

Motorcycle

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better biking

# Rider

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## Electric Avenue

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INSTEAD OF GETTING FITTER, WE'RE GETTING FATTER. WORK IS MENTAL, RATHER THAN PHYSICAL, AND EXERCISE IS ALMOST NON-EXISTENT. WHAT WOULD IT TAKE YOU TO GET OFF YOUR MOTORCYCLE AND ON YOUR BICYCLE? AN ELECTRIC MOTOR PERHAPS? *ANDY DUKES* THINKS THAT ELECTRIC BIKES COULD BE THE BEST OF ALL WORLDS

**Road Test & Review**  
**PowCycle Salisbury LPX — Electric Bicycle**  
By Andy Dukes — Editor of Motorcycle Rider



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**I cycle between 50 and 100 miles per week and consider myself pretty fit but this bike enabled me to cycle up big slopes that I usually struggle with on a conventional cycle**

We're turning into a nation of couch potatoes. Many of us get out of bed, sit down for breakfast, drive or ride to the office (sitting down) and then spend the next eight hours sitting behind a desk. When we get home, we're often too tired to cook a meal, so we order a take-away. Except that we don't take it away, it's delivered. Thanks to digital TV, we can watch just about anything we want, whenever we want. It's no wonder we're putting on weight like never before.

There are some scary statistics currently being published, but the truth is that you only need to look around you. Obesity is set to become the number one cause of death in the UK, according to current trends. Rates have trebled over the past 20 years and the recent Health Survey England found that around 24 million adults in the UK are overweight. Of these, one in five adults are clinically obese and by 2020 this figure is likely to be one in three, according to the Royal College of Physicians.

We all know that healthy eating and regular exercise is the answer, but frankly, it's all a bit too much effort. What with the remote controls, e-commerce and home delivery, there's scarcely a need to move a muscle at all. People drive to the corner shop, letters are sent by email rather than by walking to a post box, and the nearest most of us get to doing any exercise is making the trip from the couch to the kitchen cupboard to pop open another carton of Pringles. Exhausting stuff, eh?

I'd seen my overweight friends make the mistake of spending a small fortune on the latest mountain bike or home gym equipment, only to see them gathering dust in the garage a few weeks later. There has to be an easier way and I think I've found it, although it's taken a few years.

When I first looked into power-assisted cycles, the technology was still relatively in its infancy and the first one I tested (about seven years ago) had a huge, lead acid battery, a heavy drive unit and rather wacky styling. In fact, the extra weight from this battery (about 15 kg) almost negated the benefits that the bike offered.

Recently though, a release from a UK producer of electric bikes caught my eye because it was promoting a new generation of electric bikes that were only marginally heavier than ordinary bicycles, but had advanced lithium polymer battery technology promising a range of up to 37 miles. It sounded very promising, so I booked a test ride and put a news snippet in the last issue of *Rider* to whet your appetites.

So, what is the point of a power-assisted cycle then? Well, cycling is one of the best forms of exercise but many people – having not done it since childhood – find it too strenuous and subsequently give up after a couple of attempts, especially if they live in a hilly

area. But what if you can have the best of both worlds: the benefits of physical exercise, combined with a bit of additional assistance (when needed) to help you up those hills? Furthermore, you don't even need a driver's licence or insurance.

As to who could benefit from an electrically assisted cycle, the list is just about endless. I know lots of people who would cycle to work, but don't because of a lack of shower or changing facilities, but with one of these, commuters who like to cycle could arrive fresh at work using assisted power and then burn off energy cycling home. Local shoppers could leave the car at home and save the effort of fighting and paying for a parking space. Keen environmentalists will be well aware that electric bikes also help keep urban pollution to a minimum. Those without much disposable income or spare cash don't have to worry about rising petrol prices, as once you own the bike, it is free to use, apart from the minimal electricity cost of recharging the battery. And those who are without a driving licence because of either age, ill-health, or a ban, can get 'back on the road' with an electric bike.



