

Tips for a successful Half or Full Iron Distance Triathlon

By: Steve Born

DAYS LEADING UP TO THE RACE

- **Avoid the temptation to train too much and/or too close to race day!** – You will not be able to positively influence your fitness level in the days leading up to the race; however, you can negatively impact your race by training during that time (*training meaning anything of significant duration or intensity*). As well-known coach Jeff Cuddeback (pictured right) states, "The week of any event of this duration should be all about resting up and topping off your energy stores. Training is done to keep the engine lubed and tuned up, nothing more. If you think you're going to further your fitness through training the week of your key race, you're sadly mistaken. If you are the type to train right up to the event, you will almost certainly under perform."

Best performances in long-duration events are achieved by getting to the starting line well rested rather than razor sharp. In doing so, you may find yourself not hitting on all cylinders during those first few minutes. In fact, you might even struggle a bit at the beginning of the race. However, your body will not forget all the training you've done and it will absolutely reward you for giving it the time it needed to "soak up" all of that training.

- **Don't let your diet deviate too much from what got you there in the first place!**

FLUIDS – Don't drink excess amounts of water in the hopes of getting a head start on your fluid requirements for the race. Consumption of roughly .5 to .6 of your body weight is a good gauge in regards to how much water you should be consuming daily (example: 180 lb/approx 82 kg athletes should drink approximately 90-108 ounces/approx 2.7-3.2 liters of water daily). However, if you've not been following this recommendation consistently, don't start now, as this will overwhelm your body with too much fluid too soon, which may increase the potential for hyponatremia.

SOURCE: "Hydration – What you need to know"

CALORIES – Don't stuff yourself with extra food in the hopes that you're "carbo loading." The time period for carbohydrate loading (i.e., maximizing muscle glycogen storage capabilities) has, for all intents and purposes, passed. In essence, "carbo loading" is what you did in the 0-60 minutes after all your workouts leading up to the

race. That's when the glycogen synthase enzyme—which controls glycogen storage—is most active, and that's how you topped off your glycogen stores. Any excess food you eat in the days leading up to the race is either going to be passed through the bowels or stored in adipose cells... neither of those things will benefit you.

SOURCE: "Recovery – A Crucial Component of Athletic Success"

SODIUM – Don't consume extra sodium (salt) in the hopes that you'll be "topping off your body stores" prior to the race. Since the average American already consumes approximately 6000 to 8000 mg per day (if not more), an amount well above the upper end recommended dose of 2300-2400 mg/day, there is absolutely no need to increase that amount in the days prior to the race. (Hint: Adopting a low-sodium diet will do wonders for both your health and athletic performance). High sodium intake, especially in the days leading up to the race, is a recipe for disaster because it will greatly increase the potential for disruption of the hormonal mechanisms that control sodium regulation, re-circulation, and conservation. In the days leading up to the race, be especially cognizant of the salt content in your foods, especially if you go out to eat. Restaurant food is oftentimes loaded with sodium, so dining out can dramatically increase your already high salt intake.

SOURCE: "Electrolyte Replenishment - Why it's so important and how to do it right"



Amy Rappaport and Jeff Cuddeback are all smiles at the EagleMan Ironman 70.3 race. Jeff finished 1st in his age group and Amy finished 2nd in hers.
Photo: Garrett D'Alessandro

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THE NIGHT BEFORE THE RACE

- **Eat clean, eat until you're satisfied, then call it a night** – You can't positively affect muscle glycogen storage capabilities the night before the race, a time when the glycogen synthase enzyme—which again, is the enzyme that controls glycogen storage—is inactive (hint: that's why post-workout refueling is so important). Consume complex carbohydrates, some high quality protein, and

low-to-no saturated fat, make sure your meal is low in sodium, and be sure to drink sufficient amounts (but not too much) of water. Skip the alcohol, fatty foods, and dessert... save those “rewards” for after the race.

SOURCE: *“Recovery – A crucial component of success”*

THE MORNING OF THE RACE

- **No calories three hours prior to the race** – The first fuel your body will use when the race begins is muscle glycogen (again, this is why post-workout refueling is so vital). Eating a pre-race meal at the wrong time will negatively affect how your body utilizes its finite stores of glycogen, which will negatively impact your performance. **SOURCE:** *“Proper Fueling - Pre-workout & race suggestions”*
- **Don't sacrifice sleep to eat** – A better strategy than eating 1-2 hours prior to the race is to consume 1-2 servings of Hammer Gel 5-10 minutes prior to the start. That will top off liver glycogen stores nicely (the goal of the pre-race meal), and provide some calories to augment muscle glycogen stores during the swim portion, but without negatively affecting how muscle glycogen is utilized. **SOURCE:** *“Proper Fueling - Pre-workout & race suggestions”*

30-45 MINUTES BEFORE THE RACE

- **“Pre-emptive strike” dose of Endurolytes** – Taking a dose of Endurolytes before the race will provide electrolytic mineral support for the swim portion, which is a time that fueling (calorie, fluid, electrolyte intake) is obviously not possible. **SOURCE:** *“Electrolyte Replenishment - Why it's so important and how to do it right”*

