



THE NEWSLETTER FOR MASTERS ATHLETES.

Vol 1. Issue 3. September 2007.

Pacing and patience: the forgotten race secrets?

As Masters athletes, you would think we'd learn a thing or two along the way. But despite all the planning, in so many cases the race plan goes out of the window when that first rush of adrenaline hits. And unless we're very, very lucky, our chances of a PR or a strong result went out of the window too.

If you're reading this newsletter, odds are you are an endurance athlete. We are not talking training for the 100-metre dash. It's our contention at Masters Athletic that a strong finish will beat a strong start almost every time. The question is, how to do it? And, we might add, maybe give some of the younger competitors a spanking along the way? Because if we race smart, instead of fast from the gun, it's entirely possible.

Always remembering that we are talking about long events – some stretching into days, not hours – a frequent question is whether you will let the race and the other athletes dictate how your race will be

conducted, or whether YOU will. If you are racing to be competitive, an ultra-endurance event is a dynamic thing, in which anything can happen, so you have to be adaptable. But in general, I would strongly advocate racing your own event, rather than letting others do that for you.

Some successful athletes have adopted a strategy that they will just give it their all from the get-go, and what happens, happens. If they can hold it together, they win. If they don't, they drop. Ultramarathoner Eric Clifton comes to mind in this category. But for most ultra-endurance *competitors*, I'd suggest that holding back some, so you have strength to take advantage of others' miscalculations and misfortunes, and have a strong finish, is a good idea.

For *participants*, a clear pacing strategy is more than important, it's essential to getting the best from your day, and being happy. I firmly believe that going out too hard, or giving up too much effort in a particular segment of the race causes sub-par performances or DNFs for many. For example, the Javelina 100 ultramarathon – a so-

called “easy” 100-mile footrace (if there is such a thing!) has a high DNF rate. A major reason is that the course suckers runners into going way too fast in the first 3-4 15-mile loops. After that it’s a death march – if they don’t DNF. In iron-distance triathlons, a significant number of competitors give up way more time by walking in the run segment than they ever saved by pushing too hard on the bike leg.

While it may seem obvious now, starting out an ultra-distance race conservatively, even *very* conservatively, is good advice for many. You can always go faster later. However, if you gave it all up early, you won’t have that choice. But it takes discipline, patience and confidence to do it. I know. I’ve been suckered into too fast a starting pace myself, so I speak from bitter experience.

Oh, and beware. You’re always rewarded for the bad behavior of going out too hard. You’ll feel really good as you pound away ahead of folk who are usually in front of you. Until they catch and pass you, that is.

This strategy translates to different things in different races. In an Ironman it may be the ability to run the whole 26.2 – if you do I guarantee that you will pass a lot of people and greatly advance yourself in the standings. In a pure running race, for sure there will be people who went out way too hard at the start that you can hammer if you have a strong finish. But always remember that when it comes to

racing and the search for PRs, patience pays.

Raisins. An inexpensive, and maybe better, endurance food choice.

Real food choices can be good ones as an alternative to the gels, pastes and other concoctions that really are flooding the ultra-endurance market these days. In their place they may even be better choices, and, perish the thought, substantially cheaper.

Those who have a Trader Joes store handy may have seen the bags of thirteen snack-size bags of Chilean raisins, which are what set me down this path, but you can buy raisins just about anywhere. I mention the Trader Joe product because the 35 gm. bags are perfect for packing on a run or ride. They pack flat, and by the way, if the bag bursts, it doesn’t leave you with an impossibly sticky mess, unlike gels.

And a gel is a good proxy. These little bags of raisins pack 110 calories and 28 grams of carbohydrates. Just like a lot of gel packs. But what else is in raisins that make them so special?

