

Swiss "Ultra" Vacation



and "high" hills and valleys which are the famous Swiss watchmaker birthplaces."

In 1998, you can enter this event as a racer, so that your times and results will be tabulated on a daily and cumulative basis, or as a just-for-fun "trail run" in which no times or finishing positions are tabulated. You can also enter as a two person relay team, with each person doing approximately 1/2 of each day's distance.

from town to town. This price does not include airfare, extra meals or extra days in Geneva or Basel. Space in this event is limited, so you should act soon.

If you are interested in this event/vacation, you can contact our friend Werner or the Swiss Marathon Team which puts on the event. When organizing your trip to Geneva, Werner also offers assistance for your pre- and post-race accommodations and entertainment. And don't forget that interested non-runners are also welcomed and

are well appreciated as assistants in the aid station teams. Contact information is listed below. As an aside, Werner owns a jewelry store and may be able to accommodate you if you are looking for any fine Swiss jewelry or watches.

If you are an ultra runner looking for an amazing vacation destination combined with a tough multi-day ultra event, then the Swiss Jura Marathon/Trail Run from Geneva to Basel is for you. The total distance covered is 323 Kilometers over a period of 7 days. A long time E-CAPS customer, Werner Schweizer, has invited E-CAPS/Hammer Nutrition runners to come and join him in participating in this awesome event. The event is scheduled for June 28th through July 4th, 1998. This event has been held every year since 1990 and is quite popular with German and other European ultra runners.

This very difficult multi-day event, set in the beautiful Swiss Jura would certainly be an experience of a lifetime for any runner. As Werner says "You will visit Switzerland in a real Swiss region (cow mountains), not the famous places which most visitors usually see, but towns like Geneva, La Chaux-de-Fonds and Basel

Event Stage Information

1. Geneva to St. Cerque (45km, 1,200 meters elevation gain, 534 meters elevation loss)
2. St. Cerque to Vallorbe (47km, +730m, -1,021m)
3. Vallorbe to Fleurier (37km, +1,380m, -1,389m)
4. Fleurier to La Chaux-de-Fonds (40km, +1,028, -733m)
5. La Chaux-de-Fonds to Bienne (50km, +1,210m, -1,800m)
6. Bienne to Balsthal (46km, +1,634, -1,590m)
7. Balsthal to Basel (47km, +1,085, -1,315m)

In 1999, the event will be organized as a just-for-fun trail run allowing people to run together in small groups, without the stress of the race and with a more limited number of runners, similar to a running club or community.

The cost is extremely reasonable at 700 Swiss Francs, about \$475 US dollars at the current exchange rates. This cost includes food (breakfast and evening meals), lodging and services for the 7 days such as organization and assistance team, entry fees and transportation of luggage

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FREE RADICAL ACTIVITY

A MATTER OF LIVING LONG OR DYING YOUNG

Dr. Bill Misner, Ph.D.

What a Free Radical Is and What It Does

A free radical (FR) is a highly reactive molecule that contains at least one unpaired electron in its outer orbital shell. Once it is "free" in living tissues, the unbalanced molecule causes multiple cellular damage until it is "neutralized" by a scavenging antioxidant enzyme.

FRs are perhaps "Public Enemy Number One" to the length and quality of cellular life. Tissue reactions to the presence of free radicals are suspect causes for premature aging, cancer, atherosclerosis, immune function disorders, allergies, and a wide assortment of degenerative diseases.

A free radical may result from a number of exogenous pollutants introduced from air, water, food, medications, cigarette smoke, and sunlight radiation. Endogenous FRs are formed within all of us during energy metabolism. As muscle movement is performed, oxygen combines with water in muscle mitochondrial cells. Up to 5% of the inhaled oxygen forms superoxide (O₂⁻), hydrogen peroxide (H₂O₂) and hydroxyl (OH⁻) radicals throughout the multi-phased electron transport chain (Sjodin 1990). Once formed, free radicals continue to react and interact negatively, damaging cellular tissue. The extra unbalanced electrical charge assumed by peroxides and superoxides causes them to manifest a strong attraction to polyunsaturated fatty cell membranes, nucleic acids found in the DNA code for cell replication, and other cellular proteins. Upon contact with a target, the FR is neutralized, but unfortunately whatever it hit becomes an electrically unbalanced FR also. A chain reac-

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tion may produce thousands of FRs before an antioxidant enzyme reduces its reactive nature (Franke 1994). Damage losses mount beyond the capacity of living tissues to replicate, repair, and rejuvenate, causing constant degeneration until cellular death occurs.

