EIDDURALGE BY HAMMER NUTRITION #109 April/May 2018 \$4.99 US / \$5.99 CAN LEVS



IN THIS ISSUE...

Catching up with John Kelly

What's next for this Barkley Marathons winner

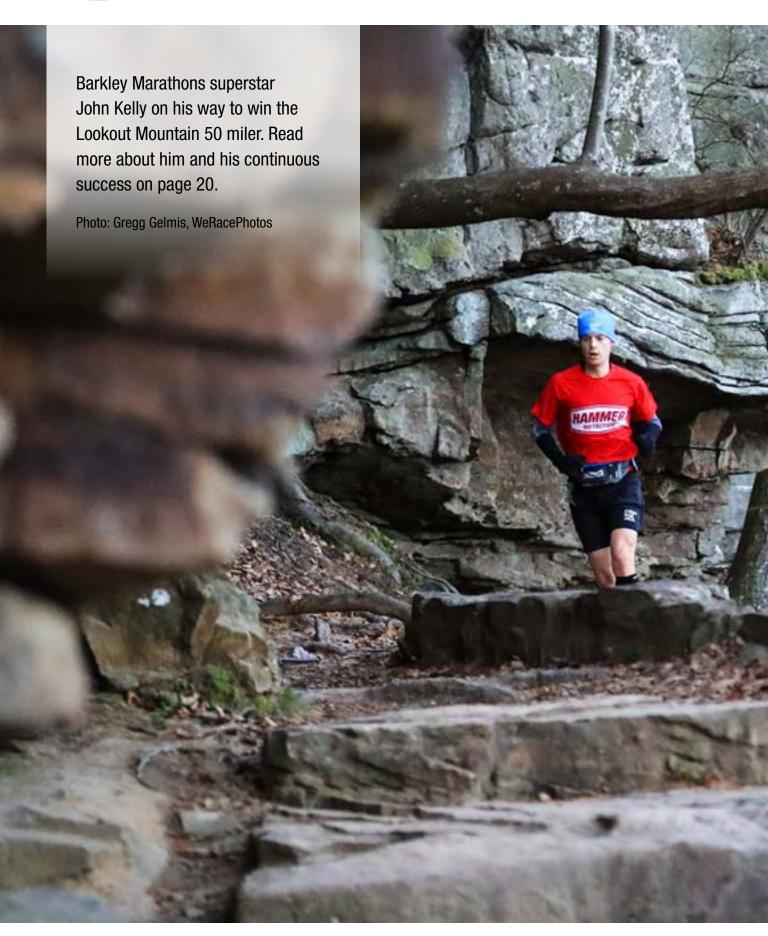
Hammer's Latest Innovations

Endurolytes® Extreme Powder, Vegan Protein Singles, and more!

PLUS...

- Pre-event meals made easy
- Get ready to ride!







Welcome to the 109th issue of Endurance News!



If you are new to Hammer Nutrition, I encourage you to scan to the right a bit and read our Mission, Guiding Principles, and Core Values in the masthead—abbreviated here, elaborated on our website.

This will help you appreciate what sets Hammer apart from every other nutrition brand on earth and why we hold a unique position in the now cluttered market. They have been my "business plan" for the past 31 years, and I am excited to see the next generation carry on with me!

My eldest daughter and her husband have returned to Montana to work with me seasonally when not running their own business, Skydive Whitefish. My son will be graduating college in May, hanging up his bike racing cleats for a while, and coming to work full time with us.

If you did not completely nail your nutrition and fueling last year, make a point of letting us help you get there this year. We are happy to help you dial in your individual fueling and nutrition plan. Just give us a call.

Endurolytes Extreme Powder is in stock and shipping now. It's ideal for those of you who use hydration packs and is far preferable to Endurolytes Fizz for this application. It also provides another electrolyte option for those who prefer not to consume capsules while exercising.

You'll be hearing about many more new products in the coming months! Stay tuned.

As always, you can count on us to continue advocating a healthy diet rich in whole foods, supported by effective supplementation. We will also continue to promote severe moderation of sugar, wheat, dairy, artificial sweeteners, chemicals, additives, and preservatives.

The use of Hammer fuels is keeping with this philosophy to support your training, racing, and recovery needs. When you combine all of these things with our proven "less is best" fueling protocols, health, vitality and race PR's are sure to follow!

Let's make it happen for you this year! Enjoy the read and recycle this issue by sharing it with a friend.

Brin Frak

Brian Frank Hammer Nutrition Owner

On the cover: Hammer athlete Robby Swift, in Ho'okipa, Maui, Hawai, captured in the middle of a pushloop forward. Only a handful of people in the have ever accomplished this awesome feat! Photo: Jimmie Hepp Photography

ENDURANCE NEWS

The informed athlete's advantage since 1993

AN EXCLUSIVE PUBLICATION OF:



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MISSION

Endurance News provides informative and inspirational content to help endurance athletes like you achieve peak performance and health. The views expressed favor a healthy diet, hard training that emphasizes quality over quantity, and prudent supplementation to improve health and performance. Back issues are available at hammernutrition.com

GUIDING PRINCIPLES

Service: From day one, we've strived to treat each client fairly, honestly, & individually. Your trust is our top priority.

Education: We educate and empower athletes with free, easily accessible information on health and performance.

Principles before Profits: Profits never take priority over our values. If it says "Hammer Nutrition," it's good for you.

CORE VALUES

Innovation: Our development of new, cutting-edge products and categories has led the field since 1987.

Product Integrity: Our consumables are researched, tested, and USA-made to the strictest standards. Read more at hammernutrition.com "Mission"





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EN REGULARS

The **Sugar** Issue

In this issue, learn about how parting with sugar will boost your brain power, and improve your athletic performance and overall health!



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Hammer Sponsored Athlete, John Kelly, shares how he balances training with family, how he keeps motivated, his recent successes, and more. Photo: Jessi Kelly



Hammer continutes to innovate! Liquid Endurance is back and better than ever.

Starting Lines

etters from Hammer Nutrition Athletes & Clients

Hammer Conquers the Andes!



Vick Dyer at the Trans Andes Challenge, where he placed 2nd in his age division. Photo: Courtesy Vick Dyer

"I have raced many endurance races and I only use Hammer Products for my fuel, my hydration, and my recovery. At no time during the 5 days did I feel hungry or did I bonk. I love Hammer Products because they have no simple sugars that produce peaks and valleys in energy; they are a clean product with no preservatives, easy on your stomach, and taste great. I have been using Hammer Products exclusively since 2005 and will continue using them in the future because they work." -Vick Dyer, 2nd place AG Trans Andes Challenge

Great Customer Service!

Your products are great and I really enjoy them, but more importantly, your staff is amazing and makes ordering the product over the phone the best part of the process.

-Brian Berg

Always room for Hammer

I've hiked 100's of miles in the hot jungles of Southeast Asia. We trekked medical supplies to poor villagers, which meant we didn't have a lot of room in our packs for health/food items. Hammer products sustained us over multiple trips. I wouldn't go without them!

-Eric Keener

Thanks for a great product!

I absolutely love your Endurolytes. I use them everyday and never have cramps anymore or other issues from being depleted...love they are sweetened with monk fruit and stevia. Thanks for creating a great product!!

-Jenna Sullivan

Protein Power!

Sustained energy for intense events.

HEED and Fully Charged on the links

My source for fueling, hydrating, and supplements is Hammer Nutrition. The main sport I participate in is ultra running. Golf is also a passion and Hammer is my choice. Last week during team match play with the match all square on the 16th tee and feeling a bit drained. Took the rest of the HEED in my bottle and added Fully Charged. My focus returned and we went on to win 1 up. It made the difference and I'll carry it every time I play. Thanks again Hammer Nutrition.

-Breese White

Hammer love

Had a great day on Tybee Island for the Critz Tybee Run. While I was waiting to collect a couple of medals (including 1st place in my age group (M60-64) for the 5-race series), a fellow runner came up to tell me what a great company Hammer is and how Endurolytes has helped him accomplish success.

-Ashley Randall



SEND US YOUR LETTERS

We love hearing from you!

Drop us a line, share a tip, or tell us about your latest adventure.

letters@hammernutrition.com

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We welcome you to head over to our Facebook page and write a review! We check our page daily and enjoy hearing how Hammer Nutrition has helped you. Hammer on!

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#howihammer

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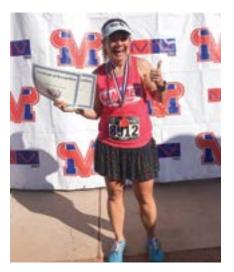
@myfancyadventures I was really grateful for all the support this weekend for my first winter race! Thanks to the Bethunes & Ways, Polar Roll was a great learning experience and a ton of fun! Finished in just over 6hrs, Lots of room for improvement. #howihammer



@ultraocrman New kit and resupply of supplements came in. Let's do this 2018!!! #howihammer



@chris.marcinek #howihammer on a Sunday



@raceeverystep Fun morning at @runningwiththebulls5k finished 2nd in the 30-39 age group (yes, I have 2 certificates, they were printed in 5vr increments but results were posted in 10yr. #howihammer

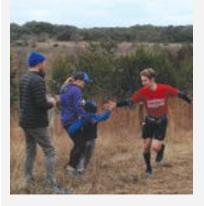


@trainingforultra Nice 13 miles with an ultra running friend. Taper time into Black Canyon 100K! #TrainingForUltra #howihammer #hammernutrition



@summers_running I use a lot of mantras & mind games during hard moments. Sometimes I even use counting, "100 more steps, Tara," but sometimes the counting never seems to end and the tricks stop working. It's then when I chose to live in the moment and look for the good. I am alive, I can move and I get to do what I love. Today is a good day, make it to the top! #howihammer

The Hammer Success continues...



@randomforestrunner Long overdue (but in under a month!) race report from Bandera. It was great to get outside my Appalachian comfort zone and experience some new terrain. #howihammer

(Read more about John Kelly's success on page 20)



@dye_ultrarunner Completed my 26th 26.2. It was held at Pettit National Ice Center in WI ~ where Olympians train. It was hard to not be inspired as I passed the photos of past Olympians along the track, #howihammer



©blustgarten Had a ton of fun racing the 15k skate mass start in Seefeld this past weekend!







Keep the conversation going!

Use **#howihammer** for a chance to be featured on Hammer Nutrition's social media pages and right here in Endurance News!



{Attn:} Males Who Take NSAIDs:

Ibuprofen use linked to decreased testosterone

BY ENDURANCE NEWS STAFF

At Hammer Nutrition, our goal from the beginning has been to provide safer, healthier alternatives to supplements that have negative side effects and sugar-filled fuels. If you're new to Hammer, you'll learn that one major topic we follow are the negative indirect effects NSAIDs (nonsteroidal anti-inflammatory drug) have on our bodies, and alternative strategies to combat inflammation. One study we came across this year links ibuprofen and male hormone imbalance.

