

Running sprints in the streets of Bangkok

ROAD RUNS

Are long road runs really necessary?

BY NATHAN PARNHAM

For decades in Muay Thai it has become customary to integrate road running into a fighter's preparation. Why not? It has proven successful for many champions along the way from many different cultures and backgrounds within the sport. One could easily assume this is an essential part of any fighter's preparation to ensure they have adequately prepared before a bout. But is road running or other forms of continuous steady state training really necessary to improve a fighter's endurance capacity?

While the quantity of rounds may vary from three, to five, and

the duration may vary from two to three minutes, dependant on the experience of competitors, for the purpose of this article a focus on the elite category of 5x3 minute rounds with two-minute recovery will be discussed. In this instance fighters are active for a total of 15 minutes in a potential 25-minute bout. As a result of the duration of each round, unlike other combative sports (i.e. MMA), Muay Thai is largely reliant on the body's anaerobic energy system.

In regards to high intensity exercise, the phosphocreatine (PCr) system is a significant energy source. This allows individuals to

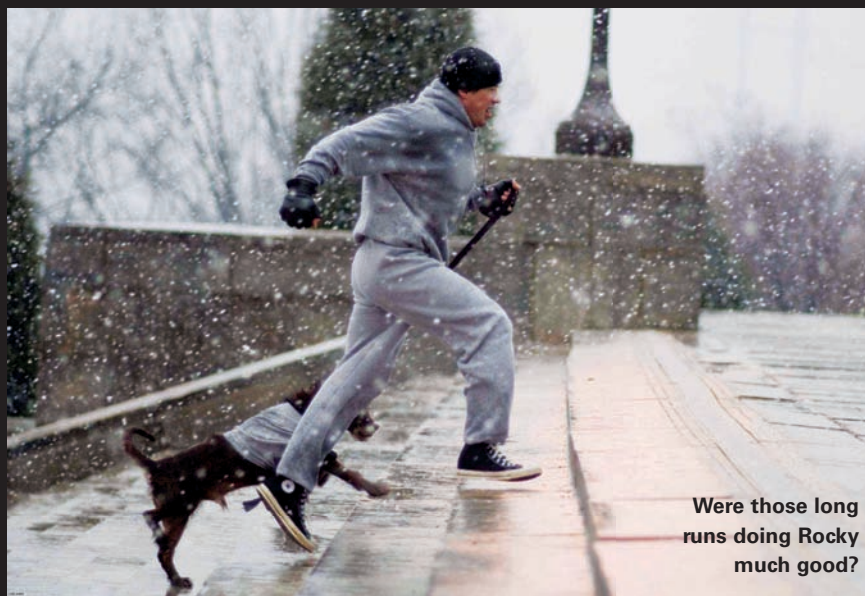
complete repeated bouts of maximal exertion efforts (i.e. combinations) for a limited period of time before intensity begins to decline. In comparison, continuous steady state exercise modalities rely on the body's aerobic or oxidative system adequately producing enough energy supply to continually sustain a low to moderate intensity of exercise.

Traditionally, road runs have been adopted and aimed at increasing a fighter's aerobic capacity (or in other words, endurance). It is often thought that a fighter with a greater aerobic capacity has the potential to perform at a higher intensity, and for a longer

duration than their adversary. Quite often this is the case, however, at an elite level other physiological parameters are likely to influence a fighter's endurance capacity allowing them to perform at a higher intensity, recovering quicker between rounds, while executing more techniques and skills to take out a decision if the bout is not finished sooner.

In many instances this may be correct. Yes, road running and other forms of continuous steady state exercise will increase an individual's aerobic (VO₂) capacity, and as a result their endurance performance. Particularly those in the general population and with less training experience. However, once a competitor has accomplished a strong base level of cardiovascular fitness, is this type of training necessary to further improve their endurance capabilities? And more importantly, will it positively transfer into their endurance performance within a bout? The answer to this is not necessarily yes, and here is why: Interval training (such as track running) is superior to continuous steady state training (i.e. road running) for improving endurance in high intensity intermittent based sports.

The difference between interval training and continuous steady state training is the intensity they are performed at and as a result, accumulated substrates. Interval training is performed at a high intensity (100 per cent) and results in the body's consistent demand to clear lactate accumulated in order to continually perform the type of exercise at such intensity. An example of this would be sprinting for seven to 10 seconds at maximal intensity followed by a recovery period of 20 seconds and repeating this for 6–10 repetitions. At the completion of the desired number of repetitions a larger rest of approximately 2–3 minutes is then implemented. This is then repeated for another 2–5 sets within the same workout. This ability becomes relevant towards the later part of each round and in particular the later stages of a bout, as each round accumulates so too does the inability to sufficiently clear such substrates.



Were those long runs doing Rocky much good?

The body responds differently to both types of training and distinguishing this may be useful in enhancing your fighter's endurance capacity specific to the sport. Both types of training have been proven to increase aerobic potential, enhancing the body's oxidative system and thus reduce lactate accumulation. However, continuous steady state exercise fails to enhance muscular buffering capacity, and PCr resynthesis very specific to Muay Thai. This is because continuous steady state exercise is not performed with maximal exertion and doesn't require immediate replenishment of the PCr system. Consequently road running itself may not improve endurance performance specific to maximal intermittent exercise such as that in Muay Thai. This is why interval training (additional to a fighter's normal Muay Thai training) should be implemented in their preparation before a bout.

Other considerations why road running may not be ideal for a fighters preparation include the encouragement of slow twitch muscle fibers, and a likely reduction in flexibility (due to the repetitive and restrictive running action).

Throughout a fighter's preparation a periodised model should be followed targeting various fitness parameters at different stages. With this in mind, there is still merit to complete road running as a part of a fighter's preparation

(such as weight management or psychological enrichment). However, when the objective is to increase a fighter's endurance capacity within a bout, other training modalities (such as interval training) should be considered. **IK**

References

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