

Heart Rate Monitors and Triathlon Training

There are some very sophisticated heart rate monitors on the market these days, ranging from the computer downloadable, multi buttoned types, or the plain old read out & nothing else job - which is what we use.

Now you might say I'm a cheapskate but let's face it, you don't need a nice graph on a computer screen to tell you what you should already know. But hey, if you've got the extra \$1000, then go for it!

No matter what kind of monitor you've got, you've got to know how to use it effectively. I'm not going to go into every minute detail of using the heart rate monitor as it isn't the only way of monitoring your progress and in a perfect world the best way to go would probably be to use a heart rate monitor and a lactate tester, as heart rate at times can be misleading. But used with common sense, the monitor can be a very valuable training tool.

Let's use long course to Ironman triathlon for instance. These races are predominantly raced at aerobic heart rates, which will burn a greater percentage of fat. Swimming is the exception, which is actually done at substantially higher rates i.e. at or slightly above anaerobic threshold.

When we think about how much time to spend in each heart rate training zone we should look at the type of race we are training for - long distance to Ironman triathlon in this case. The aerobic system must be built up and then trained for this type of racing. The volume of training in each heart rate zone should look something like this:

- 70-75% of mileage at low to moderate intensity, training below aerobic threshold
- 20-25% at aerobic maximum to low anaerobic threshold, long intervals, Ironman triathlon race pace training bricks and the like.
- 5-10% at high intensity, hard intervals, speed work at or slightly above anaerobic threshold.

HEART RATE VARIABLES

It is important to keep a few things in mind with regard to doing sessions using heart rate only. Thresholds can change from day to day, depending on how tired/stressed etc you are. Sometimes heart rates that you achieve during threshold sessions are easy to achieve one day and difficult the next. This does depend on how fresh you are and this is where a little common sense comes into play.

There is another training tool that should be used with the monitor and that is 'feeling'. You should always monitor your feeling during sessions. If you're sitting on the normal rate you use and you're suffering, listen to your body and back off a bit. You should be able to get to a point in training where you can feel your threshold zone kicking in. Use your monitor and try to learn the feeling of being in these zones. The human body is a great instrument, far better than a heart rate monitor. Be honest with yourself and it can give you all the information and feedback you need, but only if you open your mind and give it a chance.

Environment has a big effect on threshold. Wind, heat and different surfaces can affect heart rate and this has been proven with lactate testers. Lactate levels taken on a grass surface can be substantially higher than on even flat surfaces. Also weather conditions and traffic have an effect on lactates as well as the athletes' state of mind. Stress is an anaerobic condition and has a big effect on a person's ability to train effectively. Coaches should always take into consideration a person's stress levels when determining the intensity levels of an athlete's program.

HEART RATE ZONES

Each training zone has a corresponding heart rate range. The best way to find out what these zones are is to get a V02 max test (treadmill etc). Many sports centres and universities do these tests and it usually costs anywhere from \$120 -\$190.

It's worth doing. There are other mathematical formulas, which involve subtracting age from a certain number etc., but these are variable and not very accurate so it's not advisable.

To give an example of how to use your zones lets assume you've done your test and the heart rates are this:

- Aerobic threshold- 154bpm
- Anaerobic threshold -173bpm
- Maximum heart rate -182bpm

For long distance and Ironman triathlon training you will want to stimulate the zone that is going to burn fat as the major fuel source, mostly below 154bpm. As you move further up the heart rate scale more carbohydrate is burnt for fuel - a source that generally has a maximum life of two hours. Thus it makes sense that you do the bulk of volume in the lower heart rate zones.

Here is a rough example of the heart rate zones for heart rate monitoring using the above test results:

For running ...

- Recovery- <127bpm,
- Lower aerobic- 133-143bpm, - long runs all mileage sessions.
- Upper aerobic - 145-152bpm, - long intervals slightly below long course race pace.
- Tempo/ AT- 159-173bpm, - speed sessions at or above race pace.

You do need to take into account when working out zones for cycling that the heart rates are around 8-10bpm less than running and the heart rates for swimming are around 15bpm less than running.

Pay attention to your speed at these zones. It is worthwhile doing a test of some sort from time to time to test your aerobic efficiency. A 3-5km on a track at maximum aerobic heart rate (i.e. 154bpm the whole way) after a solid warm up. Take overall time and see how your speed increases over time at that heart rate with the improved aerobic fitness. This is what you should be looking for to improve long course and Ironman triathlon times. It is an effective measurement for short course specialists too.

SUMMARY

Get tested - aerobic maximum, anaerobic threshold and maximum heart rate. Work the zones that are going to improve aerobic fitness- low aerobic to low (AT). Make a mental note of how those zones feel in training as this will also help to make you a better racer. Don't live by heart rate alone & listen to your body as well, use them in tandem and you'll go fast.

This article is brought to you courtesy of Training Smart Online – The Experts in Training Program Design. We specialize in triathlon coaching – all distances/all ability levels. Contact us now!



Copyright © 2005, Training Smart Online.