Bill, for everything you have done for me during my athletic career, for all the wisdom and knowledge you've selflessly given me over the years, and most of all for your friendship, which I value more than I am able to express. It's been an honor working with you, and I hope our paths cross many, many times – whether by phone, email, or in person – in the upcoming years. In the same vein as Brian wrote, yes, this may be pretty mushy and sentimental stuff to be writing, but to me Dr. Bill will always be so much more than merely a co-worker... he is family.

Events

In Endurance News #48 I had estimated that we would sponsor around 1800 events by the end of 2005. I was just a little over on that one, but we still set a new company "PR" with over 1600 events sponsored in the Continental U.S. California led with 143, followed by Florida (100), Colorado (81), Washington (80), Texas (69), North Carolina (64), New York (56), Oregon (54), Michigan (53), Montana (52), Missouri (45), Arizona (43), Wisconsin (42), and Minnesota (41). We sponsored events in every state except lonesome North Dakota, but we've already fixed that for 2006!

Triathlon was our #1 sport, with over 450 races of all distances. Included in that figure are five full iron and 41 half-irons; the rest were sprint, Olympic, or others. We also sponsored approximately 180 mountain bike races throughout 2005, nearly 150 ultra running races, just about that many road cycling races, around 125 adventure races, nearly 100 ultra marathon cycling events, and nearly 40 Nordic skiing races. In addition to racing, we also had sponsorship presence at many other events, such as camps and clinics. I think it's safe to say that we really do support endurance sports!

I predict that we'll sponsor 2006 events (or more) in 2006. How's that for a goal? We've already secured sponsorship support for most of the races we sponsored last year (we get to work with so many great organizations and

race directors!), we've already added several new events, and the year is still young. While there are far too many to list them all, I did want to mention a couple of our new connections that we're particularly excited about:

Headfirst Performance Services – Based in Kentucky and produced by Todd Heady (himself a superb ultra endurance athlete). Races include the Headfirst Performance Half-Iron Triathlon & Aquabike on May 20.
www.headfirstperformance.com

Start 2 Finish Event Management – Based in Tennessee and headed up by Andrew Holliday. Among their many events are the very well-known Memphis in May Triathlon (May 21) and Music City Triathlon (September 10).
www.s2fevents.racesonline.com

Tri-OKC Duathlon & Triathlon Series - Based in Oklahoma. Last year we sponsored the Redman half and full iron distance triathlons; this year we'll be sponsoring all the Tri-OKC races.
www.triokc.org

Fat Rabbit Racing - Based in Ohio. We are really excited to be back on board with them and look forward to supporting all their races, including their first event of the season, Powerman Ohio (May 21).
www.fatrabbitracing.com

CGI Racing - Working from New Jersey, Larry and Michele Redrow produce the Philadelphia Women's Triathlon (July 9), the New Jersey State Triathlon (July 23), and the North East (Maryland) Triathlon (August 27).
www.cgiracing.com

Expos, Seminars, and the Silverman

Last year was a big travel year for me, and while I admit that I'm always glad to come home, I really do enjoy going to events, running the expo booth and whenever possible, being able to give fueling/supplementation clinics. My 2006 travel calendar is still tentative, but some of the events that I hope to attend and possibly give clinics/semi-



nars at include:

- **April 30**
St Anthony's Triathlon (St Petersburg, FL)
- **May 21**
Memphis in May Triathlon (Memphis, TN)
- **June 10**
Liberty Triathlon (Independence, MN)
- **June 23-25**
Pacific Crest Triathlon/Sports Festival
Weekend (Sunriver, OR)
- **July 15th**
Muncie Endurathon (Muncie, IN)
- **August 13**
Greater Cleveland Half Iron
Duathlon/Triathlon/Aquabike (Mentor, OH)
- **November 12**
Nevada Silverman Triathlon
(Henderson, NV)

Every race that we sponsor, and all of them that I attend, are very important and special to us, but the last race on the list deserves special mention. Last year was the inaugural Silverman Triathlon, a full iron distance, and we at Hammer Nutrition were really excited to be a part of this new race. After spending a long weekend there, working the expo booth and giving a couple clinics, I have to say that race director Frank Lowery and his staff did an absolutely incredible job putting on this

event. From my perspective, every possible detail was taken care of meticulously and everything about the event was world-class through and through.

If you're looking for a late season iron distance triathlon, definitely consider the Silverman. Keep in mind, however, that this is no ordinary race. Here's what I mean, courtesy of the Silverman website: "... the Nevada Silverman is sure to attract individuals and relay teams from around the world looking for a superb culmination race to their 2006 triathlon season. Featuring a 2.4 mile swim in Lake Mead, a 112 mile bike ride with over 9,700 feet climbing, and a 26.2 mile run that boasts an additional 2,000 ft elevation gain, the Silverman is the race that will set triathletes apart from the mainstream. You've had Iron. Are you ready for Silver?"

More information about the Silverman Triathlon can be found at www.silvermannv.com

Here's to a great 2006!

Although this greeting is a bit belated in coming, I want to wish all of you a

very Happy New Year, and I hope 2006 will be your best season ever. Please know that we're here to help you achieve your goals, providing you with superior products, technical support, and customer service, so don't hesitate to contact us if we may be of assistance.

Have a superb year!

