

Endurance, strength, and speed are all essential ingredients to success in an endurance event. Yet, it is imperative for an endurance athlete to seek out improved efficiency where a given amount of work can be performed with less effort.

In previous articles I have discussed the application of the M2 Efficiency Principle to cycling and to training in general. Yet, the efficiency principle should also be applied to the area of fueling for an endurance event like Ironman. I am prompted to share my views on fueling efficiency after viewing yet another year in Kona where countless athletes saw their training efforts derailed by bloated stomachs, nausea, profuse vomiting, countless port-a-john stops, etc.

Every year I hear the same song and dance about the need for X amount of calories every hour with Y percent fluids and the remaining Z percent solids, but never at dusk, etc. One almost needs a slide rule to get the calculations right. The general prescribed calorie count always seems like a banquet feed to me, and I wonder just how appetizing the meal will be while exercising intensely in windy hot conditions.

Judging by the vomit-strewn highway, it appears that the general Ironman RDA is less than sumptuous for too many folks. My first two experiences in Kona were similar to what I describe above, with my 2nd participation seeing me spew my guts across much of the vast lava field, effectively destroying my race despite the best laid nutritional strategy.

As I wallowed in the black hole of shattered dreams and pondered what had gone wrong yet again, I had an epiphany. Instead of relying on prescribed caloric calculations, trying to find out what fuels to consume, testing them all, cramming down that number in my next event, and then potentially barfing my way to another dismal finish, I decided to approach my fueling quandary in a roundabout fashion.

Rather than straining to teach my body to process large amounts of fuel while exercising vigorously under extreme conditions, I would instead try and teach my body to become less dependent on fuel and thus minimize the nutritional variable of Ironman racing. For movie buffs, "Chuck, feed mayonnaise to tuna!"

My method for improving my fuel efficiency was quite simple; controlled deprivation. Basically, this meant eating less in training while taking care to not go over the edge and bonk.

Consider the basic premise that the body will generally do what it is trained to do. If your system through practice has grown accustomed to receiving fuel on a regular basis, then the body will demand it from you, and even more-so when racing and thus burning fuel at a higher rate.

On the other hand, once the body is taught that there will not be early, frequent, and bountiful cheap fuel handouts, it quickly learns that it should be more judicious in its rate of fuel consumption.

How much one eats and how frequently with the M2 controlled deprivation method is a function of fitness, practice, and the individual. Generally, it should not be necessary to fuel for rides of 2hrs or less. In the early season when my long ride might be 3 hours, I will take a gel or piece of bar (not the whole enchilada) but not until 1.5-2hrs have passed.

As the duration of my long ride increases along with my fitness, I will expand the duration of my no-fuel rides as well as the time I wait before taking fuel on my longer rides. Three hour rides with no fuel quickly become no-brainers, and for longer rides 5-6hr duration I will work up to where I wait 2-2.5hrs before taking fuel, and will then refuel sparingly with a gel or piece of bar every 45-60'.

Years of practicing this simple method has made possible the following:

- When fit, steady-state challenging terrain 100mile+ rides can be completed using only a couple of gels, or at times just my fluid replacement drink, Revenge.
- Riders that have trained with me will attest to how I get notably stronger as the ride progresses, despite my apparent fueling deficiency. Similarly, my hydration needs are significantly lower than

those of the riders who surround me.

- I have won Ironman races on as little fuel as 1.5 bananas and fluid replacement drinks, nutritionally impossible the calorie counters would insist.
- Although I do replenish shortly after these rides, I do not get off the bike famished from such sparse fueling.
- By reducing the systemic stress of having to ingest and process large and frequent amounts of fuel, I have similarly reduced a major race variable while directing blood and body energy away from the digestive system to the legs and arms.
- A box of Clif Bars lasts an entire year.

I cannot imagine any of the standard caloric/work calculations that so many people rely upon supporting the feasibility of the above examples, but the facts speak for themselves. Clearly, one can teach the body to become more efficient in its use of existing and additive fuel stores, thus relieving in large degree the systemic stress of having to assimilate extraordinary fueling in the midst of an already grueling event.

Tangential benefits to practicing this method are a much keener body awareness and sense of what you need for fuel. By not constantly chowing down in training, you will become much more aware of the body's signals that it needs fuel and how imminently. Limiting yourself to a simple gel or bit of a bar will give you better insight as to just how far that small fuel additive will then take you. Learning how to recognize the body signs and what is needed to correct a shortage is a powerful knowledge tool that can be applied to your racing.

In summary, the athlete that fails to make efficiency a premium consideration in his training, will forever fall short of his endurance potential. Teaching the body to fuel itself efficiently should be something every endurance athlete should practice.

Athlete Commentary

I received the following e-mail from an experience endurance athlete who read this article on IronmanLive.com. Given this gentleman's years of experience, I thought it would be interesting to hear his thoughts as well. Read on.

Mike,

I read your article about on Ironman Fueling "Efficiency in Everything" and all I can say is FINALLY someone has written something sensible about nourishment replacement during Ironman or for that matter any long distance (over 3hr's) event.

I am 61 years old and have been racing (running, cycling & now triathlons) for the past 32 years. I have also found in my experience that eating less is better than eating too much.

I just finished a 1/2 ironman event in July of this year and I broke the existing record for 60+ by over 24 minutes!! My time was 4:50:37 and I did it on eating (2) fig newtons and (3) bottles of energy drinks!!! I found over the years that when I ate too much, my performance suffered drastically.

At Ironman Canada this year, I broke the existing record by 6 seconds even though I broke my chain and lost about 20 min on the bike. My bike split was 5hrs 28min which included the lost time!! I did the whole race on (4) graham crackers, (3) fig newtons, (1) power bar and around (5) bottles of energy drink and/or water.

When I was running marathons in my younger days (best time of 2hrs 52min) I would take my kids for a walk after eating dinner. I would ALWAYS have a hard time climbing up the hills with them and they would ask me why I was breathing so hard and yet I could run marathons so fast? It was the food in my stomach that slowed me down!! All long distance events are done below AT, otherwise you would never last and the energy fuel is your stored fats

and SOME stored glycogen. Therefore you must train the body to use these reserves and NOT rely on a steady input of carbohydrates.

Thanks again for writing something I've always preached yet no one would ever listen to me!!

Your racing is an inspiration to us all.
Carmen Augustini
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