When a cell membrane is initially damaged, it no longer has the capacity to transport nutrients, oxygen, water, or waste matter. Cell membranes may rupture, spilling their contents into surrounding tissues, and creating further damage to surrounding cells. The worst of these destructive reactions may be found in the chromosomes and nucleic acids of the cell, which may alter the cell replication rate or result in cancer cell mutations (Dormandy 1983).

The origin of most cardiovascular disease may be closely tied to unrestrained free radical damage to cell membranes lining the blood vessels. Free radicals are implicated in LDL-cholesterol plaque accumulations linked to cardiovascular heart disease (Ames 1993, Halliwell 1994). During unchecked oxidative stress, fatty acids within each target membrane increase the rate of formation of low density lipoprotein (LDL) cholesterol which in turn advances the rate of aging, adult

onset diabetes, atherosclerosis, and coronary artery disease.

How Our Bodies Defend Against Free Radicals

Production of free radicals is inevitable. An exercising athlete provides an excellent model for opposing excessive free radical production. During intense exercise, 2-5% of inhaled oxygen increases the tissue content of free radicals. Brooks (1984) found that rates of FR metabolite increased during exercise from 12 to 20 times above resting values. Later, Quintanilha (1989) discovered up to 3 times the normal muscle damage rates in rats (post mortem) which were subject to light aerobic exercise sessions for 2-hours duration. On the other hand, animals which were exercised intensely until exhausted were observed to deplete 40% of their muscle glutathione antioxidant stores while reducing liver glutathione stores 80% (the liver is the main storehouse for antioxidant glutathione) (Pyke 1986).

The body has three main endogenous enzymatic antioxidants with which it defends itself against FR exposure: (1) Catalase, which neutralizes peroxides, (2) superoxide dismutase (SOD), which destroys superoxide radicals, and (3) glutathione peroxidase, which detoxifies peroxides. Superoxide dismutase (SOD) naturally occurs in barley and wheat grasses or most green plants, but scientists disagree on whether the SOD molecule makes it intact through the acidic digestive system, and, if it does, whether its large size is negotiable through membranes to cellular tissue sites where it is needed. Some manufacturers of SOD enteric coat it, insisting that it is permeable only in a less acidic environment, such as the small-intestinal villi entry

ports. Glutathione is made from cysteine, selenium, and other amino acid substrates.

Several other exogenous substances have antioxidant scavenging properties known to reduce free radical reactions in human tissues. Vitamin E absorbs free radicals forming tocopherol and tocopheroxyl radicals. Vitamin C not only assists by neutralizing tocopheroxyl radicals but it regenerates and recycles Vitamin E for additional potent FR absorption (Tappel 1968). Vitamin C expenditure in athletes has been shown to be between 2-12 grams per day because of its regenerative role with vitamin E during exercise. Colgan (1993). The mineral selenium (200-400 micrograms) forms the active site for glutathione absorption and neutralization of FRs. It also potentiates the efficiency of vitamin E within the active sites where FRs are absorbed (Ganther 1974). Vitamin A (retinol) and its precursor, beta carotene, are active fat-soluble vitamins necessary for lipid metabolism throughout the body, protecting against free radical cellular mutants known to cause some cancers of the skin, breast, and lungs (Passwater 1985).