Where I feel the real benefit of an electrically assisted bicycle lies is with the mature age bracket, for whom regular cycling may be a bit too much of a struggle, but who could really get a health benefit from a powered cycle. I recently received a letter from a BMF member who was giving up motorcycling because he was just finding the weight of his bike too much to handle and thought it was best that he quitted while he was still ahead. I hope he is reading this now, because this kind of powered two-wheeler can keep you riding and do you a lot of good in the process.

My father is 72-years-old and has always led a fairly active life. We have always enjoyed cycling together, but in the past few years, he has really begun to struggle with some of the hills in our area, to the point where he's been cycling less and less. It was getting to the point where I could see him giving up for good and that worried me, so I thought that he would be a good second opinion as to the effectiveness of these things.

I was out when the £599 Salisbury LPX PowaCycle was delivered and when I saw the big cardboard box in my garage, I got out my toolbox, expecting a lengthy rebuild. However, it had been delivered almost in one piece and all I had to do was fix the handlebars, seat and pedals, put some air in the tyres and charge the battery. It looked exactly like a normal bike – the only concession to its potential was a lightweight battery pack on the rear of the down tube of the cycle frame and a twist-grip throttle on the handlebar.

When I lifted the Salisbury up I half expected to sustain a back injury in the process, but was surprised to discover that it was a lot lighter than expected. The weight including the battery is just 22 kg, which is more than acceptable. I looked a little closer and discovered that it was crammed with hi-tech gizmos. In addition to the 'Li-Pol' battery that only weighs 2 kg, the Salisbury LPX has an aluminium step-over frame, six-speed Shimano gears to help maximize the contribution from pedal effort, V-brakes, front suspension and a rear suspension seat post, 26-inch alloy rims and hubs, anti-vibration nuts, rear luggage rack, cycle stand, and a chain guard. Not top quality components, but good specification nonetheless.

I adjusted the seat to my preference and set off for the freedom of the open road. The first thing I noticed as soon as setting off was a [relative] rush of acceleration as the 'pedelec' pedal-assist system kicked in. Basically, as soon as you start pedalling, the power activates and matches the effort you put in. It's a strange sensation, as the motor is almost silent and the power delivery very subtle. The only way I can describe it is that it makes you feel fitter than you are and feels like an invisible helping hand pushing you from behind. This, combined with the six-speed gear system, makes cycling on flat roads and even slight inclines virtually effortless.

At speeds above 15mph, the power assistance cuts out and you're on your own, although unless you are going downhill or have a strong wind behind you on the flat, this is unlikely to happen. The Salisbury also has a 'motor power only' mode, which is mainly for use on flat surfaces and allows the twist-grip throttle to propel you along like a scooter, albeit a lot slower. I'm not sure who would use it (I only used it for giving my kids rides on the luggage rack) but I guess an older person with a bag full of shopping could use it to take a breather on their way home.

What interested me though was how the bike coped with inclines. I live on top of a hill on the edge of the Lincolnshire Wolds and what goes down must come up, which is why my wife – who grew up in the flat lands of Holland – hates cycling in the UK. Personally, I love a good climb so after riding through the neighbouring village and arriving at 'Woods Hill' – a local favourite

with road riders in my area – I stopped at the bottom, took a long drink and set-off to attack the climb. The effect was as if a strong wind was pushing me from behind and I continued, almost effortlessly up the hill, past the point where I usually have to get off my mountain bike to walk. I soon reached the top, aided by the Pedelec system and by twisting the throttle to boost the power. The electric motor was effortless and almost completely silent.

I have to admit I was pretty impressed, as you really can kiss goodbye to the problems associated with hills and headwinds. I cycle between 50 and 100 miles per week and consider myself pretty fit but this bike enabled me to cycle up big slopes that I usually struggle with on a conventional cycle. For one of my favourite 'nasties' – a track up an old mine road that rises more than 120 metres in just over half a mile – I attached a heart rate monitor and set off. This hill has practically finished off some of my friends and has been known to leave riders gasping for breath by the roadside at the top – if they get that far (one of my friends recently registered 185 beats per minute on his monitor). I usually top out at about 165, where my heart rate stays for the 10 minutes or so of serious effort that is required to reach the top.

