Coach-Athlete Q&A

A look at some coach-replies to common questions by topic.

Questions in **Black**…….Coach response in **RED.**

Had a great weekend. JD and I got to spend a whole bunch of time
>hanging out with Dave Scott, got our swim stokes looked at by him, and
asked tons of questions.
>
>Someone else mentioned Dr Phil, and Dave basically called him a quack among
>other things.....PRETTY STRONG SENTIMENT KNOWING THAT HE WAS MARK ALLEN'S COACH.....I DON'T THINK DAVE WOULD WANT TO BE REMINDED OF THE "SCORE" IN HEAD-TO-HEAD IM'S ON THAT ONE.

Subsequently that prompted a couple of coaching philosophy
>question for you -EXCELLENT.
>
>Given the problems inherent with coaching on-line and not really being able
>to conduct a standardized HR test on all clients, and that having already
>been tested an knowing my Maxhr is 183 and AT is 161 - So the MAF zones
make sense for me.
>
>Disregarding Phil's formula based HR zones which have some problems.
What's your rationale for using Dr Phil.
J.U.

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I NOTICED THAT YOU ATTACHED AN ARTICLE
ABOUT STANDARIZED HR ZONE DETERMINATIONS BELOW.

BUT I ALSO NOTICED THAT IT HAS TO DO W/ THE "220 MINUS ONE'S AGE" METHOD OF CALCULATING HR ZONES.....NOT MAF'S "180 FORMULA" THAT IS BASED ON THE RESPIRATORY QUOTIENT & VENTILATORY THRESHOLD (& HAS NOTHING AT ALL TO DO W/ MAX HR). KNOW THAT THESE ARE 2 VERY DIFFERENT METHODS IN CALCULATING HR ZONES.

I AGREE THAT THE "220" METHOD IS WRONG AS OFTEN AS IT'S RIGHT. AS A MATTER OF FACT.....I'LL GO ONE STEP FURTHER AND SAY THAT **any** METHOD BASED ON TAKING A % OF ONE'S "MAX-HR" IS OFF.....(i notice that you give your max-hr above).

Here's why.....ever heard someone say that their max-hr on the run is XXXX.....while they say that their max-hr on the bike is XXXXX? Baloney. NO-one has 2 different max-hr's! YOU have one maximum HR (Because you have **ONE** heart!!)

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Here is the problem.....some people are assuming that HR (in itself) is a measure of work output.
WRONG!!!

Heart-rate is a measure of the **AFFECT** that the work-output has on YOU at THAT GIVEN TIME. You measure the actual work in things like 'wattage' and 'pace-per-distance covered' .....HR simply gives you the reading of the '***COST***' of that work on your body.

So you don't have 2 different max-hr's.....you have 2 DIFFERENT ABILITIES TO **REACH** THAT MAXIMUM HR.....whether on the bike or run.....or whether is December or July. See the problem w/ basing %'s off of max-hr? Your ability to **REACH** your true max is constantly changing based on a whole number of different variables (like temperature, efficiency in the method you're trying to attain the max-hr, point in the season in which you're attempting to reach the max-hr, etc.....)

If you were a rower.....and we did a max-hr test on you so that we could base %'s off of it.....what would happen when we saw 173 (vs. your 183 above) as the max? Would we be accurate in basing the %'s off of 173? Of course not.

I coach a pro-cyclist who did a VO2-max test on an indoor ergometer (to measure wattage). He hit 188bpm as a gut-busting max-hr ON THE BIKE. Outdoors, in a massive field sprint that's wound up from 2k out, he's seen 194bpm ON THE SAME BIKE. In the max-hr formula theory.....which max do we use? They, both, were found in the same medium (the bike).

See my point?

When you accept that hr, in & of itself, is NOT the "end-all nor be-all" of intensity measuring AND REALIZE that the best possibility we can hope for is to use hr is as a 'feedback' measure used in conjunction w/ some other tangibles (like pace, perceived exertion, wattage, distance per-stroke, etc....).....THEN you see the value of using hr to measure one critical point for an athlete who will compete for 1hr+.

