

Editorial

Running slow or running fast; that is the question: The merits of high-intensity interval training

In a recent issue of the *Journal of Sport and Health Science*, García-Pinillos et al.¹ reviewed evidence on the effects of high-intensity intermittent training (interval training) (HIIT) on muscular and performance adaptations in recreational runners. They found that HIIT causes beneficial effects on running performance, including increased oxygen uptake capacity, and likely reduces running-related injuries because of the decreased work volume and training time.

Recent evidence suggests that as little as 3×20 s full-out cycle sprints per session performed 3 times per week over a 12-week period had the same health and performance benefits as 45 min of continuous cycling at 70% of the maximal oxygen uptake capacity (also 3 times per week and for 12 weeks).²

However, we do not need to go to well-controlled physiological studies to realize the enormous benefits of interval training. Ever since the flying Finn, Paavo Nurmi, 9 times Olympic gold medal winner between 1920 and 1928, used short sprints to improve his running abilities, interval training has become the norm in middle and long distance running. For a time, it appeared that every major improvement of middle and long distance world records was associated with a new discovery in interval training. The only person to ever win the 5000 m, 10,000 m, and marathon race at the same Olympic Games (Helsinki, 1952), Emil Zátopek, was famous for his grueling 60×400 m interval training sessions.

Aside from improving athletic performance, HIIT seems to provide health benefits,³ reduce the risk for injury in runners,¹ improve recovery in patients following heart failure,⁴ and produce beneficial adaptations in young and old.⁵

For the nonscientific-minded, there may be another reason why sprint and HIIT is good for you: it allows you to run fast! As a competitive runner for over 50 years, I still love the thrill of feeling the speed under my feet, the pressure running around the bend, to be as fast as I used to be over 800 or 1500 m, even though I can barely maintain that speed for 50 m now. It is a

privilege to run fast and be born a fast runner, and I believe that there is a psychological effect of running fast, doing something at high intensity, fully exhausting your body in 20 s.

Maybe somebody, one day, will test for the psychological effects of sprint and HIIT and test my (purely intuitive) hypothesis, that high-intensity exercising provides benefits just because it feels good and provides much more than physiological adaptations and improved performance.

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