The high rate of oxygen metabolism during exercise saturates muscle cells with free radical activity. As energy levels are spent from exhaustive workouts, the last enzyme catalyst to regenerate ATP for muscle energy is cytochrome c oxidase. Even during lighter amounts of oxygen expenditure during endurance exercise, cytochrome c levels have been observed to be depleted by as much as 50% of their original muscle stores (Gullnick 1990). An all-out effort may cause cytochrome c levels to fail entirely. If cytochrome c is depleted, coenzyme Q-10 regenerates ATP formation for the energy cycle. Elite, very fit athletes tend to show higher muscle mitochondrial levels of coenzyme Q-10 than their less fit counterparts (Karlsson 1987). Researchers have further indicated that in spite of incidental superoxide radical production, when coenzyme Q-10 enters tissues, the net overall effect of elevated CO-Q-10 in muscle cells results in a decreased total free radical count (Beyer 1984).

Antioxidants For Optimal Defense

There are five factors known to in-

crease tissue levels of free radical activity: (1) Workouts lasting 2 hours or more, (2) Any workout where heart rate equals or exceeds 80% maximum values, (3) Body fat percents above 15% for men or 20% for women, (4) Age above 45 years, and (5) Weight above 200 lbs. Exogenous supplementation in optimal doses may induce free radical scavenging and absorption to reduce cellular damage from normally unopposed reactions. The induction of antioxidant substances may require up to three months for enzymatic adaptation to occur. It is suggested to begin with no more than 1/3rd the optimal daily dose if the consumer has not previously used antioxidants. Free radical reduction may occur at a faster rate if the following substances are ingested on a daily basis:

- (A) N-Acetyl Cysteine @ 350mg./day (must be accompanied by 3 times this amount or more of Vitamin C to prevent kidney stone formation in some athletes),
- (B) L-Glutathione @ 200mg./day,
- (C) Vitamin E @ 600-2000IU/day,
- (D) Coenzyme Q-10 @60-75mg./day,
- (E) Vitamin C @ 2000-12,000mg./day,
- (F) Selenium @ 200-400 micrograms/day (above 800 micrograms may have toxic side effects)
- (G) Vitamin A or Beta-Carotene @ 25,000IU/day (Passwater 1985, Colgan 1993).

CAUTION: Always take antioxidants with food, dosage increases should not exceed 10% per week until Optimal Daily Allowances are tolerated after 90 days.

The actual FR-scavenger enzymes produced within human tissues are superoxide dismutase, catalase, methionine reductase, and glutathione peroxidase. If enteric coated, superoxide dismutase (SOD) and catalase (C) at the rate of 5,000 McCord-Fritovich units per day may be added to fortify their entry to active muscle sites for FR reduction. SOD and catalase also occur within a variety of edible green plants such as wheat grass, broccoli, and Brussels sprouts. Vitamin A (Retinol) in 25,000 IU doses promotes germ killing enzymes, destroys carcinogens, and stimulates healthy mucous cell reproduction. Vitamin C (2-12 grams/

day), grape seed extract (100-200mg/day), pycogenol (50-200mg/day), hesperidin, and bioflavonoid are all potent antioxidants known to increase interferon production, t-effector cell activity, and reduce lipid peroxidation in neural locales. Vitamin E (600-2000IU/day) prevents cell membrane rancidity, oxygen utilization, and enhances immune response vigorously in the presence of ODA amounts of chelated zinc. Selenium (200-400 micrograms) is an essential synergistic mineral for the body's natural production of L-glutathione peroxidase since each molecule of this vital enzyme contains four selenium atoms. Selenium is also active in potentiating the antioxidant free radical scavenging outreach of vitamin E.

Optimistic studies are being conducted into the roles of several other substances whose suspected antioxidant scavenging activity against FR reactions is promising. Those substances are ginkgo biloba, gotu kola, garlic (allicin), milk thistle (silymarin), echinecea, lycopene, alpha-lipoic acid, quercetin, vitamin D, gamma linoleic acid (GLA), copper, flaxseed oil, germanium, inositol, manganese, molybdenum, potassium, niacin, vitamin B-6, vitamin K, algae, aloe vera, bromelain, cats claw, essiac, mistletoe, modified citrus pectin, Pau d' Arco and tumeric (Balch & Balch 1990).