Raisins are, very roughly, half-and-half glucose and fructose with a bit of sucrose thrown in. That’s a great combination of a fast-acting and a slower-acting sugar. They also have a lot of potassium, by my calculation about 260mg per small bag. But there’s more to the story. Raisins are high on the antioxidant ORAC score (see later story). Only prunes

beat them, and raisins are way ahead of kale, spinach and brussel sprouts. As endurance and ultra-endurance athletes we subject ourselves to considerable oxidative stress, so this is worth thinking about. Additionally, I could not find a more highly rated base-producing food on the list of foods published by the Institute for Prevention and Nutrition in Germany. Endurance and Ultra-endurance athletes need all the help they can get in maintaining a healthy acid/base balance, particularly the Masters among us.

And to paraphrase U.S. Senator John Kerry: "Who amongst us does not love raisins?" Give 'em a try.

Training with power (cyclists)

There are many great books and articles about training with power meters as a means to optimize your cycling training so I'll keep it relatively short and give you the Masters Athletic perspective. Bluntly, if you are serious about your cycling and you are not training with a power meter, you are not serious about your cycling. I would sooner see you invest in a power meter before you buy a set of sexy race wheels, and I'll guarantee that you'll get more performance out of it.

A power meter is not just a tool to effective training. It also helps us as a pacing tool during races; see our lead article on pacing and patience.

Masters Athletic Performance provides coaching and training services to Masters athletes. We train for performance but always with a mind to athletic longevity.

We are the only coaching company devoted solely to working with Masters endurance and ultra-endurance athletes.

www.mastersathletic.com

Unlike heart rate, or other measures of work done, which may be influenced by many extraneous factors, power produced is what it is. You are either making the wattage (how power meters report power) or you are not – or you're making too many. And that's it. So by testing, as a coach, we can design workouts to exactly produce the desired training effect, and, through software like WKO+, monitor the

results to the minutest detail. In a race, given your training performance, we can set "not-to-exceed" wattage limits for each stage of a race.

But what to buy? If you are budget-limited, try an I-Bike, although I will say it's just a starting point. If you already own a higher-level Polar HRM then look at their system, although personally I think it's fiddly in terms of installation.

The Saris PowerTap is the most affordable serious solution. It is well-supported and reliable, once it's working. It does tie you to a wheel choice though, as it is built into the hub of your rear wheel. I favor buying a PT built into a tough but aero wheel. Richard Sawiris at wheelbuilder.com has done this for me and several of my coached athletes. Downsides: Saris's quality control is spotty, in my experience. Two out of three of my PowerTaps did not work properly out of the box. But, once they *are* working, they are

fine. (Maybe I have bad bike Karma. All my athletes' PowerTaps have been fine.)

Next up, the German Ergomo replaces your bottom bracket, so you can swap out wheels to your heart's content. You'll be out over a \$1,000, but if I were buying from scratch, this would be my choice today. If money is no object, buy an SRM crankset, the original and some say, best, power meter. You could however buy another bike, and a nice one too, for the money you would spend on a top-line SRM.

If you're not already training with power, e-mail me for referrals and suggestions.

Greens+ Wild Berry Burst.

In our last newsletter we included Greens+ in a meal or snack replacement shake recipe. Of all the so-called "green superfood" products around, we like Greens+ the best. We particularly like the derivative product, Greens Plus Wild Berry Burst.



This product, although definitely still green, has a pleasant fruity taste to it. It mixes up well in other drinks although it's great by itself in water.

Although we at Masters Athletic don't eat pre-prepared or packaged foods, not everyone is as lucky. We like the fact that one serving of Greens+ is the equivalent to five servings of fruits and vegetables. But mostly we love it for its ORAC score or antioxidant qualities.

ORAC is short for oxygen radical absorbance capacity. It's a comparative measure of how effective various foods are at scavenging free radicals. In a nutshell, Greens+ Wild Berry Burst tests out to have nearly nine times the ORAC capacity that our raisins do, and they rate pretty high by themselves.

