

THE ULTIMATE IRONMAN FUEL

Since *Gatorade* and *Powerbars* will be the only fuel available on course again this year, many triathletes will want to carry their own. E-CAPS' ENERGY SURGE drink mix is a perfect alternative because it can be mixed at extreme concentrations, contains no sugars or flavorings, and provides a convenient protein source. ENERGY SURGE was used in last year's Ironman by a number of age group champions and one of the top 3 female finishers. All of these athletes reported feeling great during the race with none of the usual fuel related ailments. It has also been used in the Western States 100, RAAM and many other ultra distance events with similar results. Not one athlete has complained of upset stomach or other fuel related problems in these races. Using ENERGY SURGE will allow you to avoid all of the sugar in those other products and the problems it causes. This also means that you will be drinking mainly plain water and only taking a sip of fuel (ENERGY SURGE) about every 15-20 minutes.

Here is the scenario: since a large water bottle will hold 4 servings, you will want to carry one bottle with you on the bike, drinking it slowly, then pick up another large bottle with your "need bag" at the turn-around and consume that bottle on your way back. Then when you head out on the run, take one small

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TRAINING FOR THE MOONWALK & OTHER ENDEAVORS

by Kevin Moats

How to simulate something that has never been done or experienced, that was NASA's task in preparing the Apollo Duo to walk on the Moon. Put 'em in a large cargo plane with padded insides, then do a few loops to create weightlessness. Next, move them into an indoor Moon-scape, put on the 500 pound suits, and connect them to weighted pulleys to experience 1/20th of Earth's gravity. Train and train, then send them on their way, and hope it's been enough.

How do you train for an Ironman, especially, if you have never done one? A sprint, or International, or even Half Ironman, are all variations of your standard garden variety triathlon, some a little longer than others. But in an Ironman, things start getting a little foggy after 5 to 6 hours; a whole different physiology and psychology creeps in that makes an Ironman different from anything else you have experienced. So how do you train for an Ironman?

How do you simulate the Moonwalk without walking on the Moon?

Benjii Durden, a top American marathoner in the 1980's, had a special workout he would do when he was getting ready for a marathon. He would run at a good pace for 60 minutes, then hammer for 60 minutes doing intervals, then push the pace for another 60 minutes. 3 hours all told. He said it told him where

the chinks in his armor were. It trained him to continue to push the pace over the last 6 to 8 miles when the body wants to slow down. It allowed him to experience the fatigue of the last part of a marathon without destroying his body running full marathons in training. During the 60 minutes of intervals (the middle hour of the workout), he depleted his muscle glycogen. The last hour he was just trying to hang on.

Assuming you work for a living and don't have the luxury of going out for a 100 mile ride on Tuesday, your Ironman specific training will be limited to Saturday and Sunday. My favorite series of workouts are what I call "Double Bricks." A "Brick" is a bike/run workout done back to back. Most experienced working triathletes build up to 80 to 100 mile rides on Saturday, then either run 5 to 10 miles immediately after, or wait until Sunday to run 15 to 20 miles. The problem with this approach is that you are never totally fatigued during the run, never running on empty, as in an Ironman, so that you never effectively experience in training that overwhelming fatigue that hits you 80 miles out on the Queen K Highway, or after the turn around the point on the Run out at the National Energy Lab. On Saturday, I'll ride 80 to 100 miles, preferably in the mountains, to insure that I burn off most of my muscle glycogen on the long, hard climbs. Next, I run 16 to 18 miles,

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RAGING HORMONES

Supposedly, regular exercise will improve your sex life by improving strength and stamina, among other things. While this may be true when comparing a sedentary person to one who exercises moderately, it is certainly not true for most serious athletes. In fact, research is confirming what most of you have known for years: that heavy training actually reduces sex drive. What you are probably not aware of is that depressed hormone levels which decrease sex drive also negatively affect athletic performance. However, there is hope for athletes suffering from depressed hormone levels. It is an inexpensive trace mineral called boron.

Most of you who train 10-20 hours a week or more know how it effects your libido. Bear in mind that it is not that we are so concerned with athletes having a vigorous sex life as much as sex drive is an accurate indicator of your hormone levels. The level of hormones in your body will have a direct effect on your sex drive and athletic performance. Hormone levels will determine work load capacity, your ability to build and repair muscle tissue, and most other physiological aspects of your athletic performance. This is the reason that athletes have sought to elevate hormone levels artificially through the use of steroids. Basically, the more hormones you have, the faster and stronger you will be.