Observations

Free radical reactions within the biochemistry of living cells occur at such a rapid and massive rate that endogenous defenses are unable to resolve them all, merely slow down the damage rates. The model for free radical research is the exercising athlete. Jenkins (1988) inferred that large quantities of inhaled oxygen during exercise clearly induced harmful free radical chemistry, namely lipid peroxidation. Lovlin (1987) monitored the indices of free radical damage during exercise, correlating increased peroxidation of lipids after intensive workouts. During such intense exercise sessions when maximal oxygen rates are reached (VO₂ max), plasma malonaldehyde (MDA), markers of lipid peroxidation, dramatically increase to 26% above resting value markers (serum

please see page 4

MDA levels). Light workouts performed at 40% VO_2 max rate, however, actually decrease serum MDA by 10% below resting values. If serum markers (MDA) of free radical production were interpreted as indicators of aging, light aerobic exercise should prolong life span by 10% in those who regularly practice it. The health implications are that light stimulation of the natural antioxidant system within human physiology may impact both quality of life and longevity. The rate of aging is accelerated when a decrease in the antioxidant stores of glutathione occurs. Reduced plasma levels of glutathione appear to correlate with muscle stores of this natural free radical scavenger and how long the individual may yet live (Kretschmar & Mauller 1993, Varyshkin 1981). Overtraining or too much intensity in exercise, without intermittent rest and recovery sessions, tend to peak glutathione depletion on day 11 following 10 consecutive training days. A variable rate of recovery was observed in each of these subjects who trained 10 consecutive days after 5-6 days of not training (Keast 1995).

Nieman (1991) documented the lowest concentrations of immunoglobulin (Ig) to occur 90 minutes after continuous running. C-reactive protein levels, observed indicators of tissue death, begin to rise in runners who race beyond 21 kilometers of roughly 13 miles distance, and becomes progressively worse as distance is increased (Strachan 1984, Kuipers 1989). There is some correlation between time, 90 minutes, and the distance (21km.) or a 13-mile half-marathon, when systemic markers of tissue damage appear. Blood serum markers of aging, and increased predisposition to degenerative disease are similar to those found in an overtrained athlete, yet the athlete rebounds during periods of rest because exercise-induced free radical accumulations are mostly neutralized by the conditioned antioxidant defense system. Over time however, free radical damage accumulates, resulting in an increased rate of fatigue, decreased recovery rate, deteriorated cellular immune response, increased predisposition to degenerative disease, and eventual death.

Light aerobic exercise should prolong life span by 10% in those who regularly practice it. The health implications are that light stimulation of the natural antioxidant system within human physiology may impact both quality of life and longevity.

Dekkers (1996) notes, "Increased oxidative stress induced by exercise is compromised by increased antioxidant activity, preventing lipid peroxidation after exercise." Human studies have shown that dietary supplementation with antioxidant vitamins has favorable effects on lipid peroxidation after exercise. Olin (1996) has shown that intake of antioxidants with food can reduce exercise-induced oxidative stress!

Modern Science is at present unable to prescribe a synergistically perfect formulation of antioxidant substances to prolong life or provide extreme quality of life. Some of the antioxidants discussed in this article may, when combined with others, provide intermittent reduction of free radical activity in most people, when consumed with food sources. Oral antioxidant intervention may reduce free radical damage rates, elevate the immune system response, and increase the rate of recovery from daily activity, resulting in both enhanced quantity and quality of life.

Precautionary Note

Oral antioxidant supplement dosage may be increased to peak tolerances within 90 days of initial dose levels. This article is not a prescription for any combination of antioxidants discussed: Please consult a licensed Physician or health care professional before ingesting antioxidant supplement combinations.

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Guest Editorial

Using Performance Enhancing Substances

by Nate Llerandi

There seems to be a "win at all costs" attitude in just about every sport. To some, the cost is merely poor sportsmanship or maybe some "minor" forms of cheating, such as cutting a course short in a marathon. To others, there is no limit to what they will try to gain an advantage, regardless of the consequences. I'm referring to the use of illegal performance enhancing substances.

