

 ULTIMATE TEST

# HARDER, BETTER, FASTER

Health and fitness in the 21st Century is no longer a shorts and trainers affair. Tech rules when it comes getting lean, mean and fighting fit. James Witts works up a sweat... 



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**W**HERE ONCE pedometers ruled, there's now a plethora of apps and tech-heavy devices designed

to monitor and improve your health. Calories burned, heart rate, blood oxygen levels... gadgets now measure every physiological parameter you can think of with the goal of transforming you into the next Mo Farah.

Nike's FuelBand (which we tested in *Focus* issue 244) is the poster boy for this new era of self-assessment. But the latest generation of health monitors have a host of new tricks.

**DATA AND REWARDS**

The **Tinké** is a plug-in for your iOS device and, according to its Singaporean inventors, will lead you to a better life. After downloading the free app and slipping the Tinké into your iPhone for instance, you press a thumb over two optical sensors and apply pressure. Red light and infrared combine to calculate readings based on blood volume changes. This allows measurement of your heart rate, breathing rate and oxygen saturation levels, combining for a fitness score – in Tinké terminology, a VITA rating. Simple.

But is it of worth? No. Apart from receiving virtual badges, you've no idea what to do with the data. If you score under 50, for instance, should you drag yourself to the doctor's? The validity of its results is also questionable. At rest we measured a heart rate of 67bpm. A six-mile run later and, while using the Tinké during cool-down, it had risen to just 79bpm. A traditional two-finger carotid measurement came in at 150bpm. Overall, style over substance resonated loudly.

The **Fitbit One** was a far more credible product. Just clip it onto your belt or slip it into the included armband, and away you go. Via an accelerometer and altimeter within its black casing, it measures steps, calories burned, distance and stairs climbed.

Upload this data daily to your Fitbit account (PC and Mac), or to the Fitbit app (Android and

**FIT FOR PURPOSE**

We lived with these gadgets to find out whether they really will guide you to physical perfection



**Powerbreathe K5**  
£450  
www.powerbreathe.com

**Tinké**  
£95  
www.zensorium.com

**Omegawave**  
£79.99, plus £7.90 per month after three months  
www.omegawave.com

**Fitbit Aria scales**  
£99.99  
www.fitbit.com/uk

**Fitbit One**  
£79.99  
www.fitbit.com/uk

iOS), and chart your progress via graphs, tools and charts. It's jargon-free and usable – key to making this an integral part of a leaner you. Your account comprises a handy food log, too, which offers calorie counts for a long menu of foods. This lets you compare your caloric intake to what you've burned in a day.

There's a Facebook log-in option, highlighting its community appeal, and a global leaderboard refreshes throughout the day. Whether that convinces you to substitute fried chicken

for chickpeas lies with your competitive instinct.

It's not all about monitoring movement, though – wear it at night and it'll assess the quality of your sleep. And for even more self-analysis, including body fat measurement and body mass index, you could link your account to the Fitbit Aria scales (£99.99).

Sadly, Fitbit also suffered in the accuracy stakes. While it coped fine with general activity and walks, over several runs the distance measured had no bearing on the route we'd just

completed. If data is the key to health, it doesn't help if some of the data is inaccurate.

**GOING PRO**

Used by five Champions League winners, the **Omegawave** certainly has credentials. It's been used at elite level for a few years but has just been launched to the masses, and is designed to 'measure your readiness' to train.

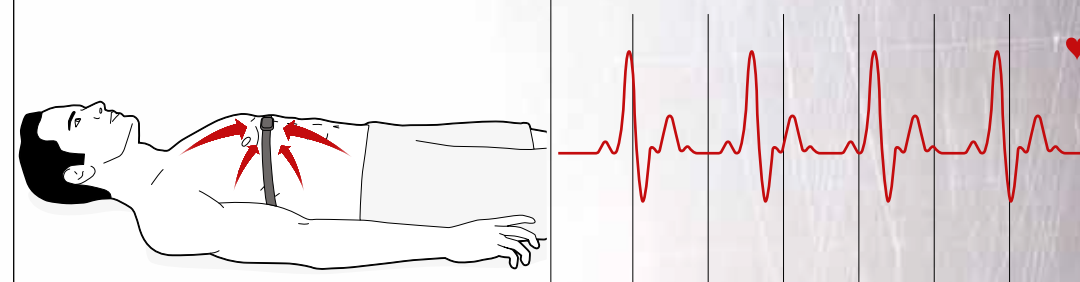
For £79.95 you receive an ECG sensor belt – like a heart rate monitor chest strap – and a three-month subscription to the app.

**ARE YOU PRIMED FOR ACTION?**

The Omegawave measures how prepared you are to exercise in four simple, but technologically advanced steps...

**1** Run cold water over the Omegawave's strap and ECG sensor to increase the conductivity of the unit when you put it around your chest. Lie down for two minutes; breathing should be relaxed.

**2** While you're lying down, the Omegawave's sensor measures electrical signals. This determines the variation in heartbeat-to-heartbeat intervals and the state of your nervous system.



**3** Over two minutes, this data is sent by Bluetooth to the Omegawave app on your iOS or Android device. You're then given the current state of your cardiac system, fatigue levels and ability to cope with exercise that day.

**4** Click on the 'Coach' option. With the self-assessment data from step three, here you're guided to the intensity you should train at. This ranges from strength conditioning to complete rest.



Data including heart rate, stress levels and potential for physical exertion are sent by Bluetooth to your iOS or Android device where the smart-looking app displays the intensity of session your body is capable of, from rest to a vigorous sprint.

The coaching feature then prescribes training zones based on that day's heart rate, so you know what rate to train at if you want to burn fat or build speed. It's an impressive piece of kit.

The only moot point is the cost. After three months, you pay a monthly subscription of £7.90. But

compared to wasted gym fees, this could be money well spent.

Unlike the other gadgets on test, the **Powerbreathe K5** actively improves your health, not just measures it – which explains its price tag. It boosts fitness by focusing on the inspiratory system – or 'dumbbells for the diaphragm' as the marketing men tell us. Simply empty your lungs into its mouthpiece and then inhale sharply and for as long as you can. Do this 30 times twice a day for a month before going down to 30 times twice every other day.

The idea is that your diaphragm and ribcage muscles strengthen over time. Like a weights programme, you gradually increase the load to offer greater resistance; in this case, a valve with a variable aperture. The K5 measures a wealth of data including power per breath and peak respiratory flow. It's technical stuff but after four weeks' use my power output when cycling had increased.

Overall, the tools we tested worked well, aside from the Tinké. The Fitbit Pro is useful if

**PERSONAL TRAINERS**

Your smartphone can become a virtual coach with the help of an app

**Runkeeper**  
iOS/Android, free  
This is the go-to app for runners, which tracks all your routes using your phone's GPS whether you're walking, running or even cycling. You can then save and share routes with any other fitness app you might have.

**Cardio**  
iOS, free  
Straight from MIT's labs, this app tells you your heart rate without the need for a cumbersome chest strap. It does this by monitoring minute changes in your face's blood volume via your smartphone's camera.

**Medibank Energy Balancer**  
iOS/Android, Free  
Tell this app who ate all the pies and exactly what kind of pies you ate, and it will tell you what kind of exercise you should do and for how long to cancel out your gluttony.

**Full Fitness**  
iOS, £1.49  
If you wander into the gym and find yourself perplexed by the muscled choreography of its denizens then this app will clear things up. It shows how to lift specific weights to strengthen whichever muscle you want.

**JAMES WITTS is the editor of 220 Triathlon magazine**