Ibuprofen is a popular NSAID that has been widely used and accepted since its release in the United States in 1974. Long-term and excessive use is common and concerning. In a study from PNAS (Proceedings of the National Academy of Sciences of the United States of America). compensated hypogonadism decreased production of the testosterone hormone—was reported in young males who took 600mg of ibuprofen daily for only two weeks. What's concerning is that a single tablet is 200mg. Studies have shown that 15% of consumers take doses of 600mg or more regularly.

Compensated hypogonadism is a misfiring of hormones, which can result in issues conceiving and with stress handling, and decreased energy stores.

When we train hard, hammer through events, or experience injuries, how many of us reach for over-the-counter NSAIDs like ibuprofen? Yet, we need our entire body to be operating optimally. NSAIDs work for inflammation, which is why they are frequently used. But, when the studies keep showing negative long-term use side effects such as overall stress on other systems in our bodies, Hammer promotes safer alternatives.

Tissue Rejuvenator was created to help our athletes and all of our health conscious clients treat inevitable, frequent inflammation. You can take the recommended dose daily knowing that what you are putting in your body will not lead to other issues. Tissue

Rejuvenator doesn't just help ease sore muscles it helps repair ioints. Our customers attest to its effectiveness. For additional support, Hammer Nutrition's EndurOmega and Clear Day can help combat inflammation.

Thankfully, compensated hypogonadism was shown by the PNAS study to resolve once ibuprofen had been stopped. The next step for researchers is to answer the question: if these drugs are being consumed as part of a daily regimen, could they slow down testosterone production indefinitely?

Be mindful of what you eat, and how you fuel, supplement, and recover. If you are healing from an injury or working hard on the trail / in the gym / on the bike, or have painful joints, and haven't made the switch, we recommend you give us a call so that we can help you.





- Aids natural tissue repair
- Promotes joint mobility
- Allows reduced NSAID use



"I'm a former soldier with rucksack wear at both shoulders and lumbar. I had back surgery back in 2001 and the ache in my back was a constant companion. Move over...pharmaceuticals prescribed by the VA. My quality of life has improved. Thank you Hammer for putting out [Tissue Rejuvenator], a legit product."

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Race Report:

Frosty 50K

BY COLLEEN LAFRANCE

As a triathlete, I enjoy focusing solely on running in the off-season. I decided to pick the Salem Lakeshore Frosty Fifty 50K as my winter race. This would be my first ultra distance; however, coming off racing the Ironman World Championship in October, I thought it would be a doable distance for so early in January. I heard that the weather in North Carolina is unpredictable in January, so I went outside for training runs (in my home state of Virginia) on the cold days, hoping I was unnecessarily preparing myself.

The week leading up to the race, I was constantly checking the weather. All I saw was record lows! Sure enough, on race day it was nine degrees with a Feels Like temperature of two degrees, and a wind chill below zero. This was 100 degrees colder than my previous race just 12 weeks prior! The course was four loops around a lake (7.75 miles each), on a dirt trail, with two water stops on each loop. The biggest question was, "How do we keep our fuel and water from freezing?" Running the race as well was Matt Sommer, my boyfriend and fellow Hammer Athlete. We staged a cooler with water bottles wrapped in towels at the end of the loop as a "just in case."

Fueling was a real challenge in these temps! My water froze almost instantly. My Hammer Gels turned to a caramel-like consistency that required chewing, and my coin cases with my Hammer supplements froze stiff. Every lap, I swapped out my water and I kept a hand warmer in with my coin cases to keep them pliable. Overall, it was an amazing experience. I love to race in challenging conditions because it makes you so much stronger mentally and physically. There is always something



Hammer athletes Colleen LaFrance and Matt Sommer. Photo: Courtesy Colleen LaFrance

you learn and take away from it. This race taught me patience and persistence. My longest run to date was 26.5 miles—so being my first ultra, it was about trusting my training, trusting my fuel, and pushing through those last three miles when I seriously thought I was going to be crawling the last hill! In the third lap, I knew I was 1st female and I didn't want to lose that spot. I caught up to Matt on the fourth lap and we exchanged some much-needed words of encouragement. I ended up finishing 1st female and 5th overall.

My fuel for training and racing always stays consistent. Sticking to this consistently allows me to train hard and recover quickly. Fueling with Hammer takes out all of the guesswork, and I know I am able to focus on my workouts and perform at my very best. 💷

HOW I HAMMER

- Leading up to race day: Race Day Boost
- Pre-Race: 2 Race Caps Supreme, 1 Mito Caps, 4 Endurance Amino, 2 Anti-Fatigue Caps, 2 Endurolytes, Fully Charged, and a Hammer Gel (favorites: Espresso and Nocciola)
- The hourly coin cases: 1 Race Caps Supreme, 1 Mito Caps, 2 Endurance Amino, 1 Anti-Fatigue Caps, and 2 Endurolytes/ a Hammer Gel every 45 minutes
- Post race: Serving of Recoverite, 1 Race Caps Supreme, 2 Mito Caps, 4 Premium Insurance Caps, 1 Endur Omega, 1 Xobaline, 1 Super Antioxidant, 2 Essential Mg, 4 Tissue Rejuvenator, and 1 AO Booster

Fire up your workout instantly, with Fully Charged

Grab a pack and go

- EASY, on-the-go fuel
- Increases energy
- Promotes mental alertness





NEW 24 Singles \$34.95 30 Serving tub \$34.95 6 Single-serving packets \$9.95





Hammer athlete Shalini Kovach. Photo Credit: Rick Mayo, Mile 90 Photography

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Your Body's Fight Against Sugar

BY KIRSTIN LAURITZEN

We've all heard it, we all know it—sugar is something we should keep to a minimum. But, when it comes down to it and that carbladen treat or soda is in front of us, will you choose to have it or pass?

Glucose, basic sugar, is utilized in the body for energy. When food enters the digestive system, it gets broken down into the basics: glucose, amino acids, and fatty acids. Depending on the food, there may be simple sugars/carbs (absorbed and digested faster) or complex sugars/carbs (digested slower, takes more energy to absorb them).

When glucose enters the bloodstream, the pancreas goes through a series of chemical processes to manage the increase in blood sugar. One of these processes produces insulin. The purpose of insulin is to bind to the sugar and help it get processed and stored. The body stores glucose in muscles and in the liver, and the left over either gets utilized immediately for energy or gets stored as adipose tissue (fat).

The problem is the typical Western diet contains a constant source of sugar. The body is bombarded with spikes in blood sugar all day long. Over time, the pancreas begins to get resistant to the amount of sugar

in the body, so it now has to produce even more insulin per blood sugar spike. At the same time, other healthy chemicals like adiponectin, which help the body maintain a healthy weight and amount of adipose fat, stop working. This is how, as a nation, we are seeing an obesity epidemic and a rise in pre-diabetes, diabetes and cardiovascular disease.

Excess sugar, refined carbohydrates, and processed/ fried foods also increase inflammation. For the athlete, this can be a problem.

First, athletes do need a healthy level of inflammation in their muscles post-training in order to promote muscle adaptation to build strength and power. Inflammation brings certain inflammatory markers that promote rebuilding and new tissue growth. This is usually the process of the 2-3 day muscle soreness called Delayed Onset Muscle Soreness (DOMS) that occurs after difficult and intense training.

The problem is, inflammation should not stick around, but in many people, it does. Sugar and other refined foods/foods of a poor diet promote inflammation in the gut and the persistence of

inflammation in the body. This leads to joint aches and pains, which can lead ultimately to injury.

Poor diet creates longer periods of DOMS, leading to longer periods between training sessions for recovery, and many other issues with digestion and cognitive function. Each exposure to sugar makes it even more difficult for the body to utilize the kill switch for inflammation.

Ultimately, a diet high in plants like vegetables, some fruits, some starches, some nuts/seeds, good sources of protein and fat, filtered water, and fueling/ supplements that are clean and low in sugars (enter Hammer Nutrition) helps the body reduce overall inflammation and is the perfect fuel for any athlete. Skipping sugary drinks, fuels, and foods is the best option for your training and your health.



Dr. Kirstin Lauritzen, DC is a Chiropractor in Portland. OR. She holds bachelor degrees in Psychology and Neuroscience. Spanish, and Human Biology. Dr. Lauritzen specializes in educating

others about nutrition and its importance in life, especially in the lives of athletes. For more information: gym-call.com or find her practice at lauritzenchiropractic.com.

Quick Energy, No Sugar Crash

- Sustained energy
- Reduces cramps
- Buffers lactic acid

No matter how long or extreme your exercise regimen or races may be, HEED will keep you properly hydrated without bloating or cramping.



"HEED is my go to fuel for all my rides. ... It blends with a lot of Hammer gels for the perfect combo of calories and electrolytes. You avoid that sugar buzz and it tastes great!"

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BIG SUGAR'S LIES Sacrifice Lives

BY STEVE BORN

In the last issue of Endurance News we wrote about Project 259, which brought to light the sugar industry's burying of a study's results that appeared to show a link with sucrose and heart disease and bladder cancer ("Sugargate"). This is on the heels of our earlier report regarding the Sugar Research Foundation paying off three Harvard scientists to make sugar seem less unhealthy and instead put the blame on fat (hammernutrition.com/blog/sugar/).

Even though some of these events go back 50+ years, we're still fuming over them and you should be as well. Why? Because far too many people put their faith in the blatantly false conclusions provided by supposedly prominent Harvard nutritional scientists, conclusions bought and paid for by the sugar industry that de-emphasized the harmful effects of their product. People were led to believe that, aside from lacking nutrients, sugar was a basically a benign substance, which undoubtedly influenced them that it was okay to eat sugar-laden foods.

One of the Harvard researchers bolstered the idea that sugar was a harmless substance, courtesy of some of his recommendations*, a sample of which include:

- That sugar is "a quick energy food...put a teaspoon in [your] coffee or tea three or four times a day"
- That Coca-Cola is "a healthy between-meals snack"
- That all Americans should drink a cup of corn oil a day
- · That we should "Eat your [food] additives. They're good for you"
- · That "We get as much food value from refined foods that have been enriched as from natural foods, and sometimes more"

With these recommendations—and the relentless promotion that sugar wasn't the cause of health issuessquarely a part of the mainstream thought process, one has to wonder how many people unnecessarily succumbed to sugar-related disease and death. Of course, we can't blame one person for all of

the deaths resulting from excess sugar consumption; however, the statistics that research has revealed are staggering and disturbing: In 2006, deaths from coronary heart disease, diabetes, and stroke specifically caused by elevated blood glucose was estimated to be approximately 3.2 million annually*.

Sadly, the deceptive practices and influences of the sugar industry still appear to be happening. As an example, just three years ago a paper was published in PLOS Medicine that revealed how the sugar industry influenced the National Institute of Dental Research (NIDR). In 1971, the NIDR launched a program called the National Carries Program (NCP) that was designed to identify interventions to eradicate tooth decay within a decade. As it turned out, research that could have been harmful to sugar industry interests was omitted from priorities identified at the launch of the program. Instead of exploring the benefits of less sugar consumption, the focus shifted to other more-costly and

Continued from previous page

less-plausible possibilities, including finding a vaccine for tooth decay.

