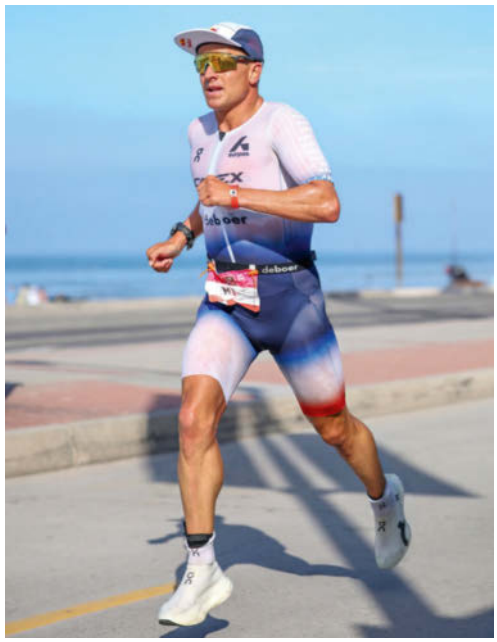

TRIED & TESTED

FANTASTIC FOUR

How a time-efficient training technique studied in Norway could boost your 5K and help you live longer

With a population of just 5.6 million, Norway punches above its weight in endurance sports. Runner Jakob Ingebrigtsen holds world records across various distances, while triathlete Kristian Blummenfelt has been world champion in everything from Olympic events to Ironman.

The key is not only their Scandinavian roots but a training ideology, the Norwegian Method. Blummenfelt's regime comprises 30-to-40-hour weeks that mix predominantly low-intensity exercise with two-to-three high-intensity sessions (including a gruelling double-threshold session day). However, the system is only practical for elite athletes with no need to juggle a career, family and other life commitments around workouts.

Fortunately for the average amateur, Norway has popularised another training technique. Known as the Norwegian 4x4, the method isn't for the faint-hearted, but it can achieve results in a time-efficient 43-minute session. "It involves doing endurance-based exercise in blocks of four minutes with approximately three minutes' rest in between," explains Paul Hough, lecturer in sport physiology at the University of Westminster. "Each block is performed at a hard to very hard intensity."

Although the technique has been used by coaches for decades, it was Norwegian researchers who began studying its benefits in the early 2000s, hence the name. "They found that it produced good improvements in VO2 Max, a marker of endurance or cardiovascular fitness. It's often portrayed as a quick way to improve fitness, which it is, but it's very taxing."

Going rate

The method works with any endurance exercise: the aim is to push your cardiovascular system into the red zone in a controlled, repeatable way. "You should be able to complete the intervals at the same intensity; if not, you've gone out too hard, or your fitness isn't at the level for this training." You're doing it right, Hough says, if your heart rate is "between 85 and 95 per cent of your maximum" or your rate of perceived exertion (RPE) – basically how hard it feels – is "around seven to eight", with 10 being a maximum effort. It's important to focus on hitting these peaks towards the end of the interval, too. "The mistake I occasionally see is athletes go off too hard to try to raise their heart rate. It won't be in that zone until around the third minute."

Fast returns

Hough is keen to stress this technique isn't necessarily a time saver: "People see '4x4' and they think it's 16 minutes of exercise, but that doesn't include the warm-up, cooldown and rest periods." But it can be a more efficient training technique, he says, bringing returns such as improved VO2 Max in as little as four weeks. "You tend to see gains in fitness occur more quickly with this approach than with just continuous [sustainably paced] training. There's some evidence that you'll get a quicker return because you're performing at a higher intensity."

Making a breakthrough

Using the example of running, Hough says you'll see boosts to your 5K and 10K times because "you're accumulating more volume at that pace", and you'll also gain neuromuscular enhancements such as better coordination, balance and stability – "the cadence at which you're running and producing force [during intervals] is similar to that of running a 5K". This isn't restricted to PB chasing in shorter events, either. "If your VO2 Max is the limiting factor, by pushing it higher you effectively increase the size of your engine. When you run at a slower pace, you're not as close to maximum capacity as you were before, and you raise your ceiling."

Trend with benefits

The gains don't end at a new Parkrun record: Norwegian 4x4's explosion as a wider wellness trend stems from its VO2 Max-maximising capabilities. "If you have a higher VO2 Max, you're less likely to get cardiovascular disease, and also your lifespan is likely to be longer." Some tout it as a "vital sign", similar to the way in which blood pressure and cholesterol are measured, says Hough, but in any case, "it's a relatively good predictor of health". Sounds like a great return for 16 minutes of hard work.

Norwegian 4x4

1. 10-minute warm-up
2. Four minutes @ 85-to-95-per-cent max HR/ seven-to-eight RPE
3. Three minutes of active recovery
4. Three more reps of steps two and three
5. Five-min cooldown

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