Sincerely,

Steve Born
Senior Technical Advisor

Reference list for the article written by Bill Misner, Ph.D. that appears on page 17

- 1 Director of Research and Product Development E-CAPS & HAMMER NUTRITION Whitefish, Montana 1-800-336-1977.
- 2 This paper was originally published in the Townsend Letter for Doctors and Patients (c) April 2005 #261, pages 49-52. Excerpts are reproduced by permission, courtesy of Dr. Bill Misner, Ph.D. and the Townsend Letter for Doctors and Patients.
- 3 Iodine is present in sea vegetation, but not in most foods unless iodized salt is added. An iodine intake of less than 20 micrograms (ug) per day is considered severe deficiency; 20-50 micrograms (ug) per day is considered moderate deficiency and 50-100 micrograms (ug) per day are considered mild deficiency. Iodized salt is widely used and some other foods are fortified with iodine. Two grams of iodized salt supplies 150 micrograms (0.15 mg). None of the dietary analysis included salt added by the consumer to their foods. This may be an inaccurate estimate of the iodine deficiency rate.
- 4 Subject: RDI Repletion from Whole Food & Suboptimal Performance

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5g Fiber Chocolate Chip
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1.800.336.1977 • www.hammernutrition.com

Increase Lean Muscle, Lose Fat : 24 Helpful Hints

Bill Misner, Ph.D.

It's not too late to get started with your New Year's resolutions, especially the one regarding losing that unwanted weight gained over the holidays. Dr. Bill has written a new article that we think you'll find very helpful, especially when you combine his suggestions with Appetat.

Everyone should be thinking now about how to achieve early "fighting weight" before the competitive season arrives. The holidays tend to add 5-9 lbs extra body weight, which tend to slow down ascents and prolonged performance significantly. Every year this extra "padding" seems to grow rather than disappear completely. One of the best nutritional examples of lean fighting weight is Lance Armstrong who consistently defeated great athletes in the Tour de France such as Jan Ullrich, whose off-season weight-gain is considered performance limiting.

A Synopsis Of Principles + Helpful Hints

We scientists are not ignorant that it is difficult to motivate non-scientists to read or attempt to interpret lengthy collected research data that conclude findings, associations, and generalizations. For those of you who want to know what works, what does not work, and how to naturally settle into your "fighting weight", the following Principles and Helpful Hints are listed:

Effective Weight Loss Principles

Total calorie intake is the cause of weight gain. Total calorie expenditures are the cause of weight loss. A calorie-restriction weight loss intervention must include balance menu, safe if dietary supplements are used, and gradual weight loss, followed immediately by a planned commitment to permanent healthy "Lifestyle" change.

The effectual weight management program emphasizes lifestyle-training modifications with each of the following goal PRINCIPLES:

- **Gradual Change** to healthful eating patterns characterized by increased intake of whole grains, seeds, nuts, fish, fruits, and vegetables, with a decrease intake of high saturated fat foods, and processed empty-calorie foods.

- **Non-Restrictive Eating** is based on internal regulation of hunger pangs, which reduces calorie overdose by increasing frequency of small-portion nutrient-rich, calorie-sparse plant foods.

- **Make Physical Activity Enjoyable** emphasizing and gradual well tolerated to achieve a minimum of 30 minutes exercise daily.

- **Set Realistic Goals** that focus on healthful eating practices and increased physical activity. Goals include halting weight gain first, stabilizing weight second, and weight loss lastly as a natural outcome of activity's effect generating a small calorie-deficit. The end reward is significant impact effect on health.

- **Eat A Variety Of Foods** Choose small portions from whole grains (6-11 servings), vegetables (3-5 servings), and fruits (2-4 servings) including (2-4 servings) from a non-animal protein source (fish, nuts, beans, legumes, sprouts, seeds). Limit amount of food to small portions. Limit foods that lack nutrients or are high in fat and processed sugar.

- **Balance Calorie Intake With Active Calorie Expense** Complete a minimum of 30 minutes moderate aerobic physical activity daily.

- **Food Choices: Whole Grains, Vegetables, And Fruits** These include high complex carbohydrate whole grain bread, whole grain cereal, whole grain pasta, rice, potatoes, corn, broccoli, Brussels sprouts, carrots, onions, garlic cloves, cauliflower, pinto, navy, kidney, and black beans.

- **Food Choices: Choose Low Total Fat, Low Saturated Fat, And Low Cholesterol Foods** Some foods and food groups are too high in fat. Fats and oils, and some types of desserts and snack foods that contain fat provide more calories than necessary nutrients. Certain foods should be limited: milk, meat, eggs, poultry, processed grains. These foods elevate homocysteine, saturated fat, and blood sugar resulting in calorie excess. "Limited" implies consuming small portions no more than 1-2 times per week.

- **Food Choices: Foods Low In Simple Sugar And Low Glycemic Index** Evidence shows that foods high in simple sugar or with a high glycemic

index contribute to weight gain, hyperactivity, and potentially insulin resistance syndrome, or diabetes. The most common type of diabetes occurs in overweight adults. Avoiding sugars or high glycemic foods alone will not correct overweight. Weight loss and weight control depends on total calorie intake and calorie deficits created by the level of physical activity.

- **Food Choices: Choose Low Sodium Foods** Sodium plays an essential role in regulation of fluids and blood pressure. Many studies in diverse populations have shown that a high sodium intake is associated with higher blood pressure. Most evidence suggests that people at risk for high blood pressure reduce their chances of developing this condition by consuming less salt or sodium.



Tell Me What To Do & What Not To Do!

Most people will naturally migrate to their natural-healthy body weight by regular daily exercise following the DO's and DO NOTS' of this weight management lifestyle:

1. **DO** reduce carbohydrate calorie intake by 30-50%.
2. **DO** increase plant foods, vegetable and fruit intake by 25-33%.
3. **DO** replace fluid losses starting with 1-1.3 fluid ounces per kilogram (or 0.5-0.7 fluid ounces liquid per pound) body weight per day.
4. **DO** limit calorie intake later in the day; consume last meal 3 hours prior to bedtime. (This does not imply that calorie timing neglects total daily calorie intake.)
5. **DO** reduce excess fat calories from meat, dairy, or dairy byproducts.
6. **DO** prolong aerobic exercise or frequent short anaerobic exercise to increase the rate of weight loss daily.
7. **DO** restrict calorie weight-loss periods to 3 weeks length resulting in small gradual weight loss, then include a reward of 3-7 days "Vacation" options to a menu plan that includes both no calorie-restriction and no calorie-excess controls.
8. **DO** limit weight loss rate to 0.5-1.0 pound weight loss each week.
9. **DO** consume a minimum 1,500 (+/- 300) calories per day during calorie restriction



periods only.