If you train long and hard a lot, and particularly if your diet is not the best, then you should think about making Greens+ Wild Berry Burst part of your daily regimen. We buy ours at Vitacost.com, and have provided a link on our store page.

Lift o' the letter.

Upper body this edition. Actually, we're going to talk about two complimentary exercises which you can do at just about any gym: the straight-arm pushdown and the pullover.

Both these exercises really work the upper muscles in the back – the lats (Latissimus dorsi) – and as such will be of particular interest to swimmers and triathletes. But both these exercises work shoulder articulations through a decent range of motion.

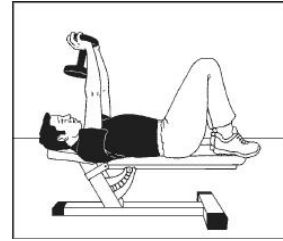
The key to both of these exercises is to keep your arms straight – these are not bent-armed triceps exercises, although they may look as if they have some similarity. Keeping your arms straight will really recruit the back muscles.



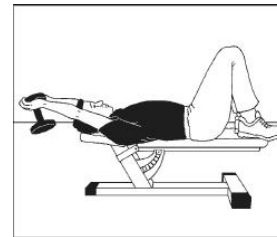
The straight-arm pushdown is a standing exercise using a high cable pulley. Use a straight bar that's wide enough to let you employ a shoulder-width, pronated (knuckles up) grip. Starting with the bar as high as you can, set the weight on the stack so that you can keep good form – that is, not too heavy.

So what is good form? Stand upright. Arms straight, and stay straight as you pull down. Don't lean forward to push the weight down. If you have to, the weight is too heavy. It helps if you stick your butt out a bit and bend the knees about twenty degrees. Start out with three sets of twelve repetitions.

A hugely complimentary exercise is the pullover. In this case you will be lying on your back on a bench. Same motion, lifting the weight from behind your head (arms parallel to



the floor is starting position) through ninety degrees so it stops above your chest. Arms straight again, focus on that, don't go too heavy. You will do best in this exercise if you use an EZ curl bar or a



dumbbell. Because the weight isn't as stabilized as in the cable pushdown, you will be working the small stabilizer muscles in your shoulder more. For added effect on functionality, use individual dumbbells for each arm. Again, a good start is three sets of twelve repetitions.

Supplementation in osteoporosis and osteopenia prevention.

Those you who are my long-time readers know that I have a goal to educate all Masters endurance and ultra-endurance athletes to the risks of lowered bone mineral density. That's for the men as well as the women. There's a lot we can do to prevent these problems, but is supplementation one of them?

Maybe. Research in post-menopausal women demonstrated that the use of potassium citrate reduced calcium passed from the body; an indicator that bone mass was being preserved. The researchers hypothesized that this bone-saving arose from the potassium citrate's buffering capabilities. Our friend Karl King at succeedscaps.com tells us that citrate is a particularly powerful buffer as it can absorb three hydrogen ions. Bicarbonates, in contrast, can absorb one.



We *don't* prescribe supplements at Masters Athletic, but if you chose to use a potassium supplement, and your physician has no objection, then potassium citrate might be something that you'd want to consider. Like Greens+, an inexpensive (<\$8) but quality source of potassium citrate is Vitacost.com.

Research notes

A combined team from Spain, Norway and Wisconsin has concluded that a training diet that includes a greater proportion of sub-threshold training significantly improved (28% greater reduction in running times) performance in *experienced* "distance" runners compared to those who had a greater proportion of what you and I would call tempo (70-90% HRmax)

training. High-intensity training (above tempo pace) was the same in both groups, only the proportions of low and tempo intensity training differed.

While in itself, the study speaks to the value of building a large endurance base, the conclusions that the researchers offered to account for the difference in training results is telling. They conclude that when higher proportions of tempo training are included in the mix at the expense of lower-intensity training, it may just be too hard on the athletes, and interferes with proper adaptation and responses to training.

