

# Can you get fit in five minutes?

HIT, high-intensity interval training, is a new fitness fad, but can the possibility of less pain (and time) really equal more gain?



**Sam Murphy**

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High-intensity interval training involves short blasts of effort on fitness. Photograph: Lori Adamski Peek/Getty

If you are one of the 62% of men or 72% of women in the UK who are yet to meet the government's recommended 150 minutes of exercise a week, you'll be pleased to hear new research suggests you may not have to. Fitness has seen a shift towards short but intense workouts, a training concept known as high-intensity interval training, or HIT.

"HIT simply involves alternating high- and low-intensity efforts," says Professor Martin Gibala from the department of kinesiology at McMaster University in Canada. Research has shown a wealth of positive results from the ever-increasing number of studies on HIT: in terms of performance and physiological measures, including aerobic capacity, carbohydrate metabolism and insulin sensitivity. This could make it as useful to an

overweight diabetic as it is to someone training for their first 10k run.

Gibala first examined the effects of short blasts of effort on fitness in 2005. His subjects, who were active people but not athletes, cycled against high resistance on an exercise bike for 30-second bursts. Each effort was interspersed with four-minute rest, or easy pedalling, and repeated four to six times, three days a week. Within two weeks, the subjects had doubled the amount of time they could cycle at a pre-set intensity, from 26 to 51 minutes.

But wouldn't a less extreme method of exercise, such as leisurely jogging, offer equal benefits? "If we assess the effect of six weeks of HIT compared with as much as 20 weeks of traditional endurance training, the percentage gain in aerobic capacity is within the exact same range," says Professor Jamie Timmons, chair of ageing biology at the University of Birmingham.

Research at Heriot-Watt University in Edinburgh found that after only two weeks of HIT, sedentary men experienced reductions in both glucose and insulin levels.

"Typically, endurance training in this population would have a limited impact on glucose, only reduce insulin somewhat and usually not until after many weeks of training," says Timmons. "HIT training addresses two of the major health benefits of exercise, insulin sensitivity and aerobic capacity, while simultaneously removing the time barrier to exercise."

With lack of time often cited as a reason for not exercising, it is certainly appealing that you can complete your exercise regime in less time than your post-workout shower. But **Professor Paddy Ekkekakis**, from the department of health and human performance at Iowa State University, says there is no evidence to suggest this means a greater adherence: "While non-exercisers frequently bring up lack of time as the main reason for not exercising, there is no indication this is true," he says. Nor, says **Ekkekakis**, is there any scientific support for the idea that the short-lived discomfort of high-intensity exercise is an acceptable payoff for the time it frees up. There is also concern that for the totally inactive, HIT training is likely to be too uncomfortable – or even dangerous.

It was this that prompted Gibala to assess the effects of a modified form of HIT involving 10 one-minute efforts with one-minute recoveries. "We kept total training time low, decreased the intensity of the intervals but increased their duration and lowered the recovery period," he explains. "After just six sessions, the changes we observed both from muscle biopsy and exercise performance were comparable to what we had seen after two weeks of all-out training," says Gibala.

Mind you, three sessions of 30 minutes a week is a far cry from the allure of three minutes a day, and sounds a lot like the type of interval session that many keen exercisers already do. For someone who is already active does HIT present a way to gain further performance gains? "For those already doing sprint training and weights as part of their regime, HIT won't add that much," says Timmons. "But if your training is all sub-maximal, then HIT could improve insulin sensitivity and promote muscle mass gain."

It may also improve your PBs. A [2009 study in the Journal of Applied Physiology](#) looked at what happened when runners reduced their usual volume of training by 25% and introduced six to 12 30-second sprints, three to four times a week for six to nine weeks. Performance in a 30-second sprint test improved by 7% and 10k race time was bettered by a minute.

The promise of more for less for every exerciser, however reluctant, suggests this is unlikely to be another passing fitness fad.

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