10. DO limit fatty meats and processed food calories.

11. DO consume a variety of nutritionally balanced foods in calorie-restriction protocols.

12. DO set realistic weight loss goals that result in slow, moderate body mass change (avoid setting immediate unrealistic goals).

13. DO NOT adopt temporary dietary protocol apart from a permanent "Lifestyle" change.

14. DO NOT impose hunger severity initiating stages of starvation.

15. DO NOT allow rapid weight loss, which has been implicated in the fast weight regain in the off-season.

16. DO NOT take stimulants, steroids, or diuretics.

17. DO NOT diet with excess protein above 1.6 grams protein per kilogram (> .75 grams/lb) body weight.

18. DO NOT diet with an excess intake of foods rich in saturated fat from dairy, animal, or poultry byproducts.

19. DO NOT consume excess amounts of packaged or fast foods.

20. DO NOT attempt a weight management lifestyle without required regular daily exercise.

21. DO NOT eat foods with processed Trans Fatty Acids (TFA) also called partially or completely hydrogenated vegetable fats; found in many packaged foods and processed baked goods.

22. DO NOT DRINK ALCOHOL Alcoholic beverages supply high calories but few nutrients. The effects of alcohol alter judgment and can lead to dependency and a great many other serious health problems. Experimental evidence from several metabolic studies showed a suppression of lipid oxidation by alcohol and thus the enhancement of a positive fat balance. The non-oxidized fat is preferentially deposited in the abdominal area. The experimental metabolic evidence suggests that the consumption of moderate amounts of alcohol has to be accounted for in the energy-balance equation and may represent a risk factor for the development of a positive energy balance and thus weight gain.

23. DO NOT eat excess calories above calorie expenditures more than 1 meal per week.

24. DO NOT eat high amounts of carbohydrates except after intense workouts.



Ask Dr. Bill

Bill Misner, Ph.D.

QUESTION : I've been using Hammer Whey for a few years now (and love it) and I've stumbled across a protein called micellar casein. It seems to be gaining some popularity and I was wondering how it compares to Hammer Whey's whey isolate.

ANSWER : Please note this is a comparison between casein proteins derived from cow's milk and whey proteins derived from cheese. This is not an evaluation of any product by name, though reference to the Hammer Whey Protein Isolate is favorably referenced.

The typical biological value of Casein is 77 as compared to upper biological value 100 for top quality Whey Protein isolates without glutamine added. Some say Whey's biological value is 159, but I do not think that is mathematically rational. Casein stimulates absorption of dietary amino acids very slowly. Casein requires increased transit time for dietary proteins absorption because casein forms a gel-like consistency within the gastrointestinal tract, which slows transit time remarkably. Casein contains almost all of the essential amino acids and is particularly high in its glutamine content (20.5%). It also contains higher than average levels of glucogenic amino acids (arginine, glutamine and threonine).

Whey protein is digested and absorbed rapidly within 20-40 minutes of consumption. Casein digestion is very slow requiring 4-7 hours to complete. That might be good for a weight lifter who changes muscle group exercise stress every other day, but for the endurance athlete who needs the upper growth response between daily exercise using the same muscle groups, the Whey Protein Isolate is the model protein-of-choice. Whey Protein contains 24% Branched-Chain Amino Acids (BCAAs, i.e. Isoleucine, Leucine and Valine). Whey Protein Isolates present the high-

est concentration of BCAAs of any single Protein.

AMINO ACID PROFILES CASEIN VS WHEY**

	CASEIN	WHEY
Alanine	3,000	3,470
Arginine	3,700	2,330
Aspartic Acid	7,000	8,860
Cysteine/Cystine	400	1,700
Glutamic Acid & Glutamine	20,500	25,500
Glycine	1,800	1,500
Histidine	2,900	1,950
Isoleucine	4,700	6,820
Leucine	9,100	6,820
Lysine	7,700	6,820
Methionine	2,900	1,600
Phenylalanine	5,100	2,230
Proline	10,400	974
Serine	5,800	5,900
Threonine	4,300	5,780
Tryptophan	1,200	2,060
Tyrosine	5,500	2,250
Valine	5,700	2,250

TOTALS 101,700 88,700
*** (mg of Substance per 89-102 Grams)

Whey protein isolates in Hammer Whey (not in Casein*)

- * Insulin-like Growth Factor-1 (IGF-1)
- * Insulin-like Growth Factor-2 (IGF-2)
- * Platelet-Derived Growth Factor (PDGF)
- * Transforming Growth Factor-beta (TGF-b)
- * Fibroblast Growth Factor
- * Alpha-Lactoglobulin
- * Beta-Lactoglobulin
- * Alpha-Lactalbumin
- * Beta-Lactalbumin
- * Lactomucin
- * Immunoglobulins (Antibodies)
- * Enzymes Lactoperoxidase, Lysozyme

*Casein protein is not published to contain the above growth factors or immune system agents.

A comparison of both protein amino acid profiles receives my vote for Whey Protein Isolates due to their higher biological value, fastest absorption rate, bolus impact on muscle growth, and immune system enhancing agents.

Is Suboptimal Micronutrition From Food A Factor In Suboptimal Performance? *Bill Misner, Ph.D.*

A similar question was published in the Townsend Letter for Doctors and Patients April 2005 issue²: Since then a number of comments and questions have been exchanged as whether endurance (Optimal) performance is possible without replenishing 100% of the required micronutrients? Who has not experienced a disappointing less-than-the-hoped-for finish or bonking so bad you were unable to finish an important event?