Researchers at a Human Performance Lab in New Mexico did a study with six male athletes to determine how their training affected their testosterone levels. After a three-day rest period, the six athletes had their testosterone levels and sex drive measured. Then the

men resumed their normal training routines consisting of a weekly average of running 32 miles, cycling 82 miles, and lifting weights 3 times a week. By the end of the two-week training period, their sex drive and sexual activity decreased noticeably and their testosterone levels dropped an average of 17 percent. If you compare the relatively light training volume of the test subjects in this study to your own training, you should get a better idea of what we are dealing with.

The athletes attributed their lack

"Hormone levels will determine work load capacity, your ability to build and repair muscle tissue, and most other physiological aspects of your athletic performance."

of interest in sex to fatigue, however, the drop in testosterone levels is a more likely culprit. The researchers believe that the training actually reduced testicular function which caused the decline in testosterone levels and consequently sex drive. Unfortunately, this study did not include female athletes, but considering what we know about amenorrhea, I would think that female athletes experience a similar hormonal response to heavy training. Nor did the study look at how depressed testosterone and other hormone levels might be affecting the athletes' performance. If it had, I suspect that it would have found a correlating decline in strength, work load capacity, and recovery.

A POSSIBLE SOLUTION

Excluding the use of steroids, a specific trace element named boron

may be the athlete's best hedge against exercise-induced hormone irregularities. Boron has been recognized as an essential nutrient for plants since the early 1920's. However, it was not until the 1980's that research identified boron as an essential nutrient for animals and humans.

In 1986 research scientists at the U.S.D.A. began examining the effects of dietary boron on major mineral, estrogen, and testosterone metabolism in postmenopausal women. The main objective was to identify boron as an important nutritional factor determining

the incidence of osteoporosis.

The results of this study showed that dietary boron levels of 3mg per day significantly reduced the excretion of calcium and magnesium. These findings link adequate boron intake with the prevention of calcium loss and bone demineralization. "Boron supplementation also

markedly elevated serum concentrations of estradiol-17B and testosterone" according to U.S.D.A. Research Nutritionist Forrest H. Nielsen, Ph. D.

It was this data that led E-CAPS to pioneer the use of boron among endurance athletes. The tendency of endurance athletes to suffer from demineralization and lowered hormone levels made boron a very promising remedy. The feedback from the first athletes, all over 40, experimenting with 5mg per day of boron was almost unanimously positive.

Within 30 days of beginning supplementation, our testers were reporting feeling stronger, more vital, and more than modest increases in their sex drive. Boron was also given to a number of female athletes

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A BETTER WATER BOTTLE

How many times have you finished a workout or race and you and your bike are a big sticky mess? It seems like one of Murphy's laws: If you put anything besides water in your water bottles, they will leak. I am sure that you would agree that most water bottles, even the expensive ones, are a hassle. They leak from the lid or nozzle, and their mouths are too small to get your powdered drink mixes into without spilling on the counter. What's more, most bottles deteriorate quickly with regular use and end up in the trash after a month or two.

Finally, Dan Snider of *Triumph* water bottles has designed and manufactured a water bottle that addresses all of the usual complaints. While *Triumph* started with a wide-mouth water bottle that worked fairly well, it was still guilty of leaking just like the *Specialized* bottles and all the rest. But Dan's new bottle truly raises the standards by which water bottles will be measured. It has a wide mouth that ice cubes and most scoops will fit through, but, most importantly, it doesn't leak. A lot of time and energy was put into re-designing the lid. It screws securely onto the bottle and features a specially-designed nozzle which is leak-proof even in the open position.

Dan was kind enough to send me a pre-production sample to test out. I used the bottle almost daily for five weeks and it worked like a champ. After weeks of regular use, the bottle did not leak at all, and the nozzle still opened and closed with the same precision as when it was new. I immediately put in my order for a load of the new *Triumph* water bottles imprinted with the E-CAPS logo. We sell them for \$3.95, but you won't have to twist our arm very hard to get a free one with your next order of E-CAPS. ■

DID YOU KNOW...

This issue of EN was delayed because the editor, Brian Frank, has been recovering from surgery to repair a wicked break of the left clavicle. Since Brian is left handed, he was unable to write or type for more than 4 weeks. Hopefully, the September/October issue (EN#8) will be on schedule and go into the mail by 9/15.



E-CAPS recycles. Whenever possible, which is most of the time, E-CAPS uses all recycled boxes and packing material. The only time styrofoam peanuts are used is when we receive them in our bulk shipments.

