



Hey Sonni! Hey man!

I've been doing some thinking/reading, which is usually dangerous! Nearly every time I start out of T2 my heart rate feels "pegged". It's almost like I'm just aerobically red-lined and, as a result, can't keep decent pace until I reach the mid-point of the run. I see. That might not be too bad, but in the short course races I'm doing, that's a little too late to get a second wind.

This got me to thinking about the Wattage Intervals that you have me do. After pushing "big gear" at a low cadence (ie: what we term High-TPPS....."high torque-per-pedal-stroke") I seem to be able to run really fast immediately and do not start feeling aerobically spent (high HR, high respiratory rate) until later in the run segment.

Here are a couple of abstracts that you may have seen in the past:

<http://www.ncbi.nlm.nih.gov/pubmed/15849289>

<http://www.ncbi.nlm.nih.gov/pubmed/11880820>

They both seem to show that cycling with a lower cadence (maybe 20% lower than freely chosen), especially towards the end of the bike, yielded better run times or run time to fatigue. But here is the problem that I see w/ these 2 abstracts:

.....while they focus specifically on the 3 control-groups of varying cadence.....they measure the cycling "output" w/ a metric that's not really "output" at all.....1)---heart-rate and 2)---hr-relative to ventilation-threshold:

1)---"During the cycle-run sessions, subjects completed a 30 minute cycling bout (90% of LT)"

2)---"realized at an intensity corresponding to VT + 5%. During the cycling bouts of C-R sessions, subjects had to maintain one of the three pedaling cadences corresponding to the EOC (72.5 +/- 4.6 rpm), the freely chosen cadence (FCC; 81.2 +/- 7.2 rpm), and the theoretical mechanical optimal cadence (MOC, 90 rpm; Neptune and Hull, 1999)."

And as we've spoken about before, heart-rate is not "output".....but, rather a measure of the COST of what you're putting IN (ie: "input").

What we don't know, and they don't say, is when the EOC-72.5 rpm (low cadence) group dropped their cadence.....what happened to the wattage??

Just because they were kept at the same heart-rate (input)..... doesn't mean that their watts (output) were sustained.

In MY experience, if one tries to compare apples-to-apples and arrive at T2 at 72, 81, and 90 rpm's.....all while maintaining the EXACT SAME wattage for each trial.....you will run MOST successfully using a cycling-cadence that most closely mimics your run-cadence.

We can call this "neural-specificity".

So if my optimal run-cadence is 170-foot-strikes/minute.....this equates to entering T2 at 85rpm's.



And I've actually observed the big-gear (high-torque) masherwho typically has the strength to crush the bike leg.....enter T2 at 70rpm's. And guess what the net-effect of pre-setting this neurological 'metronome' is?.....140-foot-strikes/minute.

In a race (*or, in reality, even at the slowest of run-paces*) guess what 140foot-strikes/minute equate to.....OVER-STRIDING (ie: big-time heel-strike "braking").

So often does this happen, that I encourage the "masher" to not only come off the watts.....but actually RAISE their rpm's prior to T2.

Because what's the point of mashing into T2 to gain 20-30 seconds.....only to, as a result, lose 60-90 seconds in the opening 2 miles of the run?

***In my opinion, the other flaw w/ this study is that it's done w/ triathletes.....who typically have/use very low cadences and "torque-train" most of the time, anyway. To this end, I'd like to see what would happen if they took a control group of these triathletes and actually taught them how to pedal (*ya know, in circles like bike-racers*).....and THEN performed the trials. Think their heart-rate would be so "tapped" so close to their ventilatory-threshold at 90rpm's.....particularly after having done training such as, say, MMS-5.1 at 120-130rpm-sets??*

Any chance I should incorporate this technique into my racing? Maybe I should back off the cadence but keep up the wattage (more torque) towards the end of the bike leg? Or, is this just a bad idea altogether? *My opinion.....and realize I'm biased w/ a LOT of anecdotal experience having read wattage downloads (ie: real output) and coupling that w/ reviews the ensuing run-splits.....you want to strive for "neural pattern consistency" to optimize both the bike and run.*

But again, it's just my opinion. ☺

Coach Sonni