Between 1996-2005, every computerized dietary analysis of 70 subjects were curiously deficient between 18-88% of their minimum micronutrients required at the recommended daily allowances (RDA) from food intake alone at the level. The RDA's are based on a population-weighted average of the latest RDAs for vitamins and minerals for healthy Americans over 4 years old. RDA's have since been updated to the higher micronutrient level RDI's.

Review The Origin

The original paper examined computerized dietary analysis performed on whole food intake from 20 subjects, 10 men (ages 25-50y) and 10 women (ages 24-50y). A computer-program default utilized the Harris-Benedict formula for determining energy expense against micronutrient needs based on activity-induced calorie expenditure, age, gender, and Body Mass Index (BMI). Each subject was selected based on the highest number of foods consumed daily of 42 dietary analysis subjects. The purpose of this search was to determine if food intake alone provided the Recommended Daily Allowances (RDA) requirements for 10 vitamins and 7 minerals. Diets were analyzed from the following active individuals (A): 2 professional cyclists, 3 amateur cyclists, 3 amateur triathletes, 5 eco-challenge amateur athletes, and 1 amateur runner. Six (6) of the subjects were sedentary (S) non-athletes. Fourteen (14) active subjects (A) were compared to six (6) sedentary subjects (S). Based on each subject's caloric expense, age, gender, BMI, 10 of the diets were calculated as calorie-excessive, above energy requirements (4 men and 6 women), but the remaining 10 diets were calculated calorie-deficient, not meeting 100% of

their energy requirements (6 men and 4 women). Fourteen subjects were athletes with high training calorie expense and six were sedentary non-athletes with little calorie expense. Total calorie intake percent averages compared intake of food to exercise expense. The men averaged only 92.6% of the calories required for their total energy requirements, while women averaged only 97.3% of the calories required to meet their energy requirements. To view these graphical results, see *Table I*.

Government established Recommended Daily Allowances are designed to prevent nutrient-deficiency diseases. I reasoned, "If athletes spending large amounts of energy fail to replace RDA-minimum micronutrients from food, then they must consume highly-enriched foods and/or concentrated dietary supplements."

Nutritionally-oriented professionals' repeatedly tell us to select a variety of food servings from the Food Guide Pyramid (FGP), and that such a menu supplies micronutrients at or above RDA levels (or new modified RDI) required to prevent degenerative disease. Alternative medicine practitioners call this conservative position the "Balanced Diet Sacred Cow." Proposing an interpretation of data that shows the "Balanced Diet" fails to generate the required minimum micronutrients generates significant resistance from mainline nutrition scientists.

By review, the original published thesis shows that specific micronutrient deficiency patterns resulted in each subject for all 340 micronutrient data collected for 10 vitamins and 7 minerals. *This data is viewable @: Table II. Groups I & II Dietary Analysis Results or: <http://www.e-caps.com/downloads/JOE/May05.pdf>*

A summary of the results are repeated in Tables III & IV on the opposite page.

Food Micronutrient Deficiency Review

Of the 20 diets analyzed, 50% were calorie-sufficient and 50% calorie-deficient resulting in an overall -7.4% deficiency for men and a -2.7% deficiency in women. Calorie-deficiency results in a greater micronutrient deficit com-

pared to a calorie-sufficient menu. Of the 340 micronutrient entries generated from 17 micronutrients analyzed, all subjects presented between 3 and 15 deficiencies based on RDA levels (or new modified RDI) values taken from their food intake alone. Males averaged deficiencies in 40% of the vitamins and 54.2% of the minerals RDA levels (or new modified RDI) required. Females recorded deficiencies in 29% of the vitamins and 44.2% of the minerals required. The male food intake was deficient in 78 out of 170 micronutrient entries, or 45.8% of the 10 vitamins and 7 minerals analyzed. The female dietary intake was deficient in 60 out of 170 micronutrients or 35.2% of the 10 vitamins and 7 minerals analyzed. Both male and females as a single entity recorded 138 micronutrient deficiencies out of the possible 340 micronutrients analyzed, or 40.5% micronutrient deficiency from food intake alone. The more active the person, the greater the need to employ a balanced diet of micronutrient-rich variety food selection; otherwise, micronutrient supplementation is a preventative protocol for preventing deficiencies. Activity's effect on caloric deficiency may further increase micronutrient deficiency with predictable inhibition of performance or increased risk of deficiency disease.

Reaction From Sports Nutrition Scientists

Shortly after Christmas 2005, I posted this interesting question (Message 27874) to the 2400-member sports science list at <http://www.sportsci.org/forum/index.html>. To generate interest, I initially selected the top foods listed for their high micronutrient content for each of 10 vitamins and 7 minerals from a consensus of conservative dietician-supported websites. I performed a computerized dietary analysis on 17 whole foods selected and configured the 17 foods a volume high enough to replace 100% of each of the 17 micronutrients. Surprisingly, 28.75 pounds of food containing 17,854 calories (52% protein, 31% fat, 17% carbohydrate) or 5 times the calories (492%) were required daily to meet the micronutrient requirements from food alone for a 154-lb, 40-year active male endurance athlete! In order

to spend calories, this athlete must run an 158 miles every day! The reaction from Sports Science list's M.D., Ph.D., R.D.'s was distinctly contentious. The first reply from an Australian government nutritionist (Ph.D.) politely instructed me to correct my food list by going to a specific web page, then change select foods for analysis and bingo (!), a "balanced diet" would provide all required micronutrients. A similar patronizing reply came from an American University Nutrition Professor, who also included a link listing the Dietary Guidelines for Americans 2005, with the comment that the balanced diet intervention "...overwhelmingly favors that a varied, plant-based, whole food eating pattern rather than limited food choices supplemented with pills." Following their

instructions, I computer-analyzed their recommended foods from the 2000-calorie "Balanced Diet." These foods also were BELOW the RDA in 7 of the 17 required micronutrients examined. I respectfully reported back my finding to the sport science list and challenged those on the list to design a food list of reasonable calorie volume that provided the required minimum micronutrients at the RDA level (or newer RDI). A University Nutrition Professor (Ph.D. R.D.) accepted this challenge by designing a menu based on the Food Guide Pyramid's "Balanced Diet" protocol.

