

# M To the Max

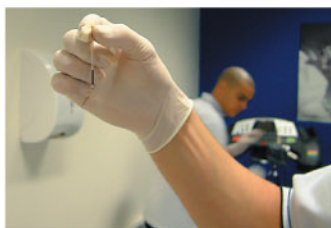
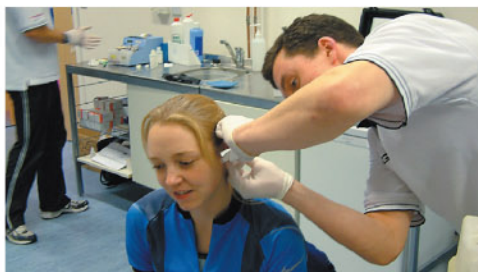
Is fitness testing for you? PAUL HALFORD went along to Elite Fitness in Cardiff to find out how science can take the guesswork out of determining training paces

**F**ITNESS testing is just for the elite. I hear you say. It is certainly the popular view that only if you're good enough to make a living from the sport is it worth paying to find out your true VO2 max and lactate threshold.

However, anyone who is serious about improving their times should benefit from a visit to a sport scientist to put their body to the test.

For just the price of a pair of shoes, a max test will help you train smarter and run faster.

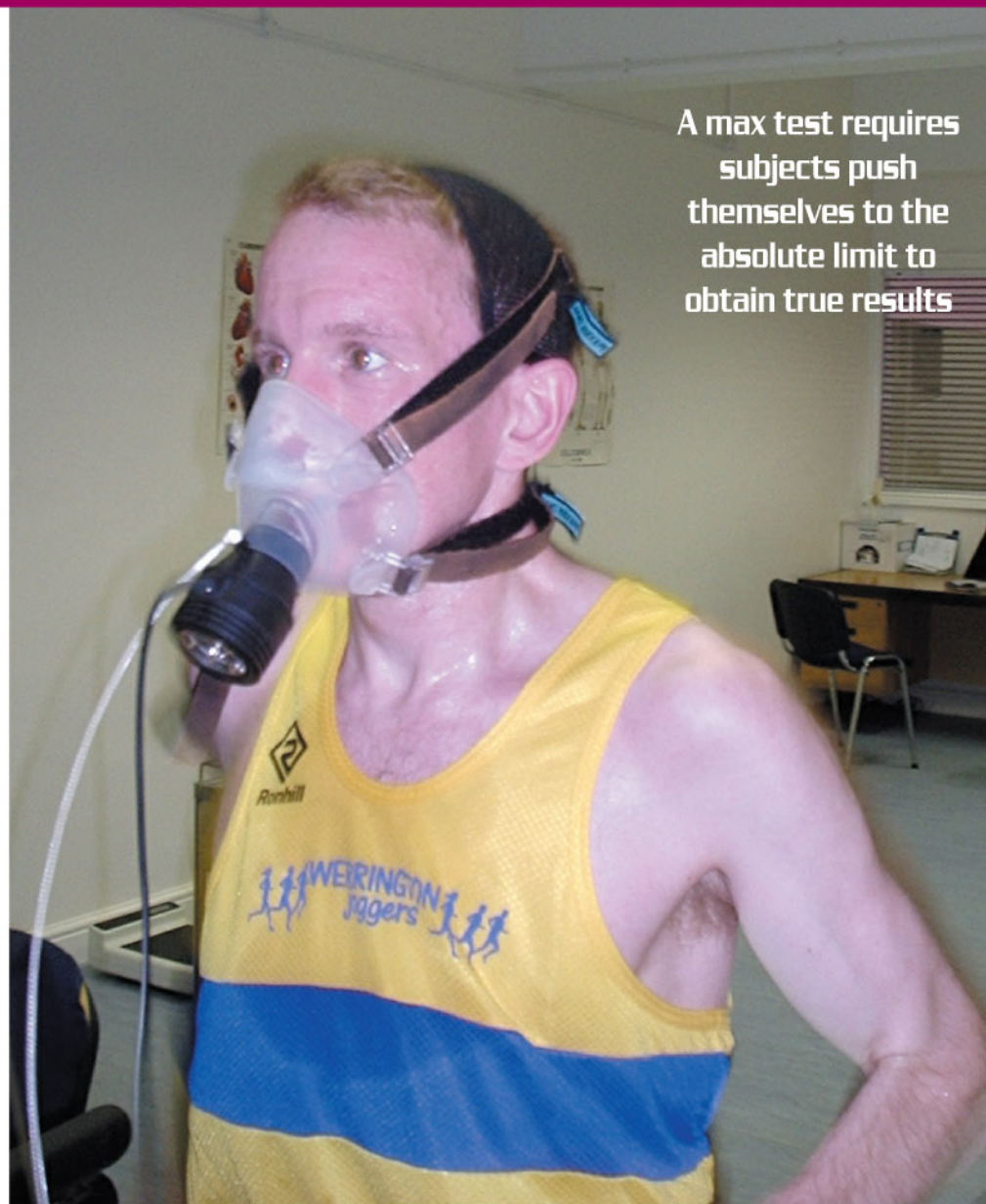
Put more technically, blood lactate profile testing, as it often referred to, will tell you accurately your lactate and anaerobic



