



VO2 Max

The volume of oxygen you can consume while exercising at your maximum capacity can measure fitness. VO2max is the maximum amount of oxygen in millilitres, one can use in one minute per kilogram of body weight. Those who are fit have higher VO2max values and can exercise more intensely than those who are not as well conditioned.

Heart Rate is the key to improving your VO2 max.

Bang! The race gun blasts and you think, “Can I really run an 8 minute mile for 6.2 miles?” Traditionally, athletes have used time, pace, or speed as the sole units of measurement to indicate their accomplishment in athletic events. Runners discuss pace; cyclists boast speed; and every competitor remembers their finishing time. Units of measurement, like speed and pace, help us evaluate our performance and plan our training to reach the next goal. But is there a better method that provides the primary feedback that can help us reach our goals, both on race day and in training? As a coach and athlete, I believe the answer is “Yes.”

I believe athletes are best informed with multiple types of feedback including heart rate, speed, pace, power, altitude, etc. However, I value heart rate as the athlete’s primary data. A heart rate monitor offers continuous and evaluative information. Athletes can quickly make sense of heart rate.

The advent of technology in our world of training increased the types of feedback available to the recreational athlete and the elite athlete. One of the best forms of immediate and evaluative feedback is heart rate. Heart rate is easily attainable; affordable; readily available, continuous, and, most importantly, instantaneous. Some coaches even use heart rate data to extrapolate power. Heart rate data is your physiological data from your heart. Heart rate data can be collected during most activities, both indoor and outdoor.

So why is heart rate a better primary feedback guide than pace? Let’s analyze pace. Pace can create a competitive pressure, either within you or between athletes. There is a focus to keep up regardless of what your body may be telling you. Pace does not reflect immediate physiological response to workload. Individuals vary in response to workload. For example, if you use pace as the measurement of workload, you may feel very comfortable running an 8 minute mile, but another athlete labours when running a mile in 8 minutes. Pace can narrow the athlete’s focus. When the athlete cannot meet the expectation of pace, he can lose the mental focus of accomplishing the bigger goal of completing the event healthily. An athlete using pace as primary feedback may create unrealistic expectations. Setting pace can be difficult. How will you consider the environmental factors, terrain, traffic, equipment? Have you considered personal issues such as sleep, nutrition, hydration, anxiety? Most importantly, do you have the ability to perform at your selected pace given all the conditions? What guidelines do you use to modify pace? How specific are your guidelines? Heart rate gives you flexibility and has specific



guidelines. You can modify your heart rate quickly and incrementally, observe the immediate effect, and evaluate what you need to do while you are still performing the event.

Do I believe that pace is important? Absolutely. I evaluate pace as part of the complete data portfolio. Here are a few basic “Rate/Pace” guidelines to use in your next three to six month training plan: When heart rate stays the same or decreases and your pace is staying the same or increasing, you are getting fitter. Raise your heart rate by 3-5 beats per minute, and evaluate pace. You will be faster. On environmentally challenging days with high winds, rain or extreme heat, stick to heart rate as your guide. Limit an increase in heart rate to 5-8 beats per minute from your selected training heart rate. You will complete the event safely and stay mentally motivated. Pace is a small part of your true performance.

The longer the distance, the more conservative the heart rate. Select a steady-state heart rate, maintain this heart rate and observe your pace. Depending on the distance for completion, if the heart rate begins to increase and the pace begins to slow, decrease the heart rate. Your pace may slow but you will complete the event. If your heart rate begins to decrease and the pace stays the same, increase the heart rate in the last stage, pace will increase, and you will probably pass a few of those who passed you in the early stages of the event.

Observe, record and evaluate heart rate and pace often. Look for the trends in the data.

Bang! The race gun blasts and you automatically know “I can run this race at a heart rate of 155 beats per minute (155 is an example — you must select you own heart rate) for 6.2 miles! My heart rate monitor is my guide. I have trained using heart rate and I know exactly the heart rate zone I will use in this race. My heart rate monitor will help me stay mentally focused. I am confident that I will succeed. My pace will be a reflection of my best training.”

Remember, pace is the result of good planning with heart rate, not vice versa.

RUN!

Benny