The professor reply verbatim was: "Regarding micronutrients, the following micronutrients were below recommended: vitamin E (78%), folate (79%), biotin (79%), and molybdenum (54%) and Iodine not available, nor was there a complete assessment of omega-3 and -6 FA's."

The 63-page debate listed in 15 messages #2787-2812 were posted by an M.D., 5 Ph.D.'s, and an ultra-athlete involved in sport science. While

reading and rereading the content repeatedly, I was reminded of the fable about the emperor who lived life insensitive to the fact that he was unclothed. The fable continues because none of his subjects would tell him for fear of negative consequences. How then can any responsible scientist reason that the "Balanced Diet" provides 100% of the required micronutrients without providing a menu that justifies an accepted rationale. This then, is my point: If food alone fails to provide micronutrient dose at the disease-deficiency preventative, where do we acquire what we need to support the demands for extreme energy-expense? If micronutrients consumed from food are suboptimal it may be that endurance performance would also be suboptimal. An endurance athlete not consuming micronutrients at least at a replacement level imposes a predictably increased risk of compromised health that includes suboptimal performance. Though unpopular, in order to prevent compromised health or suboptimal performance, the Emperor's "Balanced Diet" methodology needs to be seriously challenged...

References for this article appear on page 15

To read the original article that appeared in Issue 46, check out our website at www.e-caps.com

TABLE I. MICRONUTRIENT DEFICITS FROM FOOD INTAKE (10 MEN & 10 WOMEN)



TABLE III. GROUP I & II SUMMARY TOTALS

TOTALS	MEN	WOMEN
TOTAL MICRONUTRIENT ENTRIES	170 (100 VITAMIN & 70 MINERAL ENTRIES)	170 (100 VITAMIN & 70 MINERAL ENTRIES)
TOTAL GROUP INDIVIDUAL MICRONUTRIENT DEFICIENCIES	78	60
TOTAL CALORIC AVERAGE DEFICIENCY	92.6% -7.4% DEFICIENCY	97.3% -2.7% DEFICIENCY
TOTAL VITAMIN DEFICIENCIES	40 40% DEFICIENCY	29 29% DEFICIENCY
TOTAL MINERAL DEFICIENCIES	38 54.2% DEFICIENCY	31 44.2% DEFICIENCY
TOTAL MICRONUTRIENT DEFICIENCY	78 45.8% DEFICIENCY	60 35.2% DEFICIENCY
GROUP I & II MALE & FEMALE MICRONUTRIENT DEFICIENCY	40.5% DEFICIENCY	

TABLE IV
DEFICIENCY BY INDIVIDUAL MACRO- & MICRONUTRIENTS

MACRO-MICRONUTRIENT	PERCENT OF SUBJECTS WITH DEFICIENCY	MEN WITH DEFICIENCY	WOMEN WITH DEFICIENCY
IODINE ⁴	100%	10	10
VITAMIN D	95%	9	10
ZINC	80%	8	8
VITAMIN E	65%	8	5
CALORIES	50%	6	4
CALCIUM	50%	5	5
SELENIUM	45%	7	2
VITAMIN K	45%	5	4
MAGNESIUM	40%	6	2
VITAMIN B-6	30%	5	1
VITAMIN B-2	25%	3	2
VITAMIN A	25%	3	2
VITAMIN B-1	20%	2	2
VITAMIN B-12	20%	1	3
POTASSIUM	20%	2	2
FOLATE	15%	2	1
VITAMIN B-3	10%	2	0
PHOSPHORUS	10%	0	2

Product Spotlight : Chromemate

Steve Born

As most of you know, we have been providing the trace mineral chromium both as a main product (in Chromemate, as chromium polynicotinate) and also as a contributing ingredient in Premium Insurance Caps, Appetat, and several of our fuels. Well known for its vital role in insulin activity and related metabolic functions, new research has revealed even more potential benefits of chromium, so we're giving it the spotlight in this issue to let you know why we're so excited about this mineral.

Chromium is considered the "master nutrient" for controlling blood sugar, so it's no surprise that its most important function in the body is to maintain/increase the effectiveness of insulin and to help regulate the glucose (sugar) level in the blood. Insulin controls the movement of glucose out of the blood and into cells. Chromium is apparently involved in the step that "unlocks the door" to the cell membrane, allowing glucose to enter the cell. Chromium also plays a vital role in the synthesis of glucose, fatty acids, and amino acids. Needless to say, then, it plays a very important role in energy production.

In a related function, researchers believe that chromium inhibits the synthesis of new fat from carbohydrates; this allows the mitochondria to burn already-stored fat. That's why we put chromium in Appetat, our weight management supplement (the hydroxycitric acid component in Appetat also has this function). Chromium also helps overcome sugar cravings, a problem many people experience, especially those who have diets high in sugars and refined carbohydrates. So chromium improves your carbohydrate metabolism on many fronts.

Perhaps the most exciting finding of all regarding chromium comes courtesy of a recent study presented just this past September at the 46th Annual Meeting of the American College of Nutrition. In a study conducted by researchers at Georgetown University Medical Center (Washington, DC) and Creighton University Medical Center (Omaha,

NE), rats prone to aging were fed diets containing ChromeMate™ brand chromium polynicotinate (which is the only type of chromium we use in our products). These animals had an average life span increase of 22% compared to rats fed the same diet without ChromeMate™.



Supplement Facts

Serving Size: 1 Capsule • Servings per container: 100

Amount Per Serving	%Daily Value*
Chromium (as ChromeMate™ brand Chromium Polynicotinate)**	200 mcg 167%

* Percent Daily Values are based on a 2,000 calorie diet.