I kept a careful eye on the display as I negotiated what are known locally as 'the foothills' and before long reached the main climb. All the way to the top on the Salisbury my heart rate didn't get above 130 bpm, which suggests (if my math's is correct) that it was only actually working about 75 per cent of the rate it would have to without pedal assistance, which shows the effect of the PowaCycle's drive system. It was still a tough climb, as you have to put in a big effort anyway, but this proved conclusively to me that these bikes can bring areas of cycling that would be considered 'out of bounds' back to the people.

I had to put this theory to the test and invited my dad to try it for himself. After a gentle warm-up, he negotiated four hills that he had never managed before on a bicycle and came home having hardly even broken a sweat. Great stuff then, but I know what you're thinking. What happens when the battery discharges? Well, the Salisbury is designed to be ridden like a normal bike when you don't need additional power, so it won't leave you stranded. Besides, the lithium polymer battery gives up to 37 miles of assistance, depending on terrain, so that covers more than most of us will want to ride in a single session!

Interestingly, when you ride it without battery assistance, your legs do start to burn and the bike feels unnaturally heavy, but with such a good range, you're unlikely to be caught out anyway. It only takes four to six hours to fully recharge the battery, which can be removed if necessary, or plugged straight into the mains from the bike. A second battery is available for £199, giving you a theoretical distance of 74 miles, if you carried it in a rucksack or on the cycle rack. Weighing just 2kg, the battery can be recharged around 500 times, so should last at least a couple of years with regular Monday to Friday use.

Because it is emission free, the Salisbury is environmentally friendly too, which starts making sense for all those people who don't actually live that far from their offices. Twenty-eight million journeys each year in the UK are of less than a mile, but many people are put off the idea of cycling to work because on a conventional cycle they would arrive in a sweaty state and have nowhere to freshen up? Being able to cycle a few miles without breaking sweat makes all the difference.

Any gripes with the Salisbury? Not many really. At over six feet, I was a little bit cramped on it, but my dad was fine. It is an adult sized frame and the handlebars and saddle are adjustable, it's just

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ABOVE: Whatever your age, you can reap the benefits of an electric bike

BELOW RIGHT: The battery can be removed for charging, or the bike can plug straight into the mains

that I'm a bit too tall to be truly comfortable. The components are satisfactory, but the suspension struggled on bridleways, and after being used to disc brakes on my own mountain bikes, the V-brakes seemed to take an age to stop the Salisbury. It is virtually impossible to see the battery charge indicator while you are riding, but with such a good range, this is a small point in what is overall an excellent machine for the money.

It was difficult to return the Salisbury to the PowaCycle company and I was seriously thinking about buying one for my dad. However, I can't help thinking that in time, the batteries will become even more powerful, with longer ranges, and that lighter, more efficient motors will be produced. I guess it will happen, but of course you'll have to pay more for it.

Since the bike has gone and I've reverted to a 'conventional' cycle, those hills have seemed twice as steep and twice as long, headwinds have seriously affected my progress and without that fantastic 'pedelec' assistance, I've found it a real struggle to motivate myself to go out on my own bike – it is just too much effort.

And that's why electric bikes such as the Salisbury LPX are such a tempting proposition. I always looked forward to going for a ride on it because I knew I was going to get a good workout and feel great as a result, but without being completely exhausted. The use of a power-assisted system can definitely make the difference between somebody getting regular exercise or never cycling again.

It's no surprise that more than 60 per cent of PowaCycle's customers are more than 50-years-old and couples often buy them together. I think that it could add another 10 years worth of cycling to an older person's exercise regime, which as we know, can



increase lifespan considerably. Bit of a no-brainer really, isn't it, not to mention the viable, environmentally friendly alternative to a car for local journeys.

Will it catch on though? That remains to be seen and I guess it depends on how many of us can be bothered to get out of our comfortable armchairs and give these things a try. For more information on the PowaCycle range, call 01279 821243 for a free brochure or visit [www.powacycle.co.uk](http://www.powacycle.co.uk) for detailed information. There are about 50 dealers nationwide, so one may just be within cycling distance of you.