If you are not getting 1/2 gram of protein per pound of bodyweight each day, you are almost definitely protein deficient. Poor muscular recovery, general fatigue, and anemia are just some of the potential side-effects of protein deficiencies.

A reader wrote with his thoughts on monitoring your resting pulse rate. While he felt that it did not necessarily accurately predict the onset of colds and flu's, he did bring up another interesting point. Bill mentioned that he feels that the most important time to listen to your heart is while you are training. Specifically, he pointed out that on the days when he gets sick, or is overtrained, he can't get his heart rate up to the normal range. He believes that on hard training days when you can't get your heart rate up, or keep it up, it is time to turn around, go home, and take a nap — maybe even to take the next day off. Good point Bill.



We encourage your feedback on all of the articles published in ENDURANCE NEWS, or on any other topic. Suggestions for articles that you would like to see in EN are also welcome. ■

bottle (3 servings, 9 scoops) with you on the run, and pick up the second small bottle at the airport turn around. When mixing ENERGY SURGE at these concentrations, it will be necessary to maintain at least a 2:1 ratio per serving of water to mixed solution. For example, if you put 4 servings in a large bottle, you will want to drink at least 8 bottles of water with that bottle of ENERGY SURGE during half of the bike leg.

With over 1,300 calories, 290 grams of carbohydrates, and 42 grams of protein per bottle, you will be ingesting about 2,675 calories on the bike and 2,000 calories during the run. This is probably more calories than you have ever been able to consume in the past, but it won't feel like it. You will not need to eat anything else during the race if you follow this regimen. However, if you are accustomed to eating solid foods, you should try to eat something like bagels, bread or other foods that do not contain sugar. If you feel you must eat something with sugar, save it until the final 10k. Using de-fizzed soda, carbohydrate syrups, etc, much sooner will seriously compromise the ENERGY SURGE's ability to work properly.

After talking with my customers and sponsored athletes who used it in last year's race and other Ironman races, I am convinced that this is the hot ticket. But don't take my word for it, get a container and try it out on a couple of long workouts and see for yourself.

E-CAPS DOSAGES

After seven years of experimenting with various dosage combina-

tions for Ironman distance races, I think we have got it down pat. Here is how to do it. Remember that RACE CAPS and TRAINING CAPS are interchangeable.

During the weeks prior to the race when you are tapering, continue taking dosages. I would recommend taking a full 2 and 4 dosage in the morning, but 1 and 2 could suffice.

90 minutes before the start, take 2 RACE CAPS (TRAINING CAPS if you are using them) and 4 ENDURO CAPS. Then, just before you go to get into the water, take 1 RACE CAP and 2 ENDURO CAPS. This will cover you for about the first 2 1/2 hours of the event.

Once you start the bike, take 1 RACE CAP and 2 ENDURO CAPS 60 minutes into the bike and every 90 minutes thereafter until around the 5 1/2 hour mark. Then begin taking the same dosage every 60 minutes for the remainder of the bike and during the entire run.

One option that has worked very well for late in the run is to begin taking the ATP SURGE 100SL tablets every 30-45 minutes during the second half of the marathon or just the last six to ten miles. I do not feel that this is essential, but if you are anticipating difficulties during the last half of the marathon, it would probably be a good idea. The ATP SURGE 100SL's are perfect for this application because the oral absorption allows a good dose of ATP (energy) to get into your system very fast (about 5-7 minutes during a race) so when your energy levels drop unexpectedly late in the race, just chew up or dissolve a tablet and within 5 minutes you should be cruising again. ■

running relaxed, but trying to push the pace. Then, on Sunday, and this is the key to the whole program, I run another 19 miles, then bike another 50 miles easy. At the start of the Sunday run, if I've pushed hard enough on Saturday, I'm toast. My legs are shot, sore and fatigued, just how I felt when I got off my bike after 112 miles in Kona for the first time in 1987. But I shuffle along, and after a few miles I begin to loosen up, and gradually pick up the pace, until I'm running close to my Ironman marathon pace. Physiologically, you have depleted your muscle glycogen in your Saturday Brick workout, so that Sunday's training is totally "fat-burning," or utilizing fats as fuel. It's the running on "fumes" that ultimately prepares you for Ironman. The Sunday bike ride is more for recovery, than any real training effect. By the end of Sunday, you look forward to going to work Monday morning.

During and after the Double Brick workouts, it is important to drink and eat all of the foods you will be using during Ironman. By experimenting with different drinks and foods, you will be able to find those foods that most effectively keep you from bonking and facilitate recovery.

