

## **Fitness Testing for AR, How & Why?**

### **Defining Fitness Testing**

When most people think of fitness testing they think of blood pressure checks and health screening, as an adventure racer this may seem a little pointless, after all, if you train on a daily basis it's much less likely that you are going to suffer from health problems. Health screening should not be discouraged and for anyone who is to start an exercise programme I would always encourage you to visit your GP in advance and get the 'all clear'. However, in this article we will focus on specific fitness testing methods which will allow you to evaluate your performances in each of the AR disciplines.

### **Why should I complete performance tests?**

1. Establish a current benchmark to gauge future progression
2. Identify strengths and weaknesses with regards to different disciplines
3. Give an accurate estimation of current level in comparison to others

If you were to complete a regular test for each AR discipline, this could be used to gauge your progress throughout the year and also to look back and compare your current performance level with previous years. The results stored in a diary would answer questions such as "am I performing at a higher level compare to this time last year?" or "How much have I lost due to the injury which prevented me running for 2 months."

By testing across all disciplines you are able to identify those at which you are particularly strong and those which need development. To some extent you will already know this, but where do you stand with regards to elite athletes or your team mates. By comparing test scores you will be able to better understand your level of performance in relation to others.

Many athletes claim that they do not need to test themselves as their race performances tell them everything they need to know. Whilst race results are a great indicator of current performance level, it is not the most accurate way to monitor progress as there are too many variables which may alter the race result. If you finish higher on the leader board in 2007 or record your fastest time ever, questions to ask include:

- Was the weather better?
- Was the competition better or worse?
- Was the course different and better suited to me?
- Were the disciplines and time length better suited?
- Did I pace myself better?
- Did I navigate better?
- Did I fuel myself better?

It is clear that there are many things which can affect your performance and these 'variables' cloud the answer we are seeking – 'have I improved my performance in each of the AR disciplines?'

## **Establishing Accurate Performance Testing**

### **Reliable**

The first step is to remove as many variables as possible to ensure that the test is reliable. If you run a set distance outside and record your time taken this may be influenced by rain, wind or sunshine. Try to remove as many of these influences as possible.

### **Repeatable**

The second step is to ensure that the test is repeatable. If you choose to time yourself over a set course you must ensure that you accurately record the course and repeat in the same manner. If you carry out a cycling test, you must ensure that you always use the same bike!

### **Recordable**

What are you actually measuring and why? Are you recording your heart rate, the time taken to complete the test or simply recording how you felt during the test? All are suitable methods for future comparison.

## **Sample Tests for AR Disciplines**

### **Running**

To record your peak running fitness complete a ramp test on a treadmill. Start at a comfortable speed and increase the incline by 1% every minute until you are forced to step off. Record the total time on the treadmill and as an addition you could record heart rate at each 1 minute interval and at the end of the test. This test gives a good estimation of VO<sub>2</sub> max when compared with others.

Whilst the above test is a great way to measure peak running fitness, AR is very much about economy of effort due to the long and slow nature of the sport. In addition to the above test set a route of 2-3 hours which you can walk or run and carrying the same kit every time, record time taken (include split times at specific points), heart rate average and 'perceived effort' (simply write in your diary how you felt during and after the test). As this test is outdoors you should note the weather conditions which will be a significant variable acting on test results.

## **Cycling**

In a similar manner to running you can monitor peak cycling fitness on an exercise bike by starting on the lowest setting and pedalling at 90-95 revolutions per minute (RPM). Every minute increase the level / resistance and continue to do so until you cannot sustain 90-95 RPM. Record total time, heart rate at each 1 minute interval and heart rate upon completion of the test.

For the economy test, plan a cycling route which lasts 2-3 hours and record total time, split times, heart rate average and perceived effort. Due to the test being outdoors you should also record weather conditions.

### **Analysing the results**

The peak fitness tests are influenced by VO<sub>2</sub> max, which is the maximum amount of oxygen you can absorb and utilise to generate energy. Many elite adventure racers will have a high VO<sub>2</sub> max but in general economy of effort is far more important. Adventure racing requires a consistent speed to be maintained for long time periods as opposed to high intensity exercise for short periods. If you score high on the peak test compared with your team mates and yet you struggle to keep up on day 2, economy and fuelling are your priorities.

The economy tests use heart rate, time and 'perceived effort' to gauge your overall endurance. As you become more economical you will cover the distance in a shorter time, with lower heart rate and it will 'feel' easier. By analysing the split times you can also gain important feedback, if you become slower in the final hour it suggest that your economy requires development or your pacing strategy needs attention!

### **Before you start testing**

- If you are planning to do any testing, in particular the maximal test, ensure that you are injury & illness free, if in doubt visit the GP.
- For any testing you should be rested, train light for the days prior to ensure an accurate reflection of your current level.
- For the above tests (in particular the outdoor tests) you should not include navigation as this is a huge variable which will affect the outcome of the test. Use the same routes so the test is repeatable and test only your fitness level.
- Testing navigation is possible but difficult due to the repeatability factor. You cannot repeat the same course a second time as you will have prior knowledge and this will assist you greatly. To test for navigation improvements you should simply reflect following your events and note errors made, comparing with previous events.

There is a wealth of information relating to fitness testing available on the web and several companies offer laboratory based fitness testing for endurance athletes [www.TheEnduranceLab.com](http://www.TheEnduranceLab.com) . By incorporating structured testing into your training programme you can access personal data which will highlight strengths and weaknesses, guide your weekly training and ensure that you get maximum benefits from the time you have available.

Marc Laithwaite

[Marc@TheEnduranceCoach.com](mailto:Marc@TheEnduranceCoach.com)