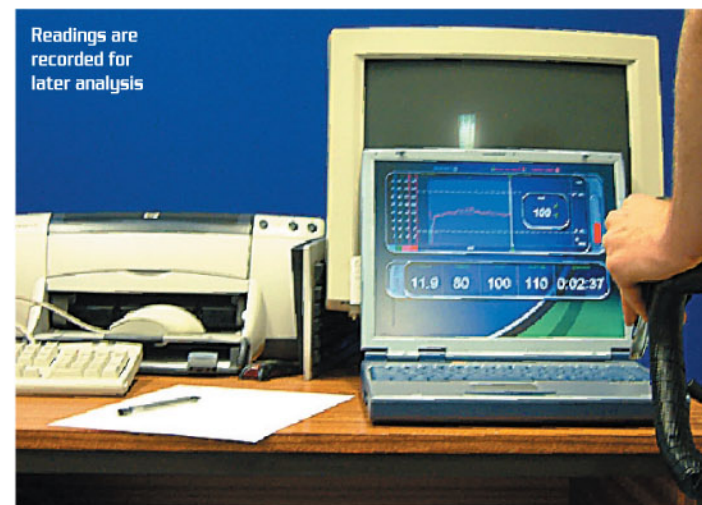
A blood sample is taken from behind the ear every three minutes and the samples are then tested and compared to reach the results



The Elite Fitness gym in Cardiff



A max test requires subjects push themselves to the absolute limit to obtain true results



Readings are recorded for later analysis

I may be far from elite but I train up to 80 miles a week and I am serious about hacking away at my 5km and 10km PBs.

Previously, I had considered that fitness testing might be useful but I had always been told it was very expensive.

New to the experience, my expectations of what to expect were mainly based on an article on the subject. The words therein, "legs and lungs burning, sweat dripping off you, legs trembling an eyesight blurred", filled me with a certain degree of trepidation. Someone told me it hurt more than racing, while I learned some have apparently vomited afterwards.

However, this prepared me for the worst and perhaps made it less of an ordeal, though the last few minutes are uncomfortable if you want to obtain true results.

Though the pace at the start felt ridiculously slow, by the end the seconds felt like minutes as the incline increased gradually and I started running perilously close to the back of the treadmill. When - for ever later - I leapt off, I immediately wondered whether I really couldn't have gone on or



threshold levels and your VO2 max.

Many know that doing a certain amount of your training at or just below your anaerobic threshold can do wonders. Most also know about training at certain heart rate levels.

Whereas most will base these speeds on the pace from their last race, fitness testing takes the guesswork out of working out what your speeds for these various zones are.

#### What happens during a typical max test?

IT IS recommended you don't do any hard training the day before because, as the term "max test" implies, you'll be pushing yourself to the limit. A blood test - via painless pinprick in the ear - is taken before the start. Then you'll run on a treadmill for about four to six three-minute intervals at very

sedate levels at first. During each 30-second period of recovery, a blood sample is taken. The speed is increased with each interval until you reach a level that is something like your 5km race pace. Then the recovery is dispatched with and you run until you feel you can't go any further, with the incline on the treadmill increased every minute.

#### How often?

HOW often depends on how serious you take your running and whether or not you're a full-time athlete. Just one visit will tell you so much, though elite fitness recommends testing four times a year to monitor your improvement.

#### Put to the test

ELITE FITNESS invited me to undergo blood lactate profile testing at their base in Cardiff.

whether I was taking the wimp's option.

In the meantime, Elite Fitness were also taking video footage of my running gait to ascertain inefficiencies in my running style.

The results from the test on the Friday arrived on my email the following Tuesday.

The major point was that my anaerobic threshold pace is 20 seconds per mile faster than I thought it was, meaning a lot of my lactate threshold work would not have been producing the maximum effect.

My VO2 max was higher than Elite Fitness would expect for someone of my PBs, revealing perhaps amendments could be made to my training. Another reason for this could be that, as Elite Fitness wrote: "Body conditioning would improve your power production and running efficiency (the video we took shows a lot of compensations, which ultimately mean a loss of speed and running efficiency)".

As well as recommendations that I was training too much and a lot of it was too slow, the results included suggested training paces for various training zones and my maximum heart rate.

#### What is VO2 max?

VO2 MAX is a measure of the body's ability to utilise oxygen. When your body can no longer increase the amount of oxygen it uses even though the intensity is increasing, you've reached your VO2 max.

Many things combine to dictate your PBs but VO2 max and your blood lactate response to exercise

#### About Elite Fitness

ELITE FITNESS offer a combination of physical conditioning, personal training and sports science. It is run by Simon Harling MSc CSCS, a member of British Association of Sports and Exercise Scientists (BASES), and Rob Ahmun, who has a masters degree in sport and exercise science.

Fitness testing is available for £85 for *Athletics Weekly* readers.

Elite Fitness is conveniently located near the M4 and a few minutes' walk from Waun Gron railway station.

Contact details: Unit 2, Fairwater Industrial Estate, Norbury Road, Cardiff CF5 3AU. 029 20 555272 or visit [www.elitefitness.co.uk](http://www.elitefitness.co.uk)



Professionals are on hand at every point of the monitoring procedure

are two of the biggest factors. Generally speaking, the fitter you are, the higher your VO2 max will be.

Once you know your VO2 max, you can base your everyday training speed on it.

#### What is the anaerobic threshold?

ANAEROBIC threshold is the exercise intensity associated with a marked elevation in blood lactate concentration above pre-exercise level.

Training for periods of more than 20 minutes or for several intervals at or just below this level will increase lactate threshold pace and result in quicker race times.

There are many ways of guessing your anaerobic threshold pace. It is said this pace is about the speed which you could hold for up to an hour. However, the only accurate of measuring it is via a max test.