**ChromeMate brand of oxygen coordinated niacin bound chromium polynicotinate. ChromeMate is a trademark of the Interhealth Company, U.S. Patents 4,923,855, 4,954,492, 5,194,615 and worldwide patents pending.

Rats fed ChromeMate™ also experienced (1) lower systolic blood pressure, (2) lower circulating glucose levels, (3) lower, normalized hemoglobin levels (a long-term indicator of blood sugar status), and (4) no abnormalities in blood chemistry, kidney, or liver function.

That's just one study with lab rats, but it sure looks like a good list of positives in areas of physiology that are of more than casual interest to humans. It may well be that on top of all the benefits chromium polynicotinate already provides, it might prove to be a key nutrient for life extension as well.

Is there a down side? Doesn't seem so. Chromium supplementation is inexpensive, and you needn't worry about toxicity. One nutrition expert states,

"There is no known toxicity for chromium, except in the cases of chromium mining and industrial exposure, which cause chromium dust to be inhaled."¹

How much is enough? Original recommendations called for a daily intake of 200-600 mcg. However, recent research indicates that higher amounts of chromium-up to 1000 mcg (1mg) daily-may yield maximum benefits. One packet of Premium Insurance Caps (the usual daily serving) supplies 200 mcg, as does one Chromemate capsule. Taking one Chromemate with your post-workout fuel and each meal is a sound strategy for providing a variety of athletic performance and general health benefits. This is especially important when you consider that the majority of American diets (up to 90%, according to studies) are low in chromium.

Chromium polynicotinate (Chromemate) is a safe, multi-beneficial nutrient. You've got to take it to get the benefits, though, so make sure you add it to your next order.

1. Shari Lieberman, Ph.D., The Real Vitamin & Mineral Book - Using Supplements for Optimum Health. (Wayne, NJ: Avery Publishing Group, 1997), p.170

HUGE SAVINGS

We've still got a variety of the 2005 clothing and discontinued softgoods items on sale. Huge markdowns!

Check out the website or call for style and size availability

1.800.336.1977
www.e-caps.com

The Guru : Racing And Life Wisdom From An Old, Surprising Source

Tony Schiller

Based on appearances alone, you'd never have known you were in the presence of a master. Wearing Converse All Stars and an old pair of khakis loosely draped on his rail-thin physique, he hardly looks like one of the nation's top business consultants and executive coaches.

You fight back the urge to reach out and straighten his "pillow-hair" while wondering if, at nearly 80 years old, he's starting to finally lose it. The notion quickly passes as the sparkle in his eye and enthusiasm in his voice hypnotizes you and pulls you into his web. You gladly hand over control of the discussion to him.

Then, as only truly exceptional coaches can do, he ends up achieving the meeting's objective (business planning) without ever broaching the subject. He does it by asking you a question on a topic he knows nothing about: "How'd your year in racing go?"

You answer, "It was decent, not quite what I hoped for, but not bad", to which he says, "Tell me more." "Well, overall I had some pretty good races and some where I struggled more than usual to keep up."

"Wow, must have been some tough competition", he asks and you say, "Hmmm, sure, it's always tough but no more so than usual. Mostly it was me. I just couldn't quite get it going... sort of seems the norm the last couple years." He follows with, "Why do you think that is? Is it an age thing or maybe something else?" You answer, "Age is definitely a factor. I don't have the energy to train as much or as hard anymore. I don't think it's a burnout thing, mostly just me not putting as much emotion into it."

To that he wonders, "Do you ever think of quitting?"

"Oh no, never; God willing I'll race 'til the day I die." He shakes his head, "You amaze me. I could never do what you do. I just can't imagine putting myself through that much pain. So what is it about racing that gives you so much joy?" You answer matter of factly until his stoking gets you to keep digging.

With his prods, you go further and further back, mining your past to uncover the deepest reasons you race - way past the physical or the ego. You share how racing isn't something you do, it's a part of your soul, a gift you were born with and feel is meant to be developed for some positive good, maybe to inspire others. Suddenly, it dawns on you that he's got you talking, not to him but to yourself.

Finally he says, "I think I get it. You almost make me want to race. I'm not going to, but at least now I understand why you do." Then with a softer voice he offers, "What's it like to have something you're so passionate about that you can't wait to wake up and do every single morning?" At first you struggle with the truth, but feeling safe you admit, "I used to wake up like that, it's been a while." He asks, "How long? A year? Two? The nineties? The eighties?"

You mutter, "somewhere in there."

Thankfully, he shifts gears by asking, "is it possible that you're not fair to yourself? I mean, which goals are harder to attain, the ones you set for 10, 15, 20 years ago, or the ones you set for today?" That's a no-brainer," you say. "Back then I was always ultra-motivated, always moving toward something better in the future, a dream with unlimited possibilities." He follows with, "and today?" You think for a moment and answer, "I still expect a lot but I don't dream as much... now it's more an analytical thing, trying to figure out how to stay close to my old times and ahead of a few particular guys."

Baffled by that, he asks you to get a picture in your mind of someone about your age who's tried unsuccessfully for years and years to beat you, never getting that close. With the person in mind, he asks, "Now imagine we could wave a wand and make that person your physical equal for the next year. What kind of a year would it be for him?"

How would his focus compare to yours? How much would he go for it when the two of you race head-to-head? Would you even have a prayer to beat him?"

You shrug, "Probably not." Now the old guru looks at you and says, "Hmmm, interesting, two people, one thrilled beyond belief to possess the same attributes another takes for granted. So I guess what you're telling me is the reason you have less joy and enthusiasm for racing and it's now less fun because you're addicted to living in the past?" Defensively you shoot back, "I didn't say that," and he asks, "Are you sure?" You think about it and ask, "Is that what I said?"



