



Pictured on treadmill: Sebastien Alary

The Anaerobic Threshold Test

How do you know if you're training at your peak performance level? You may wear a heart rate monitor, take a best guess at your maximum heart rate, and train within your heart rate training zones. However, to get the most out of your workouts and accelerate to your peak performance level, you need more than a guesstimate. The Anaerobic Threshold Test is a scientific, state-of-the-art evaluation that will define your individual metabolic profile and get you training at your best possible level.

Sebastien Alary, personal trainer and endurance athlete, had been training at what he thought was his best. As a fitness expert, Seby was always well-aware of his abilities and how to train to achieve his best performance. About six months ago, he decided to put the Anaerobic Threshold Test to the challenge. Would it give him any additional information that he wasn't already aware of? After all, he'd been a successful endurance athlete and trail runner for many years.

"Before this test, I was training like the majority of weekend warriors and athletes by gauging my maximum according to how my body was feeling," says Seby. "I was training randomly. With the data from the Anaerobic Threshold Test, I train with more quality versus quantity. If you don't have two hours, five days a week, to allocate to training, it's the way to go. I'm working so close to my lactate threshold that I know exactly where I'm at and have a better quality workout in less time. Now instead of working out for an hour, I can work out for 30 minutes and get better results."

How does it work? The test pinpoints when lactate begins to build up in the blood stream and exercise becomes anaerobic. This breaking point, or threshold, is correlated to your heart rate. Research shows that to improve your lactate threshold you need to do a significant portion of your training at or above this threshold. Also, your lactate threshold tells you the exercise intensity that you can sustain for a long period of time (like a marathon). This can help you to determine the appropriate pace for training and races.

During the test, the level of lactate concentrated in your blood stream is evaluated. At first, your body production and removal of lactate is about equal. As your intensity increases, you start to produce more lactate than your body can remove. This is known as your lactate threshold and can be correlated to

your heart rate. Once you have the data from the Anaerobic Threshold test, you can accurately design your workout to train at various zones of intensity and be assured that you're being most effective. The guesswork is taken out, and you know when to increase your intensity or ease off, based on when you're approaching your lactate threshold.

"The perception of what is your true maximum varies for many people," says Seby. "I now know that my absolute maximum heart rate is 185 and my lactate threshold is 175. So at 10 beats close to my absolute maximum, I can still perform. This allows me to confidently sustain training at that level of intensity. Before the test, I had a rough idea, but this is specific. Now when I trail run, I can be at 175 and feel perfectly good. I don't have any worries about going over the edge and breaking down. So it's enabled me to improve tremendously in my time. It's a much more strategic approach to training and events. For example, my endurance threshold is 165. I know that I can sustain this level for 10-15 hours without accumulating large amounts of lactate. I'm at the perfect endurance point. For someone running in a marathon or going on a long bike ride, this is critical information. It provides a scientifically based and individualized strategy on how to manage your effort during the event and achieve your peak performance."

TIPS FROM SEBY

- Take the test when you're already into your training season so you get accurate data on where you should be working out. If you take it too early in the season, your results may not be reflective of your true ability.
- The mental stress, anticipation, and excitement of taking any test can have an effect on your heart rate and your performance. So you may want to go through a 'test run' with your trainer so you know what to expect before actually taking the test and are mentally prepared.