And that "point" is the point where we're limited by "energy delivery" concerns.....metabolic limitations. And that "point" occurs at your ventilation-threshold since THAT's what determines what %'s of fat-to-carb ratio you'll use. Maffetone has simply come up w/ his own 180-formula (NOT to be confused w/ the "220") based on testing fuel-consumption PER distance

traveled @ a given pace.....rather than basing the hr on blood-lactate accumulated @ a given pace. Now, I admit that the 180-formula has to be tweaked for certain athletes.....and that's exactly what we do. But this takes time and the viewing of some maf-assessment progressions as well as some more feedback from an athlete. But it's the best starting point we have in approaching training from an "economy-standpoint".

I noticed that you gave your A.T.(above) as a single-point.....161bpm. I .....and our Assessment Coach (Chris Eshbach.....PhD in exercise Physiology) .....don't view A.T. as a single point, but rather a range. That's why I give you ranges of hr-beats for your A.T. To those that would argue this point.....ask them "So if 161 is my single A.T., and I'm "aerobic" at all below that.....then I could complete an entire IM @ 160bpm.....right?" Ludicrous. Do NOT attempt that, btw.

I can guarantee that you'll be accumulating lactic acid @ hr's lower than 160bpm.....and worst, going through glycogen @ breakneck speed.

See what happened? We began to see something metabolic as the real "limiter".....and IT IS!! That's why a ventilatory threshold works far better. It allows hr-measuring to do what it does best.....act as a metabolic-intensity guage. Another example: Let's go to a weight room sometime and have you super-set on the squat-rack at an ez 110bpm.....that wouldn't last very long.....yet you could ride @ 110 all day long.

Why is this? It's because you fatigue (for a particular activity) @ different rates.....even though cardiac output is the exact same. So where (hr-wise) someone produces lactic acid is a VERY moving target.

I don't agree w/ ALL that Phil Maffetone promotes. I DO think there is a time to exceed maf in speed and interval sessions.....but I DO agree that it's far over-done by most endurance athletes. Arthur Lydiard same the same thing when he was questioned in the 50's about why he trained Peter Snell (an 800m runner.....who raced for less than 2minutes) on weeks of 100+ miles.....only to drop volume and add intensity in the final run-in to target competitions. {BTW.....Peter Snell won 2 Gold medals and set world records that stood for quite a while.....& the old genius, Arthur Lydiard, is the father of the same periodization that most collegiate, NCAA Div-1 swim and distance running programs follow.}

If you ever want to see the highest endorsement that Maf has ever got.....you have to know what you're looking for & don't look at

triathletes. I stumbled across an article by a coach in OutSide Magazine (of all places) about 2 years ago. It was by a coach who talked about limiting hr for metabolic purposes.....and measuring intensity in other ways and merely using hr as a guage from which to compare with. {Like trying to increase watts or pace at the LOWEST hr for economy.}

Having read Maf's books already, I thought....."Wow, Phil wrote a good article." But it wasn't by Phil. It was done by Chris Carmichael.....and it was "Maf" through and through.

So look @ the top endurance athlete on the planet today.....our boy Lance Armstrong. Now, Chris Carmichael can't call it "Maf" (he'd get in alot of 'rights' trouble).....but i've read several months of his training program for Lance (it's available online) and how he prepares the 'metabolic-training zones' (using VERY similar maf-like hr #'s).....and distinguishes these sessions from one's where the focus is muscular or to push LT back (in which he uses REAL-work measurement.....wattage). The similarities are pretty convincing.

Last week, I sat beside Kristin Johnston (who is coached by Dave Scott) @ an IM panel discussion in Charlotte. She had her sheet w/ "65-70%.....75 to 85%, etc...." & I think that it can (very generally) work for most folks.....but my opinion is that it relies far too much on these %'s in conveying intensity rather than recognizing that hr is only like the RPM-meter on your car. It won't tell you how fast your car's going (the speedometer does that).....It WILL tell you only how hard the engine is working to do it.

Hope this helps. Sorry about the length of the response.

Sonni