In their conclusions, the authors wrote: The NCP was a missed opportunity to develop a scientific understanding of how to restrict sugar consumption to prevent tooth decay. A key factor was the alignment of research agendas between the NIDR and the sugar industry. This historical example illustrates how industry protects itself from potentially damaging research, which can inform policy makers today.

The accumulation of over 50 years of research has clearly shown that sugar is a major risk factor for coronary heart disease. Unfortunately, that information has been suppressed by the sugar industry. Sadly, the practice continues to this day. Going back to the Project 259 incident in the mid 60's, nutritional expert, Marion Nestle, wrote:

"This 50-year-old incident may seem like ancient history, but it is quite relevant, not least because it answers some questions germane to our current era. Is it really true that food companies deliberately set out to manipulate research in their favor? Yes, it is, and the practice continues."

Sugar is not a harmless, benign substance; it's simply not good for your health or athletic performance and it never will be. Big Sugar will tell you otherwise, but don't be swayed by their deceptive claims. Excess sugar intake is a major factor in heart disease, the number one killer of Americans (an estimated 16 million Americans have heart disease), as well as a number of cancers, Alzheimer's disease, and more. Don't be a victim. Don't be a statistic.

Read more! Follow the story as it continues to unfold, on our website and via reputable media sources.

*References available upon request.



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Updated SOS

So many successful athletes turn to Hammer Nutrition for fueling and supplements, along with the educational materials we provide free of charge. If you are not familiar with S.O.S. 5 Secrets of Success, it is one of the resources we have created to help you maximize your athletic performance. In this issue of Endurance News, we will give you a sample of this informational guide, taken from section three: Proper Hydration.

The other sections are as follows: Pre-Exercise Fueling, Calories Count, Electrolyte Replenishment, and Recovery Done Right.

Updates to this version include a new overall sequence, sidebars with quick tips that are now easier to reference when onthe-go, and improved fueling information. We've included a tear-out back cover to help you plan your race strategy.

If you have an older version of our S.O.S. or have not yet received a guide, be sure to get your copy now to Fuel Right, Feel Great!®



Proper Hydration

What you need to know to stay in the flow



Our fueling recommendations:

To avoid the performance and health problems associated with low blood sodium, your fluid intake should not routinely exceed 25 oz. per hour and is relative to weight and conditions.

Average athletes, average temps: 20-25 oz. (approx. 590-740 ml) Lighter athletes or cooler temps: 16-18 oz. (approx. 473-532 ml) Heavier athletes or hotter temps: Up to 28 oz. (approx. 830 ml) For exercise longer than two hours, your primary fuel should include protein in a ratio of about 8:1 carbs to protein.

Water is the most critical component to exercise fueling. It cools your body, allows healthy cellular function and energy release, and transports nutrients. However, many athletes have trouble gauging how much fluid to drink. Many attempt to replace fluids at the same rate they're lost through sweat. While it may seem sensible, in truth, this is a recipe for disaster.

The fact is, you can finish an activity of any length with 2% weight water loss without suffering performance decline or health impacts. Forget advice to "drink to replace." Instead, abide by the following principals:

Your body cannot absorb fluids at the same rate that it loses them.

On average, you lose about one liter (about 34 oz.) of fluid per hour during exercise—even more in extreme heat and humidity. However, your body cannot absorb this same amount during exercise.

When it comes to endurance fueling, we wrote the book!



The most downloaded and read book on endurance fueling and strategy available!

Pre-exercise fueling?
Calories? Hydration?
Electrolytes? Recovery?

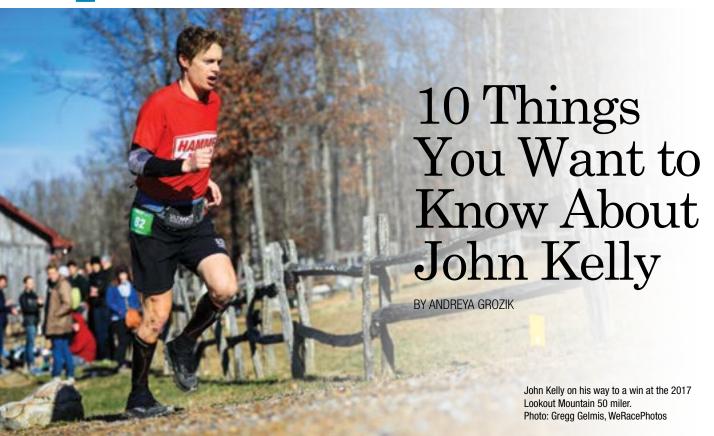
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While John Kelly is known as a super-athlete, and for winning the Barkley Marathons, he is also a hard-working, highly intelligent family man with a notable sense of humor. This is evident in his blog, as well as in conversation with him. I could glean that he has wisdom above his years. I was fortunate enough to have the chance to speak with him, and these are some of the highlights.

1. How John Kelly hammers: **During races**: Perpetuem, Hammer Gel, Hammer Bars, Endurolytes, Fully Charged After races: Chocolate Recoverite **Regularly:** Tissue Rejuvenator,

Endurance Amino, Anti-Fatigue Caps, Boron, Phytomax, Strawberry Whey Protein (before bed)

2. How he handles hitting a wall:

"Due to proper fueling and training, most of the walls I hit now are mental. When I'm at the edge, I keep pushing myself as much as possible. I adjust my pace and stride, especially during ultras, telling myself it doesn't always get worse. Just remember: keep moving, keep sticking to the plan."

3. How he balances family, career, and training/racing:

"It requires three things: flexibility, communication, and eliminating noise. My job is flexible: I can work from home at times and run commute. I don't do things like watch TV. Noise takes up little pieces of our lives, which add up to big chunks. Use those chunks of time with purpose: mindful quality time. Communicate often and openly about when those times are. Sleep is what's tricky."

4. About that orange hat and plastic bag at the Barkley Marathons... "In the last loop of Barkley, I was pushing things, and took

only what I absolutely needed.

I neglected warmer gear. On the big climb at Rat Jaw, I was scanning the briars for debris. First I found a grocery bag that I fashioned into a poncho. The orange hat was actually pretty thick and warm. I was told later it had likely been worn by a prison inmate [on work detail]."

5. His thoughts on the ultra endurance community:

"Incredible people all pushing their own limits. They are genuinely hoping for each other to run their best races, helping others reach their full potential. I'm glad I can be a part of that larger picture. It's incredible."

6. On returning to Barkley Marathons:

"I am going back to Barkley this year, but I will be crewing. It will be bittersweet not racing. I haven't ruled out racing there again. I want to continue being a part of it."

7. How he discovered Hammer Nutrition:

"About 5 years ago I ran out of my multivitamin and thought, 'Maybe I should see if there's one specifically for endurance athletes.' I did some research, and started taking Premium Insurance Caps. They worked well for me in regard to energy and helping with everyday wellbeing. Then I tried Hammer Gel. I was used to super sugary stuff, but Hammer Gel worked better for me. My stomach

didn't go into lockdown."

8. Favorite Hammer product:

"Peanut Butter Chocolate
Hammer Gel mixed with
Raspberry, but Tropical is most
used during races due to the
caffeine."

9. Recent successes:

Dec. 16, 2017: Lookout Mountain 50 Miler: 1st place, 7:27:44

Jan. 20, 2018: Appalachian Trail 4 State Challenge: Fastest

known time, 6:39:51 **Feb. 16, 2018:** The Wild Oak Trail 100 Mile: 1st place, course record, sub-24, TWOT 2017 course record holder, 23:48:00.

10. His next "white whale" after Barkley Marathons:

"Getting the data science startup where I work off the ground. I would have more time for racing. This year, my focus is giving triathlons all I've got. Then I will focus on ultra running full time."



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Pre-Event Fueling Demystified

BY ENDURANCE NEWS STAFF

When it comes to smart pre-event meals, there are lots to choose from. The trick is to select something that helps, not hurts, your race day performance. Several Hammer Nutrition sponsored athletes sent us their suggestions, and we've used them to put together a delectable pre event "menu." Whether you choose one of these meals or come up with a healthy recipe of your own, follow the Hammer Nutrition guidelines for race-day success.

- Eat at least three hours prior to your event to allow for complete digestion and the most efficient utilization of your body's finite supply of muscle glycogen.
- Stay in the 200-400 calorie range.
- Focus on complex carbohydrates, starches, and a little protein.
- Avoid consuming high fiber, simple sugars, and high fat.
- Supplements taken prior to the start of an event—such as Race Caps Supreme, Mito Caps, Anti-Fatigue Caps, or Endurance Amino—are okay to take on an empty stomach.
- Don't sacrifice sleep to eat—a better strategy than eating significant calories 1-2 hours prior to a long-duration race is to consume 1-2 servings of Hammer Gel 5-10 minutes prior to the start. Then begin fueling within 30 minutes after your start if possible. ■





FUEL MENU

Pre-Event

Hammer Snack

Coconut Chocolate Chip Hammer Bar Lemon-Lime Endurolytes Fizz

K.I.S.S. (Keep it super simple) Three scoops Sustained Energy

The Wake-Up Call

2 scoops of Sustained Energy 1 serving of Espresso Hammer Gel

Java Juice

2 scoops Caffe Latte Perpetuem 1 serving Espresso Hammer Gel

Morning Refresher

One scoop Mandarin Orange HEED 2 scoops Sustained Energy

Healthy Monkey

1 cup active Greek yogurt Banana

Half n' Half

1/2 whole grain bagel 1/2 cup active Greek yogurt

PB&J

1/2 whole grain bagel1 tablespoon peanut butter1 serving Raspberry Hammer Gel

Cinnamon Swirl

Cream of Rice One serving Apple-Cinnamon Hammer Gel

Protein Potato

1/2 baked potato 1/2 cup active Greek yogurt

Plant-Power Plan

Hammer Vegan Recovery Bar Banana

Easy Campfire Breakfast

High fiber oatmeal Blueberries Cinnamon Hammer Vanilla Whey Protein



A simple bowl of oats, fruit and Hammer Whey Protein is a delicous and easy to make pre event meal.

THE ORIGINAL Endurance Supplement unrivaled for 30 years

- Reduces muscle fatigue
- Enhances energy and endurance
- Increases workload capacity



"I have tried a lot of different supplements that simply do not work. I researched **Race Caps Supreme** very thoroughly and decided to purchase. My energy is way up and I can feel the difference immensely in my performance. I will continue to purchase for years to come!!!"