By doing 2 or 3 weekends of Double Bricks 6 to 8 weeks before Ironman, you will know whether you're ready or not. In fact, you'll look forward to the race, since it's so much easier than a Double Brick weekend.

Kevin Moats has completed 18 Ironman races, and recently finished 5th Overall, and Top American, at the 1994 Japan Ironman in 8:47:53. He has won the Atlanta Marathon 7 times with a marathon PR of 2:20:27. He also works full-time as a real estate investment advisor and counselor for The Resource Group in Atlanta, GA. ■



HEALTHY RECIPES

Summer is a great time for fresh Mexican food. These two dishes can be the filling for tacos, burritos, tostadas or taco salads. If you want to get fancy, you can add beans, rice, cheese, lettuce, cilantro or your favorite side dishes to create a complete gourmet meal.

FRESH CORN SALSA

INGREDIENTS:

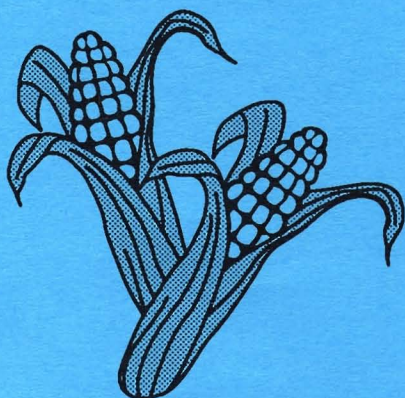
- 1 1/2 cups raw corn, cut off the cob or canned
- 1 cup diced tomatoes
- 1 cup chopped cilantro (coriander)
- 1/2 cup chopped purple onion
- 3 teaspoons chopped jalapeño pepper (or as desired)
- 2 tablespoons lemon juice

PREPARATION:

Mix all ingredients together. Serve with tacos, or by itself as a salad. Makes 4 cups, about 8 servings

Nutritional Information Per Serving:

Calories	36
Protein.....	1.3 grams
Carbohydrates	8 grams
Fat	0.5 grams



TURKEY TACO MEAT

INGREDIENTS:

- 1 pound extra lean ground turkey
- 1/4 cup finely chopped white onion
- 3 tablespoons soy sauce
- 2 teaspoons canola oil
- 1 teaspoon cumin powder



PREPARATION:

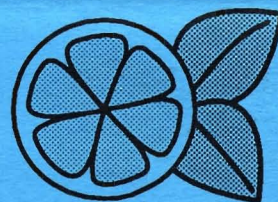
Sautee turkey and onion in the canola oil until turkey is cooked, about 10 minutes. Turkey turns white when it is cooked. Add cumin and soy for flavoring. Use as a meat for tacos, burritos or tostadas. Makes 3 cups; about 6 servings

Nutritional Information Per 7 oz. Serving:

Calories	147
Protein.....	14.5 grams
Carbohydrates	1 gram
Fat	5 grams

TIPS ON ORANGE JUICE

Oranges are one of nature's treats, available almost year 'round. High in folic acid, Vitamin A, C, potassium and magnesium, oranges make a refreshing snack or drink. There are many different varieties of oranges and tangerines, and we encourage you to try those grown locally. Valencias are great for juicing, and Navels for eating, as are Satsuma mandarins if you are lucky enough to find them fresh, usually in the fall and winter.



ORANGE JULIUS

A tasty, nutritious drink with enough protein and carbohydrates to start your day. A good mid-day pick me up, too!

INGREDIENTS:

- 8 oz. water
- 4 oz. orange juice
- 3 scoops ENERGY SURGE drink mix

PREPARATION:

Put all ingredients into container with lid; shake well and voila.

(HORMONES cont'd from page 2)

who had recently suffered stress fractures or severe shin splints. Within 60 days the usual pain experienced during and after running had ceased altogether. Our informal, non-clinical trials seemed to confirm very conclusively that the benefits to athletes were significant in terms of both mineral metabolism/retention and elevating otherwise depressed hormone levels. If there was any doubt remaining, the positive feedback from sponsored athletes and customers using E-CAPS' BORON 5MG over the past six years has taken care of that.

For athletes over 40, boron is not only an important nutritional element, but an answer to many vexing problems. At a price of only \$9.95 per 90 day supply, boron may offer the best cost to benefit ratio of any supplement on the market. For more information on boron, or to order a 90 day supply, call E-CAPS at 1-800-336-1977. ■

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 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.

*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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3333 Vincent Road, #203
Pleasant Hill, CA 94523
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