A poll of elite class athletes posed two questions. The first was: If you could use an illegal performance enhancer, win an Olympic gold medal (and the fame and fortune that accompanies it) and get away with it, would you do it? Nearly 96% said they would. The second question was: If you could use the performance enhancer, win the Olympic gold, have the fame and fortune, not get caught, but 5 years down the road you would die due to the drug's side effects, would you still do it? Here's the scary part — nearly 75% said they still would!!

In the past several years — while it can't be directly proven — a relatively large number of cyclists from the European peloton have dropped dead due to overuse of EPO. They boosted their hematocrit levels (the number of oxygen-carrying red blood cells) so much that their blood became too thick for the heart to pump. Consequently, they died of coronary arrest. And it goes beyond this every day. Athletes knowingly subject themselves to the harmful side effects of performance enhancing drugs because they feel they can't reach the top without some sort of illicit help. It's sad that this statement is true in sports such as track & field and cycling, as well as many others.

I've always been one to use whatever products were available to "get a leg up"

All I did was switch from using carbo solutions such as Gatorade or PR fuel, to using Hammer Gel and pure water. It was almost like a revelation, the difference was that immediate and noticeable!

on the competition — as long as they were legal. I see the E-CAPS products as a godsend in this regard. I began using the products back in 1989, during my senior year of collegiate swimming. My results for the entire season were fantastic, to say the least, and I have been sold on their benefits ever since.

This year marks my return to the pro ranks of the sport of triathlon after a hiatus due to the birth of my daughter, Alexis. I have had to make the most of every day of my training so that I could not only reach my former level of conditioning but surpass it. By using the Race Caps, Enduro Caps and Xobaline for training; Tissue Rejuvenator and Soy Pro after training; and Boron, Premium Insurance Caps, and Phyto-Max as nutritional supplements, my training has been extremely consistent. And the new line of

DUL-X products has helped tremendously with recovery after a very bad ankle sprain. Three days after injuring my ankle, I was able to resume my training with an intense fartlek run and swim later in the day.

But probably the most "enlightening" product I found has been the Hammer Gel. Without a doubt, my workouts have taken a big leap forward. All I did was switch from using carbo solutions such as Gatorade or PR fuel, to using Hammer Gel and pure water. It was almost like a revelation, the difference was that immediate and noticeable!

In closing, I would like to say that I know I would never cross the line into the use of illegal performance enhancing drugs. I couldn't look at myself in the mirror if I did, no matter how successful or rich I became as a consequence. Yet, with the religious use of the E-CAPS products, I don't even feel I have to worry about it. I can tell my fitness is head and shoulders above what it would be if I had never been introduced to E-CAPS nine years ago.

Thanks, Brian!

Food Additives To Avoid!

The Safe Food Primer, by the Center for Science in the Public Interest (1998) E-102, listed the following as UNSAFE and poorly tested ADDITIVES:

BAD FOR EVERYONE

- (1) Acesulfame-K
- (2) Artificial Colorings
- (3) BHT & BHA (Butylated Hydroxyanisole & Butylated Hydroxytoluene)
- (4) Olestra
- (5) Propyl Gallate
- (6) Saccharin
- (7) Sodium Nitrate

BAD FOR SENSITIVE INDIVIDUALS

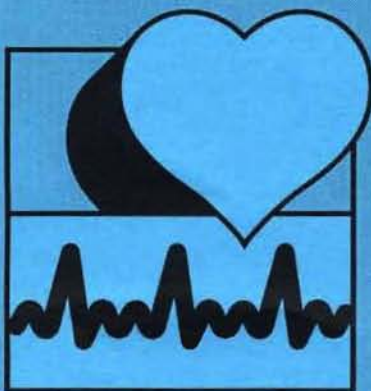
- (1) Aspartame
- (2) Caffeine
- (3) Monosodium Glutamate (MSG)
- (4) HVP (Hydrolyzed Vegetable Protein)
- (5) HPP (Hydrolyzed Plant Protein)

Other food additives to avoid are: Acacia Gum, Alginic Acid, Benzoic Acid, Iron Salts, Glutamic Acids (MSG), Ammonium Additives, Sorbitols, EDTA, FD&C Food Colorings, Irradiated Foods, Sulfites, and Hydrolyzed Casein.