5-10 MINUTES BEFORE THE RACE

- **1-2 servings of Hammer Gel** – Optional if you've had a pre-race meal. Wise strategy to employ if you haven't had a pre-race meal. **SOURCE:** *“Proper Fueling - Pre-workout & race suggestions”*



AT T-1

- **“Pre-emptive strike” dose of Endurolytes + drink from multi-hour fuel bottle (see next page), washed down with water** - A few seconds spent at the transition to replenish electrolytes and a few calories will more than repay you during the ride because it allows you to focus solely on establishing a smooth pedaling rhythm during that crucial initial portion of the bike phase. To expedite the process, have the Endurolytes ready in a small container such as a Hammer Nutrition capsule dispenser. **SOURCE:** *“Caloric Intake - Proper amounts during endurance exercise” and “Electrolyte Replenishment - Why it's so important and how to do it right”*

BIKE FUELING

- **Replenish, don't replace!** – When it comes to calories, fluids, and electrolytes, the human body is not designed to accept from your fuel donation an amount that is anywhere near what it's losing. The body knows this, which is why it has numerous hormonal (survival)

mechanisms built in, which very easily “bridge the gap” between what the body is losing and what it can accept from you. Don't try to replace what you're losing, but instead replenish with “body cooperative” doses of the following...

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1. **Fluids:** 20-25 ounces/approx 590-740 ml hourly
2. **Sodium chloride (salt):** 3-6 Endurolytes capsules or 1.5-3 Endurolytes Fizz tablets hourly
3. **Calories:** 150-180 calories hourly

... making adjustments based on these factors: age, weight, training/racing stress, fitness, acclimatization levels, weather conditions.

SOURCE: “Less is Best - The Right Way to Fuel”

- **Endurolytes or Endurolytes Fizz every 30-60 minutes**
– To fulfill electrolyte requirements more effectively and completely than salt tablets. Be flexible with the dosing to match the weather and terrain and whatever “I need more electrolyte support” signals (irregular pedal cadence, muscle twitches) your body is giving you.

Note: If you are making multi-hour bottles (see below right for more details), it's perfectly acceptable to use Endurolytes Fizz in your water instead of carrying and consuming Endurolytes capsules. However, it's recommended that you carry additional Endurolytes Fizz tablets or Endurolytes capsules, just in case what you've premixed in your water bottle(s) is proving to be inadequate (the "better to be looking at it than looking for it" train of thought).

SOURCE: “Electrolyte Replenishment - Why it's so important and how to do it right”



- **20-25 ounces/approx 590-740 ml of water per hour (+ or – 3-4 ounces/ approx 90-110 ml depending on weather and body size)** – Calories will be fulfilled from multi-hour bottle(s) of Perpetuem or Sustained Energy, electrolyte requirements from Endurolytes. Fluid requirements will be fulfilled from water only (water only, no sugar-filled sports drinks).

SOURCE: “Hydration – What you need to know”

- **Solid food not a necessity!** – Solid food is harder to digest than liquid, and it requires more time, water, and electrolytes. If you simply must have some solid food during the race follow these two pieces of advice for best results:

1. Make wise choices. Choose foods that have little or no refined sugar and saturated fats. Don't think, “I'm a calorie burning machine so I can eat anything that I want.” What you put in your body greatly determines what you get out of it. Remember: garbage in, garbage out!
 2. Make solid food consumption the exception, not the rule.
- SOURCE: “Proper amounts during endurance exercise”**

- **Hot weather fuel preparation & consumption** – If the weather is going to be warm-to-hot you should, if possible, make up your bottle(s) of fuel the night before and freeze them. If you're doing a half iron distance race rack the bottle on your bike the morning of the race... you're set.

For an iron distance race you can put both bottles on the bike or leave one at Special Needs. If that's not possible, and/or if the weather is very hot, make up one 3-hour bottle and have the other one waiting for you unmixed (powder only) at Special Needs. Another option is to make x 4-hour bottle (for the first four hours) and have a 2-hour bottle (dry powder only) waiting for you to mix at Special Needs.

Yes, you'll have to stop and add cold water to the bottle and spend a little time getting it mixed. However, this is time well invested because you will have a fresh bottle of fuel to cover you for the last portion of the bike leg.

Bottom Line: For an iron distance race, unless you have a way to keep a premixed bottle of Perpetuem or Sustained Energy cold at Special Needs, the short amount of time required to make a fresh bottle is your best alternative. And the time spent is not that big a deal, especially compared to getting to Special Needs and finding your premixed bottle of Perpetuem or Sustained Energy cooked by the hot temperatures.

SOURCE: “Proper amounts during endurance exercise” and “The Hammer Nutrition Fuels”

- **Sensitive stomach before run?** - Cut back on your calorie intake by 1/3 and/or go with Hammer Gel only during last hour on the bike.