He follows with, "You tell me... Look, the only thing keeping you from

enjoying racing more than ever is your memory. Man, you gotta' learn to forget. That's easy for me. At my age I can't remember what happened yesterday so I get to start each day with a clean slate. That's why I still like to work. You should try it."

He continues, "You know the old saying, 'if you keep doing what you've always done you'll keep getting what you've always gotten', well, here's a twist, 'if you keep thinking the way you've always thought, you'll keep doing what you've always done.' Think about it."

Then looking at the time he says, "Ooh, gotta' get to my next appointment. Hey, sorry we never got around to talking about your business", and you smile saying, "Actually, I kind of think we did." He nods, "Yea, I suppose we did."

He stands up and in a fatherly tone says, "Take care of yourself, OK?" Then with a wink, he bounds for the door.

Tony Schiller is a business motivator, a coach, and the director of the MiracleKids Triathlon, the nation's biggest with 700 kids. He's also a decent triathlete. (www.tonyschiller.com)

2005 Inside Triathlon All-Americans : Hammer Nutrition Athletes Rock!

The January/February edition of Inside Triathlon included their choices for All-American in duathlon and triathlon. According to the magazine, "To have a shot at making our All-American lists you had to show up and race very well at the most competitive races on the calendar." We'd like to recognize E-CAPS/Hammer Nutrition athletes who made this prestigious list. CONGRATULATIONS!

Note: An asterisk () before a name signifies the top-ranked person in his or her age group.*

Duathlon - Women

20-29

Andrea Myers - *Wellstone, OH*

35-39

* Christine Knight - *Louisville, CO*

45-49

* Kristin Villopoto - *Chapel Hill, NC*

Barbarann Mallory - *Littleton, CO*

50-54

* Cheryl Hart - *Louisville, KY*

60-64

Heysoon Lee - *Loudon, FL*

Duathlon - Men

20-24

Alex Eversmeyer - *Pittsburgh, PA*

25-29

Scott Myers - *Wellston, OH*

30-34

* Chad Walton - *Twentynine Palms, CA*

Christian Wareikis - *Ardmore, PA*

40-44

John McGovern - *Kingston, NY*

45-49

Steve Pyle - *Riverside, CT*

50-54

Jim Bruskewitz - *Madison, WI*

Warren Elvers, Jr. - *Getzville, NY*

55-59

Barton Bixenstine - *Shaker Heights, OH*

60-64

Robert Springer - *Sullivan, IN*

65-69

* Donald Ardell - *St. Petersburg, FL*

Warren Taylor - *Telford, PA*

75-79

Edwin Bixenstine - *Kent, OH*

Triathlon - Women

20-24

Brianna Cash - *Seattle, WA*

25-29

Christen King - *Huntington Beach, CA*

40-44

Dianna Ineman - *New York, NY*

50-54

* Laura Sophiea - *Pleasant Ridge, MI*

Jo Faruccio - *Sandy, UT*

Pam Stevens - *Sartell, MN*

55-59

Amy Fredericks - *Tehachapi, CA*

KerryAnn Massett

60-64

Cherie Gruenfeld - *Cathedral City, CA*

Heysoon Lee - *Loudon, TN*

65-69

Sharon Blount - *Saint Simons Island, GA*

Lis Heckmann - *Georgetown, TX*

Molly Hayes - *Bozeman, MT*

Diane Stuart - *West Hartford, CT*

Triathlon - Men

25-29

Patrick Evove - *Austin, TX*

Kirk Nelson - *Boulder, CO*

30-34

Chris Gebhardt - *Alpine, NJ*

35-39

Vinnie Monseau - *Morgantown, WV*

Stephan Schwarze - *Austin, TX*

40-44

Albert Boyce - *Stockton, CA*

Mike Llerandi - *Ridgewood, NJ*

Robert Schloegel - *Overland Park, KS*

45-49

George Esahak-Gage - *Phoenix, AZ*

Steve Pyle - *Riverside, CT*

Tony Schiller - *Chanhassen, MN*

50-54

Jim Bruskewitz - *Madison, WI*

Dean Harper - *Walnut Creek, CA*

55-59

Freddie Ferraro - *Austin, TX*

65-69

* Richard Clark - *Tiburon, CA*

Don Ardell - *St. Petersburg, FL*

70-74

Donald Frantz - *Lethbridge, Alberta, CA*



Cyclocross Nationals: Katie Compton

National Champion Repeats!

On December 11, 2005 Hammer Nutrition client, Katie Compton, won her second straight U.S. Cyclo-cross championship, winning the Elite Women's race in a time of 39:55, over a minute and a half ahead of the second place rider. Throughout most of the season Compton races as part of a Paralympic tandem team (she's the sighted captain of the team). Along with her visually impaired teammate, Karissa Whitsell, Katie won two gold medals (3 km pursuit, combined road race/time trial) at the Paralympic Games in Athens in 2004. She is planning on competing with Whitsell at the 2008 Beijing Games.

Testimonial : A Road Trip With Hammer Nutrition

Dear Hammer Nutrition,

This summer we hammered across the country on bicycles. We biked from Washington to New Jersey. Along the way we stopped in at Hammer Gel. We read about how good your products are and wanted to give them a try. So we purchased Perpetuem and Recoverite enough to last the trip. The gentleman that helped us was very patient in explaining the products and in answering all the questions we had. Prior to using the Hammer Gel products we were using Accelerade and Endurox. The products don't even compare. We

were able to bike an average of 92 miles a day. In the morning we would get up eat breakfast and be on the road by 6:00am and use Perpetuem for fuel for the rest of the day. Some days did not end until 3:00 or 4:00 in the afternoon covering 140 miles. When we returned to camp we would use Recoverite. We felt like your products were an essential part of our trip.