From: Mindell E, *Earl Mindell's Safe Eating*, Warner Books, New York, 1987:21-49.)

The Doctor is IN...

And Waiting To Hear
From You.



As a customer of E-CAPS/Hammer Nutrition, you have any incredibly valuable, and underused (to date), resource at your disposal. I am referring to Bill Misner, Ph.D., our staff nutritionist. For almost a year now, Dr. Misner has been answering nutritional questions as well as investigating and finding solutions for physical, physiological and dietary ailments of hundreds of athletes. However, most of them were NOT our customers.

Although he doesn't mind answering inquiries from non-customers, he and I would both rather that **our customers** had the benefit of his services.

In case you are wondering, he doesn't just recommend our products to solve every problem. He is not a salesman. What he will do is thoroughly examine your ailment or question and give you solid, factual answers and advise based on solid natural health principles.

So, contact him with your questions or problems. To receive top priority, be sure to tell Dr. Misner that you are an E-CAPS/Hammer Nutrition customer. He responds to most inquiries within 24-hours. He can be reached via e-mail at <drbill@cet.com>, by phone at (509)327-5817 or by mailing your inquiry to EN.

DISADVANTAGES OF GINSENG

Dr. Bill Misner

Of the products circulating in the marketplace where athletes tend to congregate looking for a supplemental stimulant to improve their performance, ginseng adaptogens may be the rip-off of the century. There are 12 active triterpenoid saponin glycosides (ginsenosides) found in genuine ginseng. Products whose ingredient labels suggest they contain real ginseng—panax ginseng, panax notoginseng, eleutherococcus senticosus (wujia/ciwujia), or panax quinquefolius—may, in fact, not contain ginseng at all! Dr. V.E. Tyler (Purdue University 1987) tested 54 varieties and found that 32 of them were virtually void of true ginsenosides. One well-known Sports Institute for Athletes (San Diego, California) obtained test results from a 1982–1993 study which showed that 95% of all the products they tested were nothing more than “table sugar” (pretty expensive sugar!)

A 1982–1993 study showed that 95% of all the [ginseng] products tested were nothing more than “table sugar” (pretty expensive sugar!)

My objections to recommending use of ginseng to enhance athletic performance are that it appears to stimulate certain excitatory hormones. In 1985, Dr. M. Samura, using real ginsenosides known as “G115 extract” from a popular over-the-counter supplement, showed increased levels of adrenal/pituitary excitatory hormones in rabbits. Dr. L. D’Angelo

(1986) showed similar results with humans. The data I collected and reported on DHEA supplements, suggests harm occurs to some predisposed individuals when extra-natural growth hormones are produced from exogenous sources. The relationship of testosterone precursors, adaptogens, and stimulant class drugs is strikingly similar. It takes 200 mg. of standardized ginseng extract to create these “stimulatory” conditions (Dr. D.E. Dorling, 1980). Only two products are known to actually contain up to the 1-2% standardized ginsenosides, amounting to no more than 20-40 mg. of their recommended dosage.

Encouraging athletes to spend their money on a product that does not contain what it says it contains borders on fraudulence when there is not enough of it in a single dose to “stimulate” a minimally enhanced performance effort . . . but, this is not the worse scenario.

The athlete to really feel sorry for is the one who finds a true standardized ginsenoside, then doses enough to “stimulate” performance, only to find out after long-term use of it in high doses that he has contracted prostate cancer, or she has cervical or breast cancer.

However, some athletes take ginseng supplements for years and have no problems, but most of them will tell you they do not know if it makes any difference at all. Why buy a supplement if you do not know whether it is supporting health and enhancing performance? If it is real quality standardized ginseng, and if you dose enough, you can tell the difference, but at what price? Are the long-term effects upon quality of life and health secondary to temporal performance?

These are my personal objections to the use of adaptogens.

*Research Study References provided upon request.

More on the Endurance On-Line Forum



The Endurance On-Line Forum has been running for a couple of months now and the feedback

from subscribers has been overwhelmingly positive. So, I wanted to take this opportunity to encourage you to subscribe to the group and benefit from this great resource.

