# How to be normal...

Serial entrepreneur **Dr Kevin Auton** talks to Jenny Chapman about his current venture, which has the potential to save the NHS a lot of money, and the rest of us a lot of heartache on the scales.

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## (. . .without trying too hard)

O time for the gym? An alternative is at your fingertip, and I tried it the other day without even getting out of my chair.

Clipped to the end my finger, it's one of a range of sophisticated, yet simple gadgets developed by Dr Kevin Auton. It measured a couple of aspects of my physical wellbeing, and I could do it all by myself. The same applies to Kevin's blood pressure device, activity monitor, and lung checker, all DIY and perhaps the future of preventative medicine.

Kevin, a microbial biochemist, has already founded and floated two companies, NextGen and Cellexus, both originally Cambridge-based and involving scientific instruments and the business of bacteria. In 2007 he founded Aseptika and its trade mark, Activ8rlives, which does quite a good job of explaining what it is all about.

From his PhD work on how bacteria produce proteins, Kevin had an idea for an invention which could profile bacteria in our lungs.

"This is for people with chronic lung

conditions," he says. "cystic fibrosis, COPD (chronic obstructive

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pulmonary disease), some forms of asthma. I'm asthmatic myself, and the recurrent chest infections are caused by bacteria that hides in the lungs and every now and then flares up. The lungs get inflamed and damaged and can gradually be destroyed.

"It can mean six to eight days in hospital each flare-up, but we are working with a clinician at Papworth, Andreas Floto on a home test which is an early-warning system. Patients with say, CF, can self-monitor and ask for antibiotics before the flare-up happens."

This idea has already been trialled at Papworth and is going into further trials in Portsmouth where Kevin says the concept of self-management in healthcare is already quite advanced >



"It's all about how to stay as well as you can for as long as you can, and it comes down to personal dignity as well as a huge cost benefit to society" Monitoring health: Dr Kevin Auton's new invention will be launched this month at the Gadget Show in Birmingham Picture: Warren Gunn

>> compared with elsewhere.

At Papworth, 15 patients with CF tried the self-monitoring, using the full range of Kevin's gadgets every day for six months: "They got it down to just five minutes a day, and really enjoyed doing it."

Aseptika put in for some money from the Small Business Research Institute, which is run by the NHS with the Technology Strategy Board: "They have funded all the high-risk parts of the development, £450,000 so far. It was a competition judged by experts, a technical *Dragons' Den* process." Aseptika's pitch was that there are a lot of people in hospital who shouldn't be there, who, if they'd had early warning of illness could have asked for medication and stayed at home.

"Tracking levels of activity in people with CF can lead to a warning when they stop being so active, it's a sign." And it is picked up via a bracelet, the latest version of which is being launched this month at the Gadget Show in Birmingham. It clocks your activity – walking, gardening, vacuuming, whatever you might do in your daily life – and the data is automatically uploaded into a cloud. Kevin's



first version of the bracelet needed a PC, but the new one works with smartphones and tablets.

Similarly, the gadgets monitoring your heart and your weight automatically load data into the cloud, but you have control over what's done with the information, you decide whether to go and see the doctor, and, when you do, you are a lot better informed that would be possible without self-monitoring.

This approach to well-being can be extended into dealing with problems such as obesity, which is the gym alternative I mentioned at the beginning. "It's all about how to stay as well as you can for as long as you can, and it comes down to personal dignity as well as a huge cost benefit to society."

Kevin, who studied at Southampton, came to Cambridge because of our biotech scene: "It's the most exciting, probably, in Europe. We can get everything we need here, across the medical, science and engineering disciplines. The only other place I would want to be is San Francisco."

Aseptika began as a consultancy and has been developing its own products for the past four years. As well as his background in biochemistry, Kevin has a

>> more personal interest in what he is doing. He says he is prone to obesity, a family trait, as well as being asthmatic. He has found he is able to self-monitor not only the warning signs of an asthma attack but he can now maintain his weight and BMI (body mass index) at a healthy level, all achieved by simple adjustments to his life, like parking the car a mile from where he wants to be, when he goes to London, walking between appointments rather than going underground.

But it is, of course, about calorie-intake as well: "Working out three times a week at the gym won't make you thin if you are still eating too much."

He says make a start by getting active, in the way he has, and then think about the calories you really don't need.

Aseptika has created an app in the Activ8rlives stable. It has pictures of food and drink and you decide whether what you are about to consume is good or bad for you. You can also take your own picture of what's in your cup or on your plate.

Like the gadgets, the data automatically goes into the cloud, as do the readings from your Activ8rlives bathroom scales. "But your data is yours, and you can choose who you share it with."

You can get the whole panoply of gadgets for under £300, and all the family can be monitored, Kevin says, yet at the same time he tells me this is not a kit for the "worried well", it is for those who need to keep an eye on things, and a good example is an elderly relative living alone and far away – all their data in the cloud; children who are too fat.

"I am not a medic," he says, "just an ordinary guy trying to stay well and keep my family well – and I love gadgets."





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