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Multi-Hour Bottles - A Fuel Advantage

1. Because you have a few hours of fuel in one bottle you only need to drink a small portion of that bottle every hour, which means you don't have to drink so much volume of flavored liquid hour after hour.
2. You get to drink and enjoy plain water from another source (another bottle or two, or an aero hydration system) to take care of hydration needs and to cleanse the palate. Yes, there is some actual liquid left in the multi-hour bottle of fuel. However, over the course of 3+ hours it's pretty minimal so you can basically consider that bottle of fuel a "calories only" bottle.
3. By making a multi-hour bottle of fuel you don't have to stop and make more along the way, which will save you time.
4. By keeping your calories separate from your fluids you can keep track of your intake of both—calories and fluids—with greater precision. Why? Because you're taking care of those two areas of your fueling from sources that are independent of each other. Additionally, in hot weather races your ability to process calories may diminish while your fluid and electrolyte requirements may increase. Keeping the three entities of fueling—calories, fluids, and electrolytes—-independent of each other will allow you greater flexibility with your dosing, making it easy to alter your intake of any or all of those fueling components whenever necessary. **SOURCE: “The Hammer Nutrition Fuels”**

How to make a multi-hour bottle of fuel

For the sake of an even number, for a half iron distance race figure on a 3-hour bike portion, a full iron distance race figure on a 6-hour bike portion. For a half iron race, 1 x 3-hour bottle of Perpetuem or Sustained Energy will take care of calorie requirements completely. For a full iron distance race make 2 x 3-hour bottles of Perpetuem or Sustained Energy. Another option for a full iron distance race is to make 1 x 4-hour bottle (for the first four hours) and 1 x 2-hour bottle (for the last two hours).

AT T-2

- **“Pre-emptive strike” dose of Endurolytes** – Before you transition from cycling muscles to running muscles, replenishing your body with some electrolytes is a good idea, if your last dose of Endurolytes was 20+ minutes prior to T2. If it was only about 10-15 minutes prior to T2 you can skip the dose at transition and start taking Endurolytes during the run.

SOURCE: “Electrolyte Replenishment - Why it’s so important and how to do it right”



Julie Deery on her way to 1st in her age group at the USAT Long Course Halfmax National Championship.
Photo: Paul Davis

RUN FUELING

- **Calorie requirements fulfilled via Hammer Gel and Perpetuem Solids** – This is an excellent, easy-to-carry, easy-to-consume way of fulfilling your body's calorie requirements. Hammer Gel provides a calorically dense and easily digested supply of calories from complex carbohydrates. Perpetuem Solids, an easy-to-chew tablet, also provides complex carbohydrates. However, as important, if not more so, it also supplies the body with some heat-stable protein to help protect against muscle tissue breakdown. Hammer Gel + Perpetuem Solids is a perfect combination! Taking capsules of Endurance Amino—which contains significant amounts of BCAAs—will also help prevent muscle tissue breakdown.

SOURCE: “Caloric Intake - Proper amounts during endurance exercise” and “The Hammer Nutrition Fuels”

- **Endurolytes every 30-60 minutes** – To fulfill electrolyte requirements you'll want to continue to take this product during the run. As was the case during the bike portion, be flexible with the dosing to match the weather and terrain and whatever “I need more electrolyte support” signals (irregular running gait, muscle twitches) your body is giving you. If you want to use Endurolytes Fizz instead of Endurolytes capsules that's perfectly acceptable. Just make sure you're allowing the tablet(s) to dissolve in fluid, and make sure that you're drinking the appropriate amount of fluid—both via water and/or an Endurolytes

Fizz/water combination—that you need to be consuming hourly.

SOURCE: “Electrolyte Replenishment - Why it’s so important and how to do it right”

- **20-25 ounces/approx 590-740 ml of water per hour (+ or – 3-4 ounces/ approx 90-110 ml depending on weather and body size)** – Calorie needs will be fulfilled Hammer Gel, electrolyte requirements from Endurolytes. Fluid requirements will be fulfilled from water only (water only, no sugar-filled sports drinks). **SOURCE: “Hydration - What you need to know”**



About the Author:

Steve Born is a technical advisor for Hammer Nutrition with well over a decade of involvement in the health food industry. He has worked with hundreds of athletes—ranging from the recreational athlete to world-class professional athlete—helping them to optimize their supplement/fueling program. Steve is a three-time RAAM finisher, the 1994 Furnace Creek 508 Champion, 1999 runner-up, the only cyclist in history to complete a Double Furnace Creek 508, and is the holder of two Ultra Marathon Cycling records. In February 2004 Steve was inducted into the Ultra Marathon Cycling Hall of Fame.



NOTE: “Source” refers to the article in the *Endurance Athlete's GUIDE to SUCCESS* and *The Hammer Nutrition Fuels & Supplements - Everything You Need To Know*. Hard copies are available for purchase or as a free download at www.hammernutrition.com.

