How To Properly Train With A Heart Rate Monitor

*Follow these tips and perform these workouts to get the most out of your training.*

In the early 1980s, while participating in varied running events, I purchased a heart rate monitor. Like many other athletes, I did so because it seemed like the vogue thing to do. I would monitor my heart rate while running, and I learned a few things. For example, I learned that if I kept my heart rate above 170 bpm for a 10-mile run, I would pay dearly the next day with quite a bit of soreness. But quite frankly, that’s about all I learned.

Had I known then what I know now, I would not have suffered nearly as much and I would have turned in far more rewarding marathon times.

Still today, many runners who own monitors are perplexed by the data they receive and by the training recommendations that accompany the monitors they purchase.

For nearly two decades I have made a living by writing programs for endurance athletes governed almost exclusively by heart rate response. Through clinical evaluations we determine anaerobic threshold and build our training accordingly. From all these years of study I have arrived at some conclusions in respect to heart rate use as a principle guide to training. The goal was to simplify the concepts of zone training; the results have shown a much higher rate of program compliance and better race times.

To begin with, I build programs from the middle out as apposed to from the top down. I am referring to heart rate. Many programs are built off of regression from maximum heart rate. The “middle” I am referring to is anaerobic threshold (AT). In lay terms, this is the metabolic crossroad that indicates a shift in the dominant energy system you are drawing from as you run. Training below threshold involves appreciably more fat use for energy while supra-threshold training relies more on sugar.

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The best way to determine your AT heart rate is through a VO2 max. But this requires special equipment and professional assistance. As an alternative, there is an easy way to self-determine your aerobic base (AB) heart rate (see below), which is by subtracting your age from 180. This number is going to seem low, but the important point is that it provides a standard to operate from.

The AT-TT trials described later in this article will improve relative to this number and as this occurs, you can consider increasing your target heart rate by 5 bpm increments.

All successful training programs for runners contain the following essential ingredients. They may be termed differently, but at the end of the day if you leave one of these elements out, your program will be incomplete.

***Base Training***

Base training, or what I refer to in icon speak as (AB), is short for “aerobic base development.” This is work that is accomplished for long durations below anaerobic threshold. The payment for this work is improvements in endurance. It is an age-old practice. Typical workouts last between 60 and 180 minutes.

***Speed Work***

Speed work, or what I refer to as MSD, or “motor skill development.” The latter term to me is more appropriate in that sustainable speed requires enhanced economy of movement that can only be achieved by training at high rates of leg turn over.

Whatever it’s called, many runners don’t participate in as much of this sort of training as they should. The greatest distinction between my approach verses others is that heart rate limits dictate the top end and recovery of each set. Generally, peak velocity occurs around 90 percent of max heart rate; once achieved you would hold this pace for no more than 15 seconds and, in most cases, recover to 120 bpm regardless how long it takes. Typical workouts last no more than 45 minutes.

***Tempo Runs***

Tempo runs, or what I refer to as LT runs or “lactate tolerance training.” A tempo run is generally conducted at a pace just above threshold and in some cases can weave above and below this mark. Lactate is produced in the blood stream and surges precipitously as intensity increases, which results in the pooling of lactic acid in the working muscles. While the muscles are exposed to high rates of lactic acid the result is that the innervations of the muscles are disrupted and contractions begin to falter.

Purposely exposing the muscles to this conflict teaches them to effectively rid the muscular regions of these toxins and relocate the lactate to less active parts of the body, thus creating a tolerance. Nearing the finish line under the gun requires that the body is capable of pressing on under these circumstances, which is why this type of training is important. Typical workout time for these workouts is 60 to 120 minutes.

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***Active Recovery***

Last but not least is active recovery, which is an effort that typically follows a day of intense work. Thirty minutes of active recovery assists in mechanizing waste that can accumulate from micro trauma from prior workouts. Studies show that active recovery can get you back on the road faster than complete rest in most cases.

These are the ingredients; the key to successful training lies is in taking advantage of the relations these varied stimuli have to one another in order to be progressive.

My training models are all built around time, not mileage. Mileage is the reward for time spent under the appropriate training influences. As your endurance and pace improve your mileage will increase relative to the time committed.

I recommend beginning with the amount of time you are able to commit to your training per week relative to your ability. After determining your “AT” (anaerobic threshold), perform an “AT-TT” (anaerobic threshold time trial). First warm up, preferably at a track where the terrain and environment are constant. Run one mile at or close to your threshold heart rate without going over. Document the time it takes to cover this distance and use it as a reference for future comparisons.

All that’s left is to decide the amount of time to commit to the work based on periodized percentages.

***Phase One – 80% AB/20% MSD (preparatory)***

Our goal is to enhance the aerobic capacity and create general skeletal muscular adaptations. The increase in mileage can begin to take its toll on the feet, knees and associated muscles, tendons and ligaments along the kinetic chain. This is a critical adaptive process and if it is rushed, you risk injury.

***Phase Two – 50% AB/30% MSD/LT 20%***

After you have adequately established a general tolerance to the weekly training, your body will be more receptive to increases in intensity. You may note that even though the actual percentage of AB training is less, the total training volume is still progressive and continues to increase over the coming weeks. The dominant influence is still aerobic base training.

***Phase Three – 50% AB/20% MSD/LT 30%***

Little has changed in the arrangement of work in this phase with the exception of a minor shift in the ratio of MSD vs. LT training. This shift helps to keep the body in flux and toughens your resolve under pressure. During phases two and three, the volume tends to remain static or even regresses. These static/regression phases limit the amount of collective stress and prepare you for the next shift.

***Phase Four – 70% AB/30% MSD***

The last phase of the training cycle brings the intensity down and brings the volume up. This is where we begin to really notice the improvements in our resistance to fatigue. Because we have collectively kept the base training stimulus intact, all of the wonderful adaptations in aerobic functionality begin to show. Your long training days are now beginning to tell the tale.

What I have not covered here is the progression of time in training over the entire training program. I recommend an average of 10 percent increase in time commitment per week leading up to the heaviest training week before beginning the taper.

Read more at http://running.competitor.com/2014/07/training/the-right-way-to-train-with-a-heart-rate-monitor\_3156#oDg0RDUw8RX6rhEj.99