The Endurance news group can only be subscribed to by E-CAPS/Hammer Nutrition customers (yes, we will check to verify that each new subscriber is a customer) or by special invitation. In addition to customers, we have enlisted the assistance of a wide variety of "experts" to monitor and participate in the group to respond to questions as well as contribute information in their respective areas of expertise. Whether sharing your experiences with other customers or having direct access to the gurus will be more valuable to you remains to be discovered. Either way, this chat group is an invaluable resource that is completely free for you to use and benefit from.

When you subscribe to the group you will receive a welcome letter which contains a very detailed set of guidelines for maintaining the decorum that we would

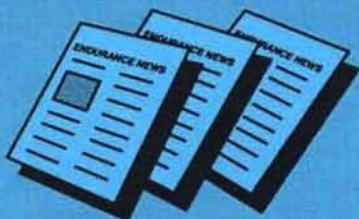
like to be the foundation of this resource. This information is appropriately listed under the "info" heading.

To subscribe to the Endurance On-Line Forum all you have to do is send an e-mail to

[<endurance-request@MailingList.net.>](mailto:endurance-request@MailingList.net)

In the body of the e-mail write "subscribe" without the quotation marks. Do not put anything in the subject line. The list is also available in digest form. So, instead of receiving a message every time someone posts one to the group, you can receive just one e-mail which will include all of the posts for the past 24 hour period. To subscribe to the digest version follow the same procedure above except send your e-mail to [<endurance-digest-request@MailingList.net>](mailto:endurance-digest-request@MailingList.net) instead. Of course, you are free to unsubscribe from the list any time you wish. More procedural/operational details will be forwarded to you when you subscribe.

I know you will enjoy this new resource and find it to be interesting, informative and educational.



Which E-CAPS/Hammer Nutrition customers receive our newsletter, *Endurance News*, is determined by how recently we have heard from you. You may have never given any thought to this subject before, but I wanted to inform all of our readers how we determine who receives *EN* and who doesn't. You may have thought that we send them out to every customer, but with over 18,000 customers now on file, that would be cost prohibitive.

If you look at the mailing address on your newsletter, you will find two sets of numbers above your name. The number on the left

is your personal I.D. or customer number. The set of numbers on the right indicates the last date on which we heard from you. Anyone who has ordered within the past 12 months, we consider "active" and receives the newsletter. So, for example, this issue was mailed in March of 1998. If you're reading this issue, you must have ordered sometime since March 1st of 1997. But, if the date on your address reads 03/xx/97 or 04/xx/97 you won't receive issue #20, unless we hear from you before it is mailed out in late May. Likewise, issue #21 will be mailed in late July, so if your last order date was 05/xx/97 or 06/xx/97, you wouldn't receive the July issue.

Endurance News Who Gets it and who doesn't

If you don't plan on ordering from E-CAPS/Hammer Nutrition, for any of several valid reasons, for over a year but still want to receive the newsletter, please contact us. We can make arrangements so that you will continue to receive them even if your status as an "active customer" has expired.

If you have any questions about this policy, or anything else related to *Endurance News*, do not hesitate to write, call or send us an e-mail.

Hammer Gel Use Tip

If kept refrigerated, the tendency of the Hammer Gel is to get thicker. The Chocolate, Espresso, and Un-flavored are the most problematic, but below 40 degrees, the Raspberry and Vanilla can get a little thick too.

What to Do About It.

Take your jug and zap it in the microwave oven for 30-60 seconds with the lid open, then fill your gel flask with 4 servings. If it is cold outside, top off the flask with water and shake for a few seconds. This will effectively reduce the viscosity of the gel so that even when it cools, it will be more runny. You can experiment with the zap time and amount of water to get the consistency exactly the way you want it for any season.



Endurance News Mission Statement

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 to 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, EN will include articles highlighting new and existing E-CAPS products and how to get the maximum benefit 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.

*Brian Frank,
Editor*

Legal Disclaimer: The contents of Endurance News are not intended to provide medical advice to individuals. For medical advice, please consult a licensed physician.

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