Hammer's own Loren Mason-Gere, overall winner of the ultra tough Butte 100. Photo: Doug Tate Photography





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FROM THE KITCHEN OF

LAURA LABELLE

Sugar is NOT So Sweet

BY LAURA LABELLE

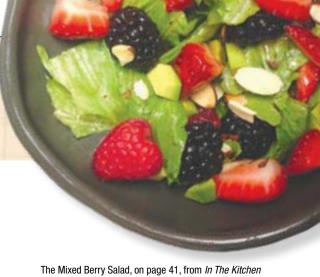
While reading all kinds of literature on sugar, I was shocked to learn that the average American consumes about 150-170 pounds of sugar per year! This statistic only includes added refined sugar, and not the natural sugar in fruit and juices. That works out to about a cup a day. Compared to 1770, when sugar was only for the wealthy, the average American ate just 4 pounds of sugar a year. In 1800, we were consuming 18 pounds of sugar a year. By 1900, that number had risen to 90 pounds per year, and in 2016, the average American consumed 170 pounds of sugar a year!

Sugar has proliferated everything we eat. It used to only be in sweets but now it is in bread. salad dressing, tomato sauce, and practically everything we eat. Our brains tell us it is delicious and then we want more of it. Imagine how much this helps sell food we buy!

Yes, sugar is highly addictive; some studies show it is more addictive than cocaine. When we eat sugar, we get a huge rush of dopamine. I have been addicted to sugar most of my life, and I believe most people who indulge regularly are addicted. If this seems crazy to you, don't take

my word for it. Try to not eat any sugar for a week and see what happens. You will most likely experience fatigue, headaches, irritability, and crazy cravings for anything sweet. Sugar's addictiveness is not the worst part; so many people are not even aware of all the health risks that come along with massive consumption of sugar:

- It has absolutely no nutritional value and is an empty source of calories.
- · Processed cane sugar is very high in fructose and can easily overload your liver, which can lead to non-alcoholic liver disease.
- It can cause insulin resistance propelling us towards metabolic syndrome and diabetes; this type of resistance is the cause of type II diabetes.
- Due to its harmful effect on our metabolism, there is considerable evidence that sugar can contribute to cancer.
- It has a unique fat-promoting effect due to how it affects our hormones and brain. It is the leading cause of obesity in adults and children.
- · It can raise our cholesterol and



With Hammer is a perfect example of a delicous, satisifying dish that is free of refined sugar.

cause heart disease.

- It is the leading cause of inflammation, which can lead to autoimmune disease.
- · It causes tooth decay.

From what I have learned, sugar is one of the most harmful legal substances around. I hope that one day people will see the truth about sugar as we now do for tobacco. This is why at Hammer Nutrition, we stay away from refined sugar in all our products; and try to educate our customers on why they should avoid it at all costs. Hammer not only wants you to have your best endurance experience, we promote your best overall health.



Laura Labelle studied at Ecole De Cordon Bleu in Paris, and is an acclaimed California-based chef. She opened the popular Cafe Luna, was in-house chef for Mix This music studio, and operated her own catering company.

Easy post-workout recovery from the purest form of whey available.

- Repair sore muscles
- Immune system support
- Grass fed, 100% isolate



"I've been using Hammer Whey Protein for several years. Nothing even comes close to its quality. Never any digestive distress..."



24 Servings

Single-serving packets

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FLAVORS

Hammer athlete Shaun Pettigrew

riding in Flagstaff, Arizona.

Photo: Shorell Pettigrew

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Banana Oatmeal Cookies

From the Kitchen of Maria Maslanka, Hammer Athlete In the Kitchen wth Hammer Nutrition page 176

Ingredients:

2 large ripe bananas, mashed 2 cups rolled oats 1/2 cup Chocolate Recoverite, prepared

Optional:

Cinnamon, honey, vanilla, chocolate chips, peanut butter chips, dried cranberries, raisins, chopped walnuts, shredded coconut

Preparation:

Preheat oven to 350 degrees Fahrenheit. In a large bowl, combine mashed banana with oats until smooth. Add Chocolate Recoverite. Spray a baking sheet with nonstick spray. Drop dough by large tablespoons onto cookie sheet; flatten a bit.

Bake 9-12 minutes until golden. Cool on wire rack.



Chunky Monkey Shake

Ingredients:

1-2 frozen bananas - sliced evenly into rounds 3 pitted medjool dates

1 1/2 - 2 cups no sugar added almond milk

2 Tbs. cacao powder

1 Tbs. cacao nibs

ice if needed

Optional: instant espresso

Preparation:

Add banana, dates, almond or cashew milk. cacao powder, cacao nibs, coconut flakes (optional) and salt to high speed blender.

> Blend on high until thick and creamy. Add in ice if wanting a thicker

Dark Chocolate Chia Seed Pudding

Ingredients:

1 cup no sugar added almond milk

1 1/2 tsp. vanilla

3 pitted mediool dates

1/4 cup dark cacao powder

2 Tbs. cinnamon

1 Tbs. instant espresso

1/4 tsp. cayenne

1/2 cup chia seeds

Optional: fresh mint, blueberries, sliced banana, or sliced strawberries for topping

Preparation:

In a high speed blender, add all ingredients EXCEPT chia seeds. Blend until completely combined. Add chia seeds. Pulse until just combined.

Transfer to a jar give a couple of gently shakes. Seal up and place in the refrigerator

overnight. (The seeds need time to work their magic and set up the pudding to the correct

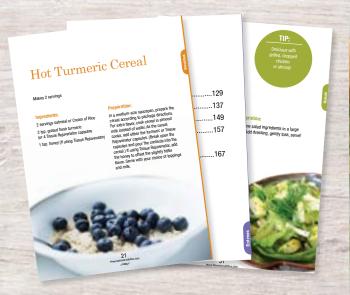
consistency.)

To serve, top with fresh fruit, if desired, and dust with cinnamon and/or cacao powder.



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Free tool to improve your health and wellbeing

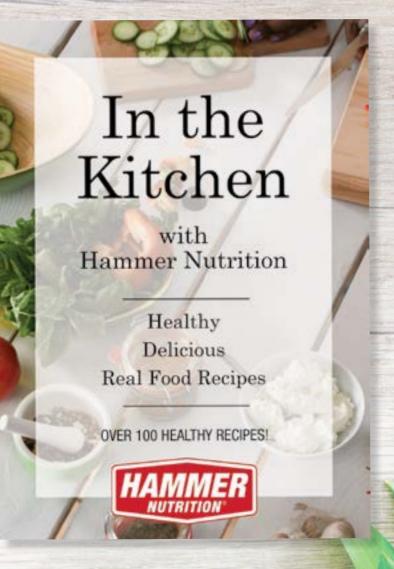


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Product Spotlight

Vegan Protein Now Available in Singles!

BY ENDURANCE NEWS STAFF

Even the best endurance athletes always strive to improve, and so does Hammer Nutrition! Hammer Nutrition's Vegan Protein powder is now available in single servings! It's the exact same formula you love so much in individual and convenient packets—perfect for on the go!

Arguably the cleanest vegan protein on the market, Hammer Vegan Protein is perfect as a post-workout/ race recovery drink, or as a delicious pick-me-up, anytime.

Enjoy it shaken with water, juice, or a non-dairy beverage — or blend it into a healthy and delicious, vegan highprotein treat. If you seek the highest-quality alternative to dairy or soy protein powders, Hammer Vegan Protein is the ideal choice.

If you haven't tried Vegan Protein, this is an excellent way to do so! Available in three delicious flavors: Chocolate, Strawberry, and Vanilla.

Our delicious, 5-star plant-based powerhouse contains 20 grams of complete organic, plant-based protein from these sources:

Pumpkin Protein: derived from the nutrient-rich seeds; contains all amino acids making it a complete protein source

Sacha Inchi: the seeds of this South American plant are incredibly rich in protein and beneficial omega-3s

Pea Protein: an abundant source of muscle-building BCAAs

Spirulina: a microscopic alga, this superfood is rich with protein, vitamins, and minerals

Chlorella: loaded with chlorophyll and essential fatty acids and abundant in beneficial beta-carotene



Why Hammer Vegan Protein?

- Nutrient-dense:
 - -Vitamins
 - -Minerals
 - -Antioxidants
 - -Essential fatty acids
- Inflammatory-fighting
- Enhances exercise recovery
- Alkaline
- Vegan
- Organic
- Non-GMO
- Sov-free
- Gluten-free
- Sugar-free
- No artificial sweeteners
- Easy to digest, with beneficial enzymes
- Rich in plant-based amino acids





New Product Updates

Check out our new designs and reformulations



New for 2018: Fuel Retro Tee

This luxe NEW royal blue tee is 100% fine jersey cotton. Hammer logo in front, with cool retro-style graphic in back.



New for 2018: Men's **Hooded Sweatshirt**

A NEW take on a classic. This black hoodie has Hammer logos on the front chest, right sleeve, and back. Front zip and pockets with a relaxed fit.



Reformulated: Almond Cacao Vegan Protein Bar

Recently reformulated with a NEW texture and taste! It has a new savory-sweet flavor profile, with more cocoa nibs, with a softer consistency. The carb-to-protein ratio is also better than ever.

For more details call 800.336.1977 or visit hammernutrition.com



New for 2018:

Endurolytes Extreme Powder

Endurolytes Extreme is now also available in powder form! It dissolves in water, with a very subtle watermelon flavor that's easy to drink. Fantastic NEW formula, great taste!



New for 2018: Men's Compression Bibs

With this NEW bib, you get form AND function. It features neutral colors, modern graphics, and a durable and comfortable new high-compression fabric that is state-of-the-art.



Train this season in our soft, organic heathered cotton sweatshirt.
COLOR: GRAY/TEAL, SIZE: S, M, L, XL

CULUR: GRAY/TEAL, SIZE: S, IVI, L

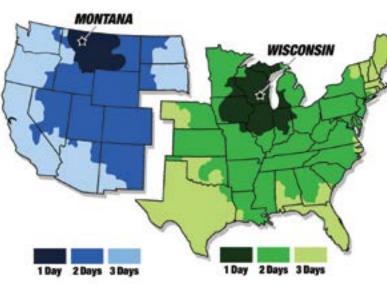
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New Product Spotlight

LIQUID ENDURANCE Your ticket to beat the heat

BY STEVE BORN

Of the factors that can negatively impact our workouts and races, hot weather—or, more specifically, the inability to deal with hot weather tops the list. When summer comes, you'll want to be ready. With Liquid Endurance, you will be!

When exercising in hot weather, especially when you exceed two hours in duration, your body's core temperature increases dramatically. Your internal cooling system responds by sweating. However, unlike your car's radiator, which recycles its coolant, your sweat evaporates and drips away, and it's gone. Obviously, rehydration is your basic strategy, but by using Liquid Endurance in advance, you give yourself a head start.

Liquid Endurance contains glycerol, a well-tolerated, naturally produced metabolite of fatty acid oxidation. Glycerol absorbs rapidly when taken with water, increasing the water content in blood, cells, and extracellular spaces. All three of these compartments contribute to sweat volume, resulting in a significant increase in cooling efficiency during prolonged exercise in the heat.

You can use Liquid Endurance before any hot-weather workout. Prior to events and competitions contested in hot

weather conditions, a 3-day load with Liquid Endurance will increase total body water (i.e. glycerol hyper-hydration) and provide noticeable benefits of improved thermoregulation and endurance during hotweather exercise.

