



## **RUNNING - WHAT ARE YOUR STRENGTHS AND WEAKNESSES?**

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Years ago at the AIS I was running with a female triathlete who was training for the Ironman. When I ended a long easy run on the track and we started talking about her previous athletic background. As a kid she'd been a 400 metre runner. She hadn't run a 400 metre rep in years. As we talked she wondered out loud what she could run these days for 400. A few seconds later she was off and running - 58 seconds later she was finished. As a straight marathoner her best was around 3.10, but for a 400 as a 32 year old she could still punch out a sub 60 second 400 - untrained. It got me thinking about the old adage "horses for courses".

Success in some events comes more easily than in others. In fact, few runners have the same potential to be outstanding at all distances. Even some of the best runners in Australia who have clocked world-class performances from 5km to the marathon have never really been at the top of the tree on a world basis over all distances. Some people have speed, while others are natural-born longer distance runners. In the end, your physiology, temperament, and priorities will determine your ideal racing distance. The physiology you're born with determines how well you'll perform your first time out, and how much improvement you'll be able to make in training. The good news is that with the appropriate training strategy, you can make the most of whatever you were born with. So how do you know whether you're best suited to running 1500 or 42.2km? You could go through a human performance lab and have your VO<sub>2</sub>max and anaerobic threshold assessed, or you could look at your training habits and what you enjoy doing and which distances you excel at when you race as an indicator.

Your predisposition is going to be determined by your physiology, psychological make up and training habits. You'll find that you fall into one of three categories.

You'll either have "speed" and will excel over 5-10km, you'll have speed-endurance so you should be targeting the half marathon or you'll be a "grinder" - you'll lack speed but you'll be able to go all day - target the marathon.

Understanding your physiology. Each of the following factors will affect your running performance over all distances.

1. Your anaerobic threshold pace (AT2, lactate threshold, OBLA, etc.) is the fastest pace that you can sustain for an extended period (roughly 30 minutes or more) before the build-up of lactic acid forces you to slow down. With appropriate training you can raise your anaerobic threshold and hence maintain a faster pace for longer - which is the basis of all endurance training.

2. Are you predominately fast or slow twitch in your muscle make up. Most runners are born with a modest mix of both. You can't change the muscle composition you inherit, but you can train your muscles for speed or to sustain steady paces over long distances. There is an old saying that states "Sprinters are born and distance runners are made". In other words, regardless of how much sprint training you do, if you don't have the necessary mix of fast twitch fibres you'll never be a world class sprinter. On the other hand, trained properly fast twitch fibres can take on the characteristics more similar to those of slow twitch endurance fibres.

3. VO<sub>2</sub>max, maximal oxygen uptake. This is the goal standard of endurance performance and prediction, it accounts for about 75% of your potential as an endurance athlete. It refers to the maximum amount of oxygen that can be consumed per minute while exercising. Runners with a naturally high VO<sub>2</sub>max often find it easier to run faster because their hearts can deliver more oxygen to their muscles. To a large extent what you are born with you're stuck with. So if you've only got a modest VO<sub>2</sub>max to start with don't expect to set the world on fire as a distance runner.

4. The "cost" (or economy) of running. This measures the amount of oxygen you need to use in order to sustain a certain speed as a percentage of your VO<sub>2</sub>max. Efficient runners use lower percentages of their maximal capacity to maintain high running speeds. Energy cost is determined by such factors as body weight and running gait. Therefore someone who is overweight and has a sloppy running gait will use a greater percentage of their capacity to hold a certain pace than an athlete who is lean and has a easy, flowing running style. As you run more you'll get leaner and your movement patterns will improve, as such you develop a better running economy. Which way should you go? What should be your focus? This is a relatively easy question to answer.

Examine your own training and racing habits. Where have you had the most relative success in a field of other runners and what gives you the most enjoyment? These are pretty fair indicators of where you should focus your energies.

Answer the following questions: 1) How many hours a week do you devote to training?

A. 2 to 3 B. 4 to 5 C. 6 or more 2) Which of the following is your idea of a perfect training run?

A. Hammering flat out and feeling the power kicking into a higher gear brings. B. Being on the "edge" of your abilities - any harder you know you'll blow, backing off you know you could go harder. C.

