

The ins and outs of interval training

By Tony Boutagy

So you've heard about 'interval training' but what actually is it?

Interval training is a strategy that your trainer may employ with you, to allow greater energy to be expended, aid your weight maintenance program and/or to improve your physical performance.

It involves an intense bout of physical activity, followed by a recovery period and then a repeat of the intense activity, followed by another brief recovery period. A simple example of interval training is if you jog or swim at a sprint pace for 50 metres, return to the beginning, then sprint or swim at full pace over the 50 metres again, and then return to the beginning.

Interval training is not really appropriate for beginners, but if you've been exercising at a low to moderate intensity for a few months, then it may very well help you achieve your goals.

Interval training is very widely used among athletes and the 'general' exercising population; however, many of its users remain unaware of its origins, benefits, optimal programming and potential risks.

The origins

Interval training had its beginnings not with the elite athletes or in gyms, but in the medical practice of German cardiologist, Dr Heinz Reindell and his cardiac patients back in the 1930s. Dr Reindell found that the most effective way of improving his patient's cardiovascular fitness (VO_2 max, heart size and the stroke volume) was a bout of exercise where the heart rate rose to 170 to 180 beats per minute; when it had dropped to around 120 beats per minute, the patient could commence the next bout of exercise.

In 1935, due to its effectiveness in improving the capacity of the heart, German coaches adopted the method to condition their Olympic track athletes. Nowadays there would hardly be a world class athlete who doesn't use interval training during some stage of their physical preparation.

The benefits

Due to the brief periods that the heart rate is elevated higher than comfortable, sustained training pace, interval training has several distinct advantages over continuous moderate-intensity exercise. These advantages include an increase in:

- speed of movement
- VO_2 max, which represents the maximum consumption/utilisation of oxygen in your muscles
- the muscles' resistance to fatigue
- the muscles' ability to tolerate and buffer lactate
- neuromuscular recruitment patterns at high intensities.

During the last decade, interval training has been studied by several research groups, shedding light on the optimal amount, duration and frequency with which intervals should be performed to maximise physical capacity. Their findings have assisted many athletes reach their true potential, and at the same time demonstrates many of the methods currently used by coaches and trainers to be less effective.

Researchers have found that two, and at the most three, intense interval sessions per week is sufficient to significantly enhance performance. Any more than two or three interval workouts can be detrimental and lead to overtraining.

Interval training can help you achieve your goals more quickly and effectively, so definitely talk to your trainer to find out if this training strategy is appropriate to add to your exercise regime.