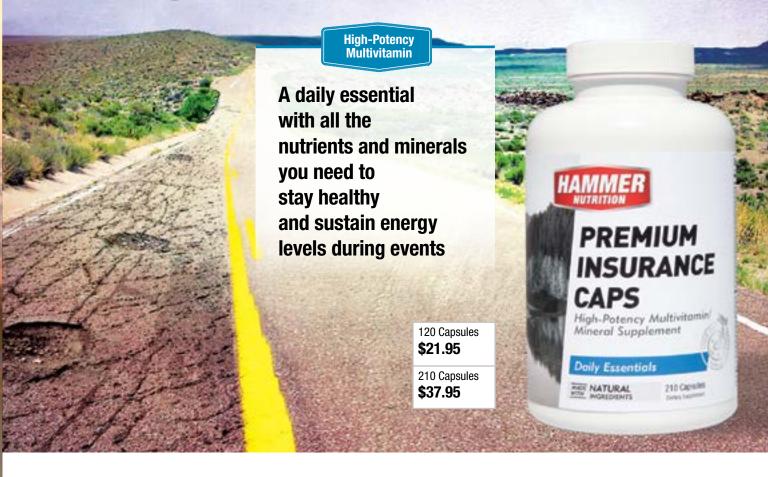
Unreplenished fluid loss causes endurance athletes several problems:

- Your heart must work harder in order to pump a decreased. but thickened, blood volume.
- Fluid depletion inside and outside muscle cells may slow down the metabolic reactions necessary for efficient muscle fuel transport.
- Inadequate fluids result in higher cell temperatures that alter metabolism, causing less-than-optimal endurance performance.

Excess body fluid loss causes premature fatigue and decreased performance. If the loss goes unchecked, the potential for serious dehydration increases. Once dehydrated, you're cooked literally and figuratively. Liquid Endurance, along with proper hydration, will address the two primary problems fluid loss and fuel metabolism decline—that endurance athletes face when training or competing in hot conditions.



Fill the holes in your diet





"LOVE THIS FOR EVERYDAY USE! It totally took the place of my multivitamin and has a ton of other beneficial ingredients!"

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- Boosts energy all day
- Supports immune function

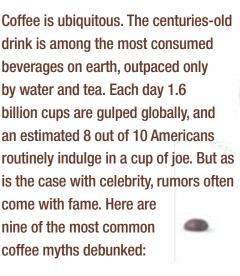
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Research has shown that coffee is a mild diuretic: however. when consumed in moderation (approximately 3 to 6 cups per day) it has nearly the same hydrating effects as pure water.

MYTH 2: Coffee is addictive

Caffeine is a mild stimulant, but the World Health Organization has stated there is no evidence that caffeine consumption meets the criteria for addiction.

MYTH 3: Coffee causes insomnia

For healthy adults, the half-life of caffeine is approximately five to six hours, so as long as you aren't drinking your java late in the afternoon or evening, it should have little effect on your sleep.

MYTH 4: Coffee will sober you up

Coffee will counteract alcohol's sedating effects, but it has no effect on your body's ability to metabolize alcohol. More alarmingly, research has found that combining alcohol and caffeine can be especially dangerous because it can give a false sense of competency to those under the influence.

BY ENDURANCE NEWS STAFF

MYTH 5: Coffee will cure a hangover

Hangover symptoms are attributed to dehydration and electrolyte imbalance. Although coffee alone will satisfy some of your body's hydration needs, water and electrolytes do a better job of combating a hangover.

MYTH 6: The hotter the coffee, the better

For optimal extraction coffee experts suggest a water temperature of between 195 and 205 degrees. Brewing coffee with boiling water (212 degrees) extracts more bitter oils from the beans, imparting an overly bitter or burnt flavor to the beverage.

MYTH 7: Coffee is acidic

The pH of a typical cup of black coffee is 5.0, making it only slightly acidic relative to other beverages. Soda, fruit juices, and even beer are more acidic than coffee.

MYTH 8: Espresso is stronger than drip

When discrediting this myth, size matters. It is true that by volume, espresso contains more caffeine than standard drip coffee. But a typical 2 oz. shot of espresso contains 80 mg of caffeine; a 12 oz. cup of black coffee contains, on average, 120 mg.

MYTH 9: Coffee is best stored in the fridge or freezer

Fridges and freezers, because of their high moisture content, can cause the flavorful coffee oils to break down faster. Instead, store coffee in a cool, dry pantry or inside a canister with tightfitting lid.



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- 100% organic
- Micro-batch roasted





Our organic, fair-trade coffee is guaranteed fresh and delicious, no matter which of our palette-pleasing blends you choose. Our beans are roasted in micro-batches to order and are shipped within 1-2 weeks of roasting.

All blends available in ground and whole bean!

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THE CHAIN BREAKER	
ESPRESSO	12 oz. \$13.95
THE DOWN SHIFT	
DECAR	12 \$12.05



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Carbo Loading Explained

It's simpler than you think

BY STEVE BORN

It's late January as I write this, and with many of your key events not happening for several weeks to months (definitely months, here in Montana). you might be thinking, "Carbo loading? Now? Are vou crazy?"

Hear me out, though. I have no doubt that my rationale is sound and that, if applied, you will experience noticeably higher quality in your training leading up to your events, as well as better performance in the events themselves. Oh yes, while you're at it in the "carbo loading" aspect, you'll also be doing something equally if not more important: recovering optimally between all of your workouts leading up to your races.

In my opinion, the right way—no, make that the only way—to truly "carbo load" is to do it g-r-a-d-u-a-1-1-y. Think of it this way: When you start your training season, you don't bust out with super long runs or rides, hill repeats, and high-intensity speed work from the get-go, do you? No, you do base miles, and then gradually increase the duration and intensity of your training so that your body becomes more accustomed to the stress you put on it, thus becoming fitter as the weeks go by. Additionally, you don't wait until the week before

an event to start training, do you? Of course not!

These examples can be applied to "carbo loading" as well, which is more appropriately defined

as maximizing muscle glycogen stores.

Muscle glycogen? What's that?

When you begin a workout or event, the primary fuel your body uses for the first 60-90 minutes or so is known as muscle glycogen, a glucose polymer (complex carbohydrate) that contains tens of thousands of glucose units arranged in branched chains. As your stores of muscle glycogen become depleted, your body switches over to burning fat reserves along with carbohydrates and protein consumed during exercise. You've only got a finite amount of this premium fuel, muscle glycogen, but its importance is hard to overstate. In fact, several studies have shown that the pre-exercise muscle glycogen level is the most important energy determinant for exercise performance. Bottom line: If you want to have the best event possible, you want to start it with as much muscle glycogen "on board" and ready to serve you.

Maximizing glycogen stores is so easy; here's all you need to do!

- Train intelligently and consistently.
- "Refill the tank" with high quality carbohydrates and protein ASAP after all of your workouts.

That's it! That's what "carbo loading" is all about. It is NOT what you eat (or how much) in the week before the event, and it's NOT what you eat (or how much) the night before the event. It is the replenishment of carbohydrates and protein in the first 60 minutes after ALL of your workouts in the weeks and months leading up to the event.

Recall what I said earlier about training—you don't try and to gain all of your fitness all at once; it's a gradual process. Additionally, you don't wait until the week before your event to accrue the fitness you need. The exact same is true with about maximizing muscle glycogen stores ("carbo loading). It is a gradual process, one that takes several weeks to happen, and it's a process that cannot be truly achieved in the week leading up to an event.

How it all works

Along with insulin, which regulates blood sugar levels of ingested carbohydrates, an enzyme known as glycogen synthase converts carbohydrates from food into glycogen and stores it in muscle cells. This also drives the muscle repair and rebuilding process. However, to maximize the recovery process, you need to take advantage of glycogen synthase when it's most active. Carbohydrate

replenishment as soon as possible after exercise, when the body is most receptive to carbohydrate uptake, maximizes both glycogen synthesis and storage.

The oft-used phrase, "striking while the iron is hot" absolutely applies to many aspects of recovery, especially in regard to muscle glycogen synthesis and storage. So before you get out of your sweaty cycling kit, before you hit the shower, and take a nap, put some fuel back into your body. Do that, taking advantage of the glycogen synthase enzyme when it's most active, and you will enjoy a HUGE advantage over those athletes who either blew off post-workout refueling or waited too long to "refill the tank."

It is NOT what you eat, or how much, in *the week* before the event, and it's NOT what you eat, or how much, *the night* before the event.

Training causes physical stress and depletion. Recovery is when adaptation to that stress occurs; it involves improvements in muscle tissue rebuilding, glycogen storage, and immune system functioning. After a hard training session, your body is basically saying, "If there's another workout like this tomorrow,

I better be prepared."

You can really give yourself a major advantage in all of your training sessions, and especially on the day of your event, if you'll take the time to put some quality nutrition into your body as soon as possible after all of your workouts.

A high-quality solid food meal, or a recovery drink such as Hammer Nutrition's post-workout fuel Recoverite (or Hammer Whey + a quality carbohydrate source), will help you "refill the tank," effectively replenishing and maximizing muscle glycogen stores. That, in my opinion, is the true definition of "carbo loading" and the time to begin the process is now... trust me, your body will thank you and the quality of your workouts and events will be your proof.

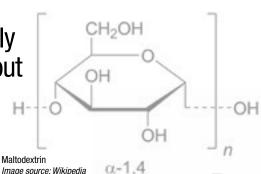






Answers to frequently asked questions about **Hammer Fuels**

BY ENDURANCE NEWS STAFF



2 < n < 20

I continue to see energy fuels that have a blend of carbohydrates in them (glucose, sucrose, fructose, etc.), while **Hammer Nutrition only** uses maltodextrin. Why? Are there benefits to using multiple carbohydrates instead of maltodextrin?

The 'superiority of multiple carbohydrates' argument is based on glucose (maltodextrin as well) and fructose being absorbed by different transporters. With two different transporters being used, carbohydrates were absorbed at different rates; so higher oxidation (burn) rates were noted.

Hammer Nutrition's long-standing position is that, for most athletes, the body can effectively convert to energy approximately 1.0 to slightly over 1.1 grams of carbohydrates. This averages 4.0-4.6 calories per minute, and equals a maximum of 240-276 calories per hour. Several years ago, however, research showed that a greater volume of calories could be converted to energy, upwards of 1.8 grams (7.2 calories) per minute, using various blends of carbohydrate sources, primarily simple sugars.

While that sounds good on paper, we need to look further into the various studies. In each study, the exercise intensity of the study subjects was very relaxed—a recovery pace at best. Exercise pace makes a big difference regarding the ease of digestion of food and fuel. At a more leisurely pace, athletes can digest just about anything and in high quantities. Boost the intensity to moderate or high, however, and the price for burning more carbohydrates at a higher rate is that effort and pace must be greatly reduced.

