

## **Strength Training for Adventure Racing**

Strength training for endurance athletes is a hot topic in the world of sports coaching, some people swear by it and others think it's pointless. The research into the benefits of strength training for endurance athletes doesn't help much as recent studies have shown conflicting results. I stand firmly as a believer, but often find it hard to convince others of the potential benefits, why do I face such problems?

### **Core Focus**

The key to successful strength training is selecting exercises and routines which are specific to your goals and needs. If you complete a body building type programme 3 times per week, this is unlikely to enhance your adventure racing performances and may actually be detrimental. The term 'strength training' is very broad indeed and this tends to confuse athletes with regards to whether strength training is actually beneficial for endurance sports. The simple answer is that certain types of strength training are far more beneficial than others and if adventure racing is your chosen sport, 'core strength training' is the optimal form of strength training for you.

When you are riding your mountain bike up a steep climb, your thigh and backside muscles work hard to drive the pedals, but they aren't the only muscles involved in cycling performance. Others are responsible for maintaining your posture, keeping your pelvis still and holding your spine in alignment and these are collectively termed 'core muscles'.

Core muscles work to stabilise each joint in the body and are essential for adventure racers, the importance of core strength is highlighted in the following examples:

1. Running over rough ground requires excellent joint stability, poor core strength will result in your running style resembling a drunken stumble!
2. As fatigue sets in and fixators work less effectively your joint stability and energy efficiency will deteriorate. This explains why, towards the end of an adventure race, you are running with sagging hips, hunched back and flat, heavy footstrikes (we have all seen the finish photos – thanks Rob). Your firm skeletal frame is collapsing beneath you and there is little benefit to having powerful thighs if your chassis collapses.
3. Riding your mountain bike for a long time will eventually lead to fatigue and a noticeable change in riding style. Your hips start to sway and you exhibit excess upper body movement.
4. When kayaking your spine should be in a neutral position, providing the perfect axis from which you can rotate and generate power. As fatigue sets in you start to slump forwards and unable to rotate your torso you resort to a short paddle stroke using your arms only.

Core muscle strength is essential if you would like to improve your economy during long distance endurance events such as adventure racing. If core strength is poor, you waste large amounts of energy due to your unstable skeletal frame. The stiffness of your mountain bike frame is important and manufacturers spend a great deal of time thinking about how to reduce the amount of 'flex' in the region of the bottom bracket. It makes sense, imagine if your frame were made of rubber and each time you pushed on the pedal the tubes twisted and bowed, you would never get anywhere. If it works for bike frames, it can work for your skeletal frame, every time you plant your foot on the ground, does the frame flex or is it rigid?

### **What does it all mean?**

If you start strong and you finish crawling, core strength exercises may help you to improve your economy and save you considerable chunks of time. You will glide over tussocks with such grace that others will think you have found a tarmac path, your torso will hold firm allowing powerful rotary kayaking strokes and 4 hours into your mountain bike ride, the only body movement visible will be from the hips down.

Core strength can be carried out throughout the year and 2-3 sessions per week would be enough for improvement. I suggest that you add exercises to the end of your running or cycling workouts to avoid additional sessions taking up more of your time.

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