Getting into a meditative rhythm and letting absorbed in the moment as you cruise along for an hour and a half or more absorbed in your own thoughts. 3) If you had to choose to miss a training session which would it be?

A. Longer easier runs. B. Tempo sessions (i.e. Sustained race pace efforts). C. High intensity interval repeat sessions. 4) When you're out on a group run others know you to:

A. Finish off strongly - regardless of the speed of the long run. B. You can hang in there, regardless of how much the pace is being forced during the session. C. You're the one that is coming on strong at the end of the session regardless of how long or how fast the group has been pushing the pace. )

When you get injured it is usually as a consequence of: A. Over-doing it which leads to an overuse injury. B. You pull or strain muscles and/or tendons during your quality sessions. C. You've had no major injuries. 6) What are your thoughts when it comes to spending money on racing? A. You race a lot and it is tough to justify high entry fees for all the races you enter. B. You're happy to spend your hard earned dollars to race as long as there isn't a lot of other costs involved with doing the race. C. For a few big events each year, it's not a big deal to splurge on race entry and associated costs.

7) When you're racing what matters most?

A. Convenience. B. Getting a decent workout-and a good test-without a lot of additional hassle (e.g. Travel). C. Racing should feel like a big deal, it is something you work towards over a period of time. The race is the reward for all the hard preparation work.

8) Relative to the rest of the field where have you had your best performances?

A. 5-10km B. Half-marathon C. Marathon Rank yourself with the following guidelines and tally your score. 1. A=2 B=4 C=6 2. A=1 B=2 C=3 3. A=1 B=2 C=3 4. A=1 B=2 C=0 5. A=1 B=2 C=0 6. A=2 B=4 C=6 7. A=2 B=4 C=6 8. A=2 B=4 C=6

Your tally should provide you with some useful feedback as to where your running strengths and weaknesses lie and as such a guide as to where to invest your effort.

11 to 18 points: **Focus on speed.** You may not have focussed on 5-10km races but you appear to pick up your speed easily. It is easy to find a local 5 or 10km race most weekends and you can do this regularly without compromising other aspects of your life.

19 to 26 points: **Speed-endurance is your go.** Whilst everyone around is taking about running the marathon, you don't need to do that to get a similar sort of buzz but with much less time cost. Run a half marathon! Half marathons are becoming increasingly more popular, you can back up from them more quickly than a full marathon.

27 to 35 points: **Go the distance.** You enjoy the solitude of your training. Some people hate the thought of spending a few hours training - you look forward to it. You've probably been spat off the back during the 5-10km races you've entered but have been coming home strong over the closing stages of half marathons - the marathon is your go.

Work to your strengths.

**If you're built for speed:**

Build VO2max, fire your Type II/fast-twitch muscles and hone your running economy. Work out with speed, lots of intervals with plenty of rest and recovery. Work up close to maximum heart rates regularly hence forcing your heart to move as much oxygen as it can to the muscles. This will (a) increase your VO2max, (b) innervate your Type II/fast twitch muscle fibres and (c) improve your running economy at speed.

**Speed-endurance is your go:**

You need to raise your anaerobic threshold.

You need to run hard, but not so hard that you can't sustain the pace. You need to do intense sessions that last from 20-45 minutes to build your ability to sustain the speed and build your mental stamina that is required for being "uncomfortable" for extended periods of time. "Tempo" work is important to you.

**Let's go long:** You need to be as economical as possible.

Training volume is your key. The more you run at a relatively easy/comfortable pace the more economical your form will become, and you'll feel stronger on your feet for longer stretches of time. You'll also build your body's ability to use fat as a fuel source "sparring" muscle glycogen and hence improving your ability to maintain your speed over longer and longer periods of time. You do need to incorporate some "quality" sessions into your training program. Your key session is your weekly long, easy aerobic run.

So while the above isn't a sure fire 100% accurate methodology of helping you focus in on where you should be making your biggest efforts, it is certainly a worthwhile guide. The vast majority of people involved in triathlon aren't full time professional athletes, the key is to get the biggest bang for your training buck - focussing on your strengths and discarding your weaknesses makes sound sense for the time poor!