Shorter Warm Up Results In Significantly Less Muscle Fatigue

A study suggests that athletes may want to lower the intensity and reduce the amount of time that they warm up to reduce muscle fatigue.

The research indicates that longer warm ups could sabotage performance. The notion came to a researcher while watching sprinters warm up before a race. Sprinters, cyclists or short distance speed skaters will usually warm up for 1 to 2 hours before their race, including a number of brief rounds of high intensity physical activity. From an exercise physiology perspective, it appears like it could be quite tiring.

A lot of physiologists and coaches consider that a long warm up offers an increased anaerobic metabolism, an acceleration of oxygen uptake kinetics, an increase in muscle temperature, and a process known as postactivation potentiation of the muscles. Hardly any research has however investigated if warm ups have an adverse effect on muscle fatigue and performance.

As it happens, the warm up is among the more debatable issues in high performance sport. Many coaches have different theories and very few quality studies have been carried out to determine the optimal warm up.

This study compared a traditional warm up, with what the researchers called an experimental warm up. A number of athletes and coaches were interviewed to put together the standard warm up.

The study involved high performance sprint cyclists carrying out a traditional warm up lasting approximately 50 minutes with a graduated intensity which ranged from 60 to 95 % of maximal heart rate before finishing with several all out sprints. The experimental warm up was a lot shorter at approximately 15 minutes, and was carried out at a lower intensity, finishing with just a single sprint. The scientists performed several tests right after each warm up to accurately measure the power output and fatigue of the athlete.

The researchers found that a shorter warm up contributed to substantially less muscle fatigue as well as a peak power output that was 6.2 % higher, representing a considerable improvement for an elite athlete. Based on the results of this study the researchers suggest that sprint athletes should consider implementing a shorter as well as less strenuous warm up for improved performance.

By Health Blog.