The other factor to account for is osmolality (the concentration of dissolved particles). Body fluid

osmolality ranges from 280-303 milliosmoles. Fuels containing

simple sugars (glucose, sucrose, fructose) are in that range but are efficiently digested without delay ONLY when consumed in calorically weak 6-8% solutions. On the other hand, complex carbohydrates (maltodextrin) in that range can be digested, efficiently and without delay, in more calorically dense 15-18% solutions. You can therefore digest a greater volume of calories from complex carbohydrates than you can from simple sugars.

When you combine simple sugars and complex carbohydrates together, as other company's do, the mixture's concentration and osmolality changes dramatically, to the point where neither carbohydrate source is digested efficiently. If the mixture is too concentrated and can't get through the gut efficiently, it simply will not matter if glucose/ maltodextrin goes through one transporter and fructose through another.

Bottom Line: You will most likely only experience a variety of performance-ruining stomach distress issues by consuming fuels containing multiple types of carbohydrates. Why take that chance?

To this day, we remain convinced that the ideal carbohydrate source for athletes engaged in moderate-to-high intensity training and racing is complex carbohydrates (maltodextrin) only, and it's why Hammer Nutrition fuels are formulated the way they are. For more than 30 years, thousands of athletes have enjoyed better workouts and race results-without uncomfortable GI distress—using Hammer Nutrition fuels and adopting our protocols.

Everything you need to stay hydrated on the course. Sustains energy Reduces cramps **Buffers lactic acid** **** "I have been using [HEED] as part of a post-workout shake for the past two years....all flavors taste great." **FLAVORS** LEMON-LIME MANDARIN CRANGE STRAWBERRY MELON UNRLAYORED HEED Single-serve packets 80 Servings 32 Servings 16 Servings \$59.95 \$29.95 \$19.95 \$1.95 ORDER TODAY! Use Promo Code EN 109FIZZ

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Hammer Sponsored Athlete Nick Castellano on a ride in Northern California. Photo: Ray Prevost, Cycling Photographer



Electrolyte Drink

hammernutrition.com 800.336.1977



Sweet results happen when you give up sugar

BY ENDURANCE NEWS STAFF

As we reported in Endurance News 108, the FDA recently changed the Nutrition Facts Panel to require that "added sugars" be listed separately from those that occur naturally in products. Many processed foods (and sports fuels) contain large amounts of added sugar, so changing the label this way can help consumers make better buying decisions.

So, what exactly would happen if one were to give up those "added sugars?" It's no secret that obesity runs rampant in our modern American culture, but giving up added sugars would also have other major benefits both for overall health and for athletic performance.

Cardiovascular benefits

By giving up added sugars for as little as 10 days, LDL (Low Density Lipoproteins) levels could decrease by up to 10%. Elevated levels of LDL cholesterol can increase risk for heart attack, stroke, and atherosclerosis, a buildup of plaque in the arteries. Reducing added sugars can also lower triglyceride levels and have a positive effect on overall blood pressure (BP) numbers. Lowering BP means not having to work as hard during endurance training and events, and delaying the onset of fatigue.

Decreased risk for Type II diabetes

Excess sugar promotes the buildup of fatty deposits around the liver, contributing to insulin resistance.

Improved mood

Although some sugar addicts might experience temporary anxiety, restlessness, and depression upon going cold turkey, these symptoms decrease over time and may disappear entirely, leading to better mental health and happiness.

Better sleep/cognition

No more midday crashes from sugary breakfasts like processed cereals, baked goods, and even the sneaky sugars added to yogurts, dairy products, and condiments such as ketchups and dressings. You'll feel more awake and ready to power through until 5 o'clock. Less sugar also means better sleep at night. More sleep = more time for your body to rebuild and rest.

Weight loss

Cutting out added sugars typically results in better dietary choices that include more fresh fruits and vegetables to fulfill daily calorie requirements.

Improved athletic performance The added sugars found in

many sports "fuels" can lead to stomach distress, sugar crash, and decreased performance.

Cutting the sugar

So how do you do it? Read the nutrition labels on everything! Be wary of packaged and processed foods. Many food items that you wouldn't think have added sugars usually do.

"Added Sugars" go by many names, including: high fructose corn syrup, cane sugar, corn sweetener, fructose, glucose, evaporated cane juice, and sucrose-to name a few! Some sweeteners, including xylitol and stevia, are deemed okay when eaten in moderation. Hint: the farther down the ingredient it's listed, the less of it is present in the product (the first item listed makes up the greatest percent). You owe it to yourself to fuel right and feel great!

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WHEY PROTEIN FLAVORS



PEANUT BUTTER CHOCOLATE

Keeping fueled at Lake Tahoe. Photo: Drew Silvers

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Ready to Ride

Strengthen & stabilize those cycling muscles!

BY DRS. RYAN WIGNESS & TORBEN JENSEN

Cyclists share in common specific areas of weakness or instability, but there are simple exercises that can help strengthen and stabilize these areas to keep you comfortable, strong, and efficient for a great day on the bike. This issue features Part 1 and 2. Stay tuned for the rest of the article, Part 3, in the next edition of Endurance News magazine!

PART ONE: Proper Breathing

While you are sitting there reading this article, take a deep breath. Where did you feel that breath go? Was it in your rib cage, shoulders and neck, or into your abdomen? The most efficient place to send that breath is actually into your belly and lower ribs! If you watch a baby breathe, you will notice that they breathe into their little bellies. This is because when we breathe, we are supposed to use our respiratory diaphragm, the

broad flat muscle that separates our chest cavity from our abdominal cavity at the bottom edge of our ribs. The respiratory diaphragm arches upward like a full parachute when it is relaxed; when it is contracted, it shortens and flattens, pulling downward. As the diaphragm pulls downward, it creates negative pressure in the chest cavity causing air to be pulled into the lungs and displacing the abdominal contents in a downward and outward direction

forcing the abdomen to flare

How to Belly Breathe:

- · Lay on your back on a flat surface without a pillow. Using a gym ball or chair for support, flex your knees and hips to 90 degrees.
- Place your hands across your abdomen between your belly button and pubic bone. Relax your chest, shoulders, and neck.
- Let your belly bulge upward and outward as you breathe in, raising your hands up with the expansion of your abdomen. (Do not flex any abdominal muscles.)
- Add alternating knee lifts from the ball (simulating the pedal stroke). Exhaling from your abdomen and lift your right leg. Your core muscles should gently contract as you lift your leg.
- · Keeping leg elevated, inhale into your abdomen. Exhale, then lower the leg back to the ball.
- · Repeat with the left leg. Repeat 10 repetitions with each leg.



PART TWO: Neck and shoulders

Constantly leaning your trunk over the bars with the head extended at the base of the skull to see where you are going, puts great stress on the muscles and joints of the upper thoracic spine, cervical spine, and shoulder girdle. If you assume poor postural positioning over the bars, fatigue will set in quicker, reducing your riding efficiency, endurance, and enjoyment. To maintain postural control of the upper body, we must hold the joints of the spine and extremities in their optimally loaded ranges and strengthen the supportive muscles of the region:

· Lay down on a flat surface on your

front with your chin slightly tucked in and forehead on the floor.

- Bring your hands up above your head resting on the outer edges of your baby fingers (think Karate chop), and your elbows on the floor at the height of your ears. Relax your shoulders.
- Maintain proper respiration into your abdomen, or your shoulders will migrate upward toward your neck. thus increasing fatigue.
- Belly breathe and draw your shoulders downward toward your back pockets, lengthening your spine.
- · Lift your head slowly 2-3 inches from

- the floor, concentrating on hinging the movement at a point between your upper shoulder blades and not the base of your skull.
- Hold for 10 seconds and slowly lower your forehead to the floor. Repeat 10 times.

Riders should maintain this posture while riding to help take tension off their neck and shoulders

Performing these exercises will help improve respiration, stability, and endurance on the bike, thereby increasing power. efficiency, and enjoyment for those awesome spring rides.

Easy post-workout recovery drink

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- Repair sore muscles
- Immune system support
- Grass fed, 100% isolate

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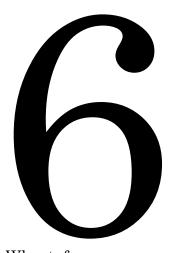
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Wheat: for many Americans, it's what's for breakfast, lunch, dinner, and the snacks in-between. As an athlete, you probably gave up doughnuts long ago. but wheat-based pasta, cereal, and bread may still be on your menu. Regardless of USDA recommendations to eat lots of whole grains, wheat (whether refined. whole, or cracked) should not be a big chunk of your daily diet. Mounting research shows that wheat can wreak havoc on your body sapping energy, causing joint pain, impairing your nervous system, and ultimately hurting race-day performance.

Reasons to Go Wheat-Free and Thrive

BY ENDURANCE NEWS STAFF

Here are six reasons why avoiding wheat could be one of the most beneficial changes you make to your daily diet:

1. Cut the gluten, ease the pain

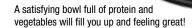
Modern wheat contains more of the protein complex gluten than the wheat our ancestors ate. The trouble is, many people react very badly to it. The number of people suffering from celiac disease is on the rise. Some medical experts believe undiagnosed gluten sensitivity may be to blame for many cases of migraine headaches, joint pain, depression, and more.

2. Just say "no" to damaging acid

Wheat has been estimated to account for 38% of the average American's dietary acid load. Combine that with a diet high in acid-forming meat and dairy and you have a recipe for "acidosis," the term for a body fluid pH that's below the normal range of 7.35-7.45. (See the article "Acidosis: a term you should know" in issue 107 of Endurance News.)

3. Slow aging

A carbohydrate unique to wheat, amylopectin A, causes blood sugar levels to skyrocket. Sustained high blood sugar levels in turn trigger byproducts that accelerate aging. The effects can include skin damage, cataracts, kidney disease,



arthritis, and hardening of the arteries.

4. Take care of your heart

The insulin-spiking sugars in wheat also trigger the formation of small LDL particles—the ones that cause plaque to build up in arteries, leading eventually to heart attack and stroke. Help keep your body's most important muscle going strong by eliminating wheat from your diet.

5. Keep firing on all cylinders

Wheat products take a toll on your brain and nervous system, too. An immune system response to gluten can cause antibodies to bind to brain cells in the cerebellum, resulting in progressive loss of balance and coordination, muscle twitching, and impaired memory.

6. Clear out wheat, clear up skin

Sometimes wheat damage shows itself externally, affecting your body's largest organ, the skin. Wheat gluten-related skin conditions include acne (triggered by increased blood sugar and insulin levels), many kinds of ulcers, psoriasis and other rashes, and some cases of hair loss.





AID STATION

SLEEP MORE TO CURB YOUR SUGAR & CARB CRAVINGS

Are you getting seven to nine hours of sleep each night? If not, you may be giving in to more sugar than your rested peers.

According to a new study published in the *American* Journal of Clinical Nutrition, participants who got a full night's sleep naturally opted for less sugar in their diets—reducing their intake by up to 10 grams each day. (After four weeks, that number boosted to about 12 grams.) They also consumed fewer carbohydrates each day.