Now let me tell you that their "endurance" athletes were 5K track and 10K X-country runners! If their observation is true for folk running at that distance, do you think it might hold true at longer ultra-distances?

The take homes are: The vast bulk of your training should be in Z1 and Z2. You do need *some* very intense training (Z5) but not too much. The body adapts quite quickly to intense training. Tempo work should be at the same *relative* volume as intense training.

This is great news for Masters athletes as we tend to train more in Z1 and Z2 anyway, but we do need some tempo and intense work to maintain strength and power – just not too much.

I've purposely avoided giving the optimal proportions of training from the study as the authors speak largely to percentages based on both

volume and intensity, which might mislead. But if you are interested in what these percentages are and how you can calculate them for yourselves, drop us an e-mail.

Badwater

We worked on the medical team at Badwater ultramarathon again this year. For us this is a great opportunity to give back and to add to our experience of working in extreme environments. Death Valley is our favorite place in the USA and the home of great ultra events. We rode the Death Valley century ride in March (and October) put on by Adventurecorps.com. A great event and well done. Check their site.

This year we had the distinct pleasure of seeing Lisa Bliss, the medical director of both the Badwater and Western States ultramarathons, finish as first female. Congratulations, Lisa.

Badwater is definitely a race for Masters athletes. If you check the race roster you'll see very high proportion of the over-40s. Ages are well-represented in the 50s and 60s too, and this year, Robin Smit, 70, finished well within the cutoffs as the oldest finisher and set a new record for the over-70 age group.

Lessons learned and reinforced this year? First if you do not know your sweat rate you will find it very difficult to manage your hydration state. At

Badwater there is ample time to weigh the runners and adjust fluids up or down as appropriate, although not all are successful in that endeavor. But in other races you may not be able to weigh yourself. So... best have a good idea what's going on with your sweat rates by monitoring fluid intake and body weight during training *before* race day.

If you know you will be racing in particularly hot or hot and humid conditions, best consider our lead article on pacing too. As you become hotter during the race, the body will shunt blood from the internal organs to the outer extremities to optimize cooling. With a lower blood flow, the internal organs just don't work as well. That

is why nausea and gastric distress may be more of a factor, but most specifically the kidneys will slow down and urine production may be minimal or non-existent. This is not a good thing in a race of any duration, but at

ultra-distance it's a real problem. You will not have the "luxury" Badwater runners do in being able to stake out and go off somewhere to cool down. All you can do is to set a pace that does not cause you to become overheated... which, sorry to say, means slower. Just remember, if all is well, you can always ratchet up the pace later, but if you overheat, you may not have the option later. (Please note: these

TRAINING SAFELY

Always train within your own capabilities and comfort zone. It is one thing to test yourself with a breakthrough workout. It's something else to push beyond your capabilities. If you ever feel out of your depth, stop the workout and tell your coach.

comments relate to pacing and maintaining cooling. If you suspect heat stroke, that is a life-threatening medical emergency which should be treated as such.)

High Altitude training HQ.

Check our website for details of our high-altitude training headquarters at Lake Tahoe CA. This is one of the only places in the US that you can swim (the demands of open water swimming at over 6,000 feet are an education!), bike and run at over



6,000 feet elevation. We accommodate up to eight athletes with training available for road or Xterra triathlon or heavy-duty ultramarathon. Less than two miles

to the Tahoe Rim trail with forest trails a quarter of a mile from the front door, ten minutes walk to a sandy, gently shelving swim beach, with a kayak rental store just up the street. Seventy-two bike-friendly miles around the lake or hit the hills leaving the lake. Mountain bike? You're spoiled. Mountain Bike Action magazine just wrote about the new mountain bike park at Northstar resort, which is minutes from our training headquarters. Tahoe is internationally known for its mountain biking. Our training HQ is pet friendly, too.

Next issue:

- Running form.
- Squats for maximum performance.
- What's new in wetsuits.

Train wisely, train safe.

Coach Woolfie