

## **STRENGTH TRAINING FOR RUNNERS**

“We knew we could run in the mud because of our strength training,” said the coach of the Coatesville, Pennsylvania high school boys cross-country team after they won the 2006 Nike Team Nationals on a wet and muddy Portland Meadows 5k course (Sports Illustrated 105(23): 48, 2006).

It’s a common misconception that the best way to run faster and farther in a race is to run faster and farther during training. While nothing can replace the base miles needed for good running performance, running is not the only thing we need to run well.

Here is a little evidence for you from a few studies that have been done on the topic of strength training for runners...

Paavolainen et al (1991)

18 elite distance runners reduced their 5K times

and improved running economy (VO<sub>2</sub> max at a given speed) after 9 weeks of sprint training and plyometrics. Sprints and plyos composed 32% of the total training time.

### Spurs et al (2003)

17 distance runners improved 3K times and running economy after 6 weeks of plyometric training. Plyo schedule was 2x/week for 3 weeks, then 3x/week for 3 weeks.

### Mikkola et al (2007)

25 distance runners showed improved anaerobic performance following 8 weeks of sprint work that composed 19% of total training time.

### Saunders et al (2004)

15 elite distance runners improved running economy after 9 weeks of plyometrics (3x/week)

### Millet et al (2002)

15 elite runners improved running economy after 14 weeks of heavy weight training for the lower

limb 2x/week.

In all of these studies, control groups did not show improvements compared to their baseline.

The bottom line is this: sprint training, plyometrics, and weight training can improve your running.  $VO_2$  max was improved in all of these studies, and race times were reduced in 2 of the studies. (Realistically, race times will improve as  $VO_2$  max improves.

Most studies don't use race times because there is too much variability in that measurement.)

Run With Brains,  
Scott Hadley, PhD, DPT



## References:

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