- Senior study author, Wendy Hall, concludes that this "simple change in lifestyle [sleeping more] may really help people to consume healthier diets."
- Lead researcher, Haya Al Khatib states, "This further strengthens the link between short sleep and poorer-quality diets that has already been observed by previous studies."

Sleeping for less than seven hours a night, however, is correlated not

only to poorer food choices, but also to several health problems including obesity and metabolic syndrome.

How Hammer Can Help



SLEEP STATISTICS

Those who sleep less than 6 hours a night have a quadrupled risk of stroke compared to those who sleep 7 or more hours.

> Not getting enough sleep each night can lead to weight gain (averaging two pounds) in as little as five days.

Athletes require more sleep than the average person: 9 or more hours of sleep is ideal.

SLEEP TIPS

- Avoid caffeine intake in the six hours before going to sleep
- Avoid eating big meals and snacks late in the day
- Exercise! It improves sleep quality
- Reduce screen time—cell phone, TV, laptop, etc. before bed
- Keep your bedroom as dark as possible
- Maintain a consistent sleep schedule
- Create a relaxing bedtime routine every night, such as reading a book
- If you have a hard time falling asleep, make sure

you are getting enough magnesium. It relaxes muscles, helps with leg cramps, calms the nervous system, and more. Essential Mg contains five optimal forms of highly absorbable magnesium.

- If getting deep, all-night sleep is a problem, give REM Caps a try. It is a highly effective yet safe sleep aid, containing ingredients such as melatonin, valerian root, and 5-HTP. Sound sleeps awaits!
- Phytomax steps in with a boost of nutritional support when sources from food are not enough. Supply your body with the nutrients it needs for higher quality sleep.

EMS: What's right for you

BY BRIAN FRANK

If you did not get an EMS unit for strength training during the off-season, now that spring is here, you will need one to accelerate recovery from the higher volume of training and to address muscle strength imbalances before you get to the heart of your season.

GLOBUS VS. COMPEX

Both machines employ the same patented, self-cancelling square wave technology. The Globus is a heavier, metal box, very durable, but uses the old style pin cable adaptors—not as flashy as the Compex snap pads, but the replacement pads are less expensive (\$10 per set of pads

vs. \$15). On the other hand, the Compex machines are lighter and feature a slicker user interface, complete with a pictogramanimated character to show you body location and type of activity being performed.

A big plus for the Globus is the cable splitters. They effectively allow you to turn the unit into an eight-channel machine. With its high power output, this is not a problem because each channel will still go up to 60 ma, which is more than most people can handle (120/2 per channel). On top of



this, it has the 2+2 program. You can run Active Recovery on your legs while running Massage on your lower back, for example. Or, do a strength workout on your abs while doing active recovery on your quads.

And as always, if you have any questions that would help you decide which brand and model you want, just give us a call!

Hammer Tip: To extend battery life, recharge your EMS unit before the battery level dips below ½.

Hammer Nutrition can hook you up with EMS.

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- » Relieves muscle cramping
- » Improves training results

Order an EMS unit from Hammer and enjoy:

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ADVENTURE RACING, PADDLE SPORTS, RUNNING, TRIATHLON, CYCLING, SWIMMING, MOTOCROSS, SKIING

WE SUPPORT: YOUR SPORT

Whatever your sport, you'll find plenty of challenging Hammer Nutrition-sponsored events to choose from this summer. We already have more than 160 events on our calendar for the upcoming months, covering practically everything associated with endurance, and more requests for sponsorship support are pouring in daily. Here's just a sampling of the exciting summer events that we are honored to support:

OZARK FOOTHILLS

ST. LOUIS. MO

The fourth annual Ozark Foothills trail races, held at Greensfelder County Park on April 7, 2018, in Wildwood, Mo. Come run the scenic and technical trails laving at the foothills of the gently rolling Ozark mountain range.

ozarkfoothills.weebly.com

4/7/18

GRITVENTURE GRAVEL GRINDER

AUGUSTA, WV

This will be a true gravel adventure: no SAG support, no route markings. There will be bars and gels available at the ride start to throw in your jersey pockets to take with you.

www.elementsport.com/gritventure

4/7/18

BLANKETS CREEK DIRTY 30 MTB

CANTON, GA

Free Flite Bicycles will be the presenting sponsor of the 2018 Blankets Creek Dirty 15/30 Mountain Bike Race.

mountaingoatadventures.com/blankets30

4/14/18

PALOUSE 100K

PULLMAN. WA

The Palouse 100K Relay and Solo starts and finishes at Summit Therapy.

ultrasignup.com/register.aspx?did=53370

4/15/18

HATTIE 100 ROAD CYCLE

HATTIESBURG, MI

Those who complete the 100 mile course will receive a Hattie Hundred 2017 Railroad Spike.

runsignup.com/Race/MS/Hattiesburg/ HattieHundredBikeRide

4/21/18

POWER OF A WOMAN TRI

EAST MEADOW, NY

This is a perfect beginner race that includes a pool swim with 50 meter

eventpowerli.com/power-of-a-woman-pooltriathlon-2

4/21/18

TWO MILERUN & 6/3 HR MTB

FRANKLIN. PA

You will find both double track and single track with river crossings, bridges, rocks, roots, logs, and many other natural obstacles and rolling terrain that create a natural challenge for all levels of riders.

twomilerun.net/index.php?mid=43

4/21/18

CHANDLER TRI

CHANDLER, AZ

Heated pool swim, entire bike and run is on paved policed and barricaded city streets or sidewalks.

trifamilyracing.com/events.html

4/22/18

THE EPIC 80/150M GRAVEL **GRINDER**

KAISER, MO

That itch to do something exciting, different, and maybe a little crazy. Our natural human instincts are being ignored, and it's time to do something about it.

epic150.com

4/28/18

OPEN RANGE GRAVEL GRINDER

PRATT, KS

The course will provide racers with flat sand-packed roads, red dirt hills, and winding gravel roads on one of the most diverse courses in the state. The Gyp Hills are one of the "8 Wonders of Kansas Geography." Bicycling Magazine named the Gyp Hills as the most beautiful bicycle ride in Kansas.

www.kawsports.com

4/28/18

INDIANA SPRING SPRINT TRI

MUNCIE, IN

Great for first timers, fantastic for all! Super sprint and sprint distances available.

americamultisport.com/2018-5th-annual-indiana-spring-sprint-tri-5k

4/28/18

SALUDA ROUBAIX 68 GRAVEL GRINDER

LEESVILLE, SC

Saluda Roubaix 68 remote all road race amounts to dirt, gravel, bedrock, farmland, timberland, countrified bridges, levees, rustic pavement, no towns and one specifically remote ball field.

saludaroubaix.com

4/29/18

WILLOW 10&20 MILER

HUDSON, WI

The Willow is two events in one, all you have to do is decide the distance that takes you out of our comfort zone. Ten or Twenty miles - your call!

www.willowtrailrun.com

5/05/18



Snake Root Trail descent. Photo Brett Sherfy

GATEWAY 50K

BLACKSBURG, VA It's finally here: An ultradistance event in Blacksburg, Virginia. Come experience the allure of Jefferson National Forest and Brush Mountain by way of the challenging 50K or the introductory 25K.

www.ecbcrunning.com/

5/05/18

OSAGE PADDLE SPORTS SPRING 12

BONNOTS MILL, MO

All paddlers in the canoe divisions must use single-blade canoe paddles. Paddlers in the kayak divisions may use double-bladed kayak paddles or single-bladed canoe paddles. Pedal kayaks and other boats are welcome to participate.

www.osagepaddlesports.com/spring12race

5/12/18

MEXICO BEACH SPRING SUP CLASSIC

MEXICO BEACH, FL

We love the water. We love the ocean. We love to be close to the water; in it, on it, for a limited time under it...you get the idea. We love to paddle and catch some waves.

www.mexicobeachsup.com

5/19/18

ARCADIA GRIT & GRAVEL

ARCADIA, MI

At Endoman Promotions, LLC, our goal was to develop and promote a couple of great races here in the beautiful

> northwest lower peninsula of Michigan, and we think we've achieved that with the Arcadia Grit & Gravel and the flagship event.

www.endomanpromotions.com

5/19/18

SPRING DOLPHIN AQUARUN (TRI)

BOCA RATON, FL

You will have the option to race in the full swim and run sprint or choose to focus on one aspect of the event. There will also be team options for those that have a buddy they prefer to pair up with.

www.kisoswim.com/spring-aquarun-race

5/20/18

MONTICELLOMAN (TRI)

LAKE MONTICELLO. VA

Come on out for the eighth annual 2018 Monticelloman Half, Olympic or Sprint Triathlon at Lake Monticello and find out why many keep coming back year after year.

cms-events.com/monticello-man-tri

5/06/18

TRABUCO CHALLENGE (MTB)

TRABUCO CANYON, CA

 $27~\rm miles$ and 4,500 feet of elevation. You are responsible to carry all food and water for the ride.

www.warriorssociety.org/events/trabuco-challenge.html

5/12/18

THE STORMING OF THUNDER RIDGE 100M (ROAD CYCLE)

LYNCHBURG, VA

Storming of Thunder Ridge is Lynchburg, Virginia's only local, fully-supported road cycling event. With the Blue Ridge Mountains as your backdrop, there's a ride for everyone: 27, 45, 47 (The Mountain Only), 75 and 100 mile options. The Storming of Thunder Ridge Bicycle Ride is a fund-raiser benefiting the YMCA of Central Virginia's Annual Fund.

stormingofthunderridge.org

5/20/18

Ditch Sugar & Improve Your Focus

Healthy cognitive function depends on a reduction of simple sugar

BY STEVE BORN

Cognitive performance is defined by Dr. Patrick Kamphuis as "our ability to utilize the knowledge acquired by mental processes in our brains." He says, "A wellfunctioning brain controls a range of voluntary and involuntary actions. Examples of these actions are the sleep-wake cycle, attention, perception, mood, emotion, appetite-satiety and memory."

Obviously, maintaining optimal cognitive performance is vitally important for all aspects of daily life, including athletic training and competition. And while there are a number of things we can do to maintain and improve cognitive function and performance, one of the most important is to reduce—or, bet yet, eliminate—our intake of simple sugars.

Results from a recent study by scientists in New Zealand provide evidence that ingestion of simple sugars like glucose and sucrose ingestion led to negative cognitive performances, including reduced attention and response time.

The 49 individuals involved in the study consumed sweetened drinks containing glucose, fructose, sucrose, or sucralose (an artificial sweetener) prior to performing and completing three cognitive tasks:

- Simple response time
- Arithmetic processing
- The "Stroop Effect"

The results revealed that ingestion of glucose and sucrose led to poorer performances on the assessed tasks as opposed to fructose and sucralose. The reason why fructose didn't impair cognitive performance is because it does not cross the blood-brain barrier like glucose and

...simple sugars

like glucose

and sucrose

ingestion led to

performances,

attention and

response time.

negative cognitive

including reduced

sucrose do.