Thank you,
Scott and Dorothy Zimmerman



Race Report : Catching Up With A Few Amazing Athletes

Matt Hart

An Incredible Adventure

I want to say THANK YOU! I am just back from Baja where my team DART Montrail won the Baja Travesia expedition adventure race. The race traversed the peninsula of Baja California - more than 370km from the Pacific Ocean to the Sierra Mountains at 10,000 ft and back to the Sea of Cortez. It was one of the most amazing and challenging events I've ever done and we finished in 69 hours on less than 15 minutes sleep! Second place was more than 10 hours behind us.

I could not have done this without your great products. I used Perpetuem and Hammer Gel as my main fuels throughout. I also used Endurolytes and was popping them like crazy when we ran over a marathon distance through the desert to the Sea of Cortez. At one TA I actually had a serving of Recoverite. This was before a rally car orienteering section where I sat in a car 2 hours. Thank you for your support - You make amazing products!

Matt Hart

DART Adventure Race Team

John Hood

Hammering On

It brings me great pleasure to announce my 3rd place finish out of 3,000 runners in the Kiawah Island Marathon.

Taking in the Perpetuem before the race, then 4 Endurolytes an hour prior, then 3 more Endurolytes on the starting line worked great! I took Hammer Gel every 30 minutes and coasted to a 2:42.03 finish, placing 3rd out of 3,000 runners. Thanks so much for the on-going support. This marathon is my springboard for my seventh Boston marathon this April where my goal is another top 100 finish and a PR of sub-2:35.

Well, once again thanks a bunch. Throw everyone a high five for me around the office!!

Hammering on,
John Hood

Amanda McIntosh

Simply Amazing

Congratulations to long-time friend, client, and sponsored athlete Amanda McIntosh for her outstanding victory in the 2005 World Masters Athletics 100KM Championships in Bariloche, Argentina on December 11th, 2005. Amanda posted a blazing time of 9:22:49 on "a hilly course on a hot day at the foothills of the Andes."

Complete story and results can be found at:

www.coolrunning.com/engine/3/3_1/americans-win-world-maste.shtml

From Amanda...

Thanks to all of you for your support in helping me to WIN the MASTERS WORLD CHAMPIONSHIPS!

The race was very tough but incredibly beautiful. We ran at the base of the Andes through the lakes (5) and the Nahuel Huapi National Forest. The land and the people are amazing!

Though I was hoping for a relatively flat, fast course, my year of training paid off on this super hilly course of which I only had to walk on a couple of very steep hills. I had plenty of energy thanks to a year of awesome nutrition.

Steve, how can I say "thanks" to you? Your help has been invaluable over the years. My performance has skyrocketed thanks to the Hammer Products but mostly from your advice on how to use them most effectively.

Peace,
Amanda McIntosh

2005 Results
Bandera Trails 50K:
1st Female

Big Bend 50 mile:1st
Female, 2nd Overall

World Masters 100K Championship:
1st Female, 5th overall

Team YAK

The YAK Attack

Hammer Nutrition powers new 50+ Team Record at Furnace Creek 508

Team YAK thanks you for your support of our FC508 race (Oct 8-10, 2005). We were 2nd overall with a time of 26h 45m and we set a new 4 x 50-year-old record. Our crew and riders wore our Hammer Nutrition T-shirts to the rider meeting, and each of the riders wore our Hammer Nutrition outfits for both of our stages of the race. We had hoped to be the overall winner, but the Hammerheads from the Kern Wheelman (a 40-year-old 4 x team that did RAAM this year) rode with disc wheels and aero helmets and shuttled fresh riders from motels, logistically outsmarting us. One of them was a 29-year-old very strong rider! I'm not sure that even mimicking their logistics and with peak performance that our older team could not have taken them out, but I'm sure we could have cut an hour or more from their nearly 2 hour winning margin. Regardless, it was a great race/adventure and we are pleased to have a very solid 4 x 50 record.

Larry, Jim, Jim, and Mark
2005 FC508 Team YAK

Todd Heady

A Stellar Effort

Just wanted to drop a note and say thanks again for the products. I placed 7th in the World Championship Ultra Triathlon despite some knee problems. I used the products and had great success with them.

Todd Heady

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 (please put Race Report in the subject line) about your recent accomplishments and we'll try to include it in our Race Report

Inside This Issue

- New Product Introduction
 - PSA Caps
- New Flavors of HEED and Perpetuem Coming
- Athlete Spotlight
 - Get to know Shanna Armstrong
- A Farewell to Dr. Bill
 - Dr. Bill retires after 10 years of service
- Uganda Mission Update
- The Guru
 - Racing and life wisdom from a surprising source
- Product Spotlight
 - Chromemate

...and so much more in our biggest issue yet!!!!

The Back Page

Earn FREE Product : The Athlete Referral Program

Tell your friends, neighbors and training partners (just not your competition) about us and you could earn a mess of free products!

Here's how it works....you tell your friend Hank Hammer, who's never ordered from us before, about our products. Hank Hammer places his very first order and mentions either your first and last name or your client number. Hank Hammer gets 15% off his first order and you get 25% of his order credited to your account (i.e. Hank Hammer spends \$100 and you get \$25 credited to your account). You can then use that \$25 just like real cash...purchasing whatever you want from our product and clothing lines.

So, without a lot of work you can earn free product from E-CAPS/Hammer Nutrition. You'd better get going!

For more information and all the details, give us a call at 1.800.336.1977.

The Details :

- Referral credit can be used just like cash for the purchase of any products, accessories and/or apparel.
- We keep track of your referral credit for you. Want an update? Just ask.
- Whenever you place an order, you can apply it to that order or save it for future use.
- If you order online, just put in a note asking that we apply any available credit to that order.
- There is no expiration date for your referral credit.
- And much more!

Get started today! Cut out this card, fill in your name and client number and give it to a friend who's never ordered from us.

Fill in your name and client number and give this card to a friend who's never ordered from us. Remember, you get a 25% credit!

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