That doesn't mean that fructose gets a pass in terms of being "A-OK for the brain." Among the numerous negative health effects associated with fructose, far too many to list here, studies conducted at Georgia State University showed that rats

fed a diet high in fructose impaired memory.

Sucralose, aside from the fact that it offers no calories for energy production, is far from being acceptable for consumption. While sucralose may begin as a sugar molecule, the end product is a synthetic chemical with a chlorinated core.

Some people may ask "What's the big deal? It's just glucose!" But think about it, on a daily basis,

every part of your brain is involved in some form of cognitive function. It just makes sense to do what you need to do in order to keep things working smoothly cognitionwise. And what about during endurance events, especially ultra-distance events? If only for

> the attention span, mood, and emotional components of cognitive function wouldn't you want to make sure that those are razor sharp?

We've said it many, many times before, and we'll say it again: Companies that produce and sell sugar-loaded gels, bars, and drinks—under the guise of being "cutting edge" performance fuels—are doing you no service

whatsoever. That junk simply does not belong in your body, both in terms of general health and athletic performance.

This is yet another study that should ring the warning bells loud and clear as to the harmful effects of simple sugars, and it's yet another reason why, for 31 years and counting, we have never strayed from our battle cry: Stay away from fuels that contain added simple sugars and stick with complex carbohydrates only.



- Easy, complete recovery
- Rebuild muscle tissue
- No artificial ingredients

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CHOCOLATE ORANGE VANILLA STRAWBERRY VANILLA

16 Servings \$32 Servings Single-serving packets

\$34.95 \$59.95 ea \$3.50

"I take **Recoverite** before and after long bike rides. It makes a big difference in the ride and the recovery where I can function as normal the rest of the day even if go past my limits."

When you consume Recoverite within 30 minutes following your workout, you will feel the benefits of your exertion without experiencing muscle pain.

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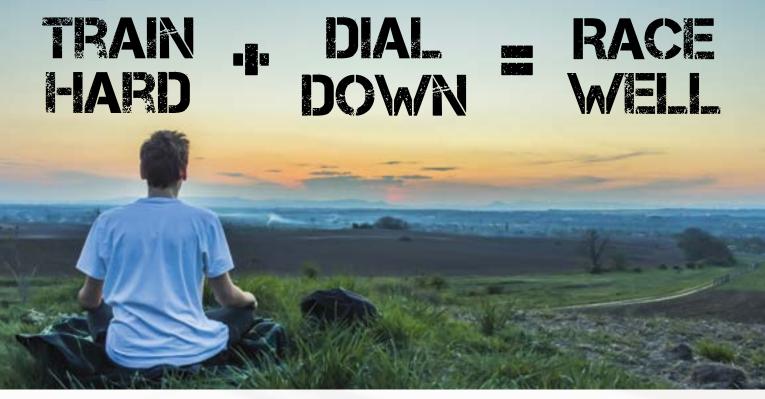
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Before Race Day Practice tapering

BY NATE LI FRANDI

That big race of the season, the one your whole season is geared toward, should be an exciting time. You've put in the hard work and hopefully you're ready to put the hammer down. However, the final weeks leading into that big event can be some of the most stressful of the year.

This is when the doubts start to creep in. This is when you start doing things you shouldn't do during a taper. You start pushing harder to make sure you eek out every bit of speed for the race, or you do that "one last" track workout or long ride "just to be sure" your fitness is OK. The problem is, in the final weeks those workouts are the ones

that can cripple your ultimate performance.

If the work hasn't been done before tapering begins, then it's too late. If you're still under trained—due to recent sickness. injury, laziness, etc.—still, the only way you're going to get your body totally prepared is by tapering and not by working harder.

I suggest a 2-week taper for Olympic distance triathlons and 40K TT's on the bike, or 10K runs. For marathons, Ironman's and ultra-cycling events, I give my athletes a month-long taper.

Weekly volume tapers off dramatically, and the intensity of the hard workouts stays high though the volume of hard work done also decreases. During this decrease in overall work the body takes less time to recover from workouts and, thus, is able to top off its energy system storessomething it can't usually do during hard bouts of training.

Finally, don't misinterpret the "mid-taper blues," a period of time where you can feel sluggish. It's very common to the taper process. Your body has been used to getting hammered and all of a sudden you're being nice to it. It takes a while for the body to adapt and round the corner. If you encounter the blues, don't panic. You'll rebound quickly. When you do, you should be feeling more energetic, stronger, faster and confident.

Cutting down on duration, amount of intensity and, possibly, the number of weekly workouts is the way to maximize the taper process. Doing that last hard/ long workout just to be sure your fitness is OK, is not the way to ensure great results. 💷

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Our Customers Say It Best

"Great products, amazing service, and as always, Hammer Nutrition's fueling advice was 'spot-on.'"



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Surprising sources of sour

BY ENDURANCE NEWS STAFF

Doctors and other medical experts have been warning us for decades about the dangers of consuming too much salt in our diet. Although sodium is necessary for our bodies to function properly, higher than normal levels of this important element have been linked to a number of dangerous health conditions including:

- Hypertension (or high blood pressure), which can lead to heart failure
- · Poor bone development, which can cause osteoporosis
- · Fluid in the lungs, which can cause shortness of breath
- · Kidney stones, which can cause renal failure
- Dehydration causing excessive thirst and water retention
- · Gastric ulcers, cancer, and hormonal imbalances

Studies suggest that people who consume too much salt are twice as likely to develop stomach cancer and are at a much higher risk of contracting stomach ulcers, acid reflux, and other digestive problems including persistent heartburn, bloating, nausea with vomiting, severe stomach pain, and weight loss.

What you can do

Fresh produce is always more healthful than processed foods.

Whenever possible, use fresh or dry veggies in your cooking, and make your own juices, broth, and sauerkraut. If you do buy canned foods, read labels to check for actual sodium content.

Look for no-salt-added or lowsodium alternatives. Use ground black pepper, fresh garlic, chives, and other herbs or spices to enhance flavor without adding sodium.

Endurolytes: full spectrum minerals, not excess sodium

When replenishing electrolytes during exercise, choose Endurolytes. Endurolytes and Endurolytes Fizz contain a full spectrum of minerals, not just sodium and chloride. Endurolytes contains sodium in levels that will not overwhelm your body's natural ability to regulate this vital mineral.

Even if you are not using the saltshaker, you're probably consuming much more sodium than you know. Here are five seemingly healthy foods that are among the worst offenders:

Cottage Cheese: Many turn to this dairy product as a healthy weight loss solution, but the problem is all of that added salt.

(Sodium content: 819 mg per cup)

Canned Beans: Beans are a good source of protein, but most canned varieties come packaged with extra sodium.

(Sodium content: 800 mg per cup)

Canned Tomatoes: This otherwise healthy vegetable is generally canned not only with added salt. but many manufacturers also add high fructose corn syrup or sugar, especially to sauces.

(Sodium content: 1,350 mg per cup)

Vegetable Juice: Many canned and bottled varieties are packed with extra salt and added sugar used for flavoring. To cut back out the salt, juice your own veggies.

(Sodium content: 481 mg per serving)

Broth: Beef, chicken, and vegetable broths are usually low in fat and calories, unfortunately, they are typically loaded with added sodium. (Sodium content: 773 mg per 1 cup vegetable beef)







Hammer athlete Scott Wesemann in Zion National Park. Photo: Courtesy Scott Wesemann

"...Usually a full tab per water bottle works well for me. It's saved my butt in hot and humid conditions and I don't race without it."



- Full-spectrum electrolytes
- Easy to carry
- No sugar added

Now without the white residue!

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From Our Athletes

Our "From Our Athletes" section features submissions from athletes at every level, ranging from elite pros who have been competing for decades to beginners completing their very first race. This is just a small cross section of the thousands of Hammer athletes around the world who are establishing Hammer's reputation for having safe, natural, and performance-proven results. Congratulations to everyone here on their accomplishments!



Hammer Nutrition, a Family Tradition

BY JENN AND LEXY HALLADAY

Jenn: My daughter Lexy has watched me compete on the bike for 10 years. She is very aware of the importance of nutrition in successfully competing and meeting race goals. I have been able to share my knowledge and experience using Hammer nutrition—successfully!

In 7th grade, she went on to break the Idaho High School 1,600 m time, running a 4:53, and in 8th grade she ran it in 4:46. Lexy is a nationally ranked runner at the high school level. In the Adidas Boost Boston Games last year, she ran the fastest mile time for high school, 4:41.80, breaking a 44-year Freshman Mile record.

Elite athletes have something in common—natural ability, but more than that they have an instinctual drive to train and push themselves to a different level. Training at this level for a growing teenager is very tricky. Nutrition and rest become very important. Hammer protein, Recoverite, Endurolytes, Tissue Rejuvenator and supplements such as Boron and Chromate help Lexy maintain this level of training. Lexy and her brother Jesse drink Hammer Whey protein before bed. This routine does not change. Recovery is huge in every sport and for every athlete.

Lexy: We are really diligent using Hammer protein at night as a way of helping our bodies recover. I remember last year at State I had a very short break in between the 1,600 m run and the 800 m run, just over 3 hours. When I race, I can't have any solid food in my stomach or I end up vomiting. My mom called Hammer and got advice from Steve Born. He said to go ahead and use Recoverite. This ended up being great advice and allowed me to successfully run the 800 and help my team win the 4x400. My high school team went on to win State. I trust Hammer Nutrition.



Quentin Sims

Pine Flat Road Race

After winning the Cantua Creek Road Race the day before, Quentin doubled his success for the weekend by winning the 62 mile Pine Flat Road Race. Quentin fueled on Hammer Gel and Fully Charged at the start, and Perpetuem during the 3 hour race.

Photo: Hunter Ziesing



Lincoln Murdoch

Blackstone Love Run 5K

"This was one race of many that are strategically planned, each one getting faster. Hit the goals for this race on that journey. At the start those who finished ahead of me just took off. I ran a steady pace and was thankful to get the 3rd Overall Male award."

Photo: Courtesy Lincoln Murdoch



Jennifer Reschke

Colt State Park Half Marathon

"My coach and I decided to do a 6 week training focus for this half marathon after the IM 70.3 World Championships. I was 3rd female for most of the race and around mile 10.5 I caught the 2nd place female and stayed ahead of her. Really happy with my training, fueling, and pacing strategy for this race and came away with almost a 4 minute PR!"

Photo: Rvan Gallivan



Nicolette Nordan

Masters of All Terrain 50K

"The course was flat, running on tall dry grass, then rocky dirt roads. I finished out the first 1.5 loops feeling very good. I stayed on top of fueling every 7 miles with Chocolate Perpetuem and at the same time taking Anti-Fatigue Caps, Endurolytes and Endurance Amino. I stayed on course with fueling and supplementing and never did crash out."

Photo: Masters of All Terrain



Crushing it in Cali

Aaron Ophaug took 1st in his age group and 5th overall at the Into the Wild Limestone Eco Challenge 25K in Silverado, California. Photo: Ulysses Chan, Paksit Photos



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