

CYCLOPEDIA

Questions answered, subjects explained – Cyclopedia is your bimonthly cycling reference guide



Left: Alamy

Be ready for pedestrians even when it's your right of way. That's your 'duty of care'



Legal

Duty of care

Q There was a case this year in which a cyclist collided with a pedestrian who was looking at her mobile phone. The light was green for traffic, yet the judge found them equally responsible because the cyclist owed a 'duty of care'. Can you explain this?
Simon Challand

A A 'duty of care' is a responsibility that all road users share to ensure that their actions (or lack thereof) do not result in harm to others. This duty may be better thought of as a 'standard of care', which reflects what a reasonably competent and skilled road user would do in any given situation. Failing to meet this opens oneself up to civil litigation.

In the 2019 case of *Brushett v Hazeldean* you describe, it would at first seem that the cyclist, Mr Hazeldean, did all he could reasonably have been asked to do to avoid Ms Brushett, who stepped into his path, then backwards into his swerve. Both sustained injuries.

At trial the judge found both sides to be equally at fault. Why? It was argued that Mr Hazeldean failed to engage his brakes at the first sign of potential danger, instead continuing at speed towards the crossing, sounding his airhorn. Due to his speed (some 20mph), it was argued that the

Your Experts



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outcome of the collision was predetermined before Ms Brushett had stepped off the kerb.

By cycling at 20mph near a pedestrian crossing, Mr Hazeldean was found to have created a dangerous situation whereby he was unable to brake in sufficient time. This increased risk breached the duty of care that was owed to Ms Brushett, and was identified as the impetus that resulted in the collision.

Rest assured that if you find yourself in this situation, Cycling UK membership provides third-party limited liability coverage against accidents up to £10 million.

Richard Gaffney



Technical

Stop right there

Q In the June/July 19 issue, you mention choosing Magura HS22 hydraulic rim brakes over disc brakes. What was the reason?
Mark James

A It's partly down to the high efficiency of hydraulic transmission of force. The Bowden cable used in most rim (and some disc) brakes is a versatile and effective device, but it does suffer from frictional losses of up to 20%, and from cable stretch and compression, which absorb some hand force in elastic deformation of the cable. This means a greater (less advantageous) leverage ratio is needed.

Hydraulic brakes suffer from neither to any degree, and therefore transmit practically 100% of hand force to the brake blocks. A 650g aluminium rim can absorb more energy from braking without overheating than a 160g stainless steel disc rotor – important for a bike weighing almost 200kg with rider and luggage!

Richard Hallett

Cycling UK Forum

Need an answer to a question right now? Try our forum: forum.cyclinguk.org



Snacks like bananas keep your energy levels topped up on longer rides

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Health

Energy on longer rides

Q I'm training for a 50-mile charity ride. It'll be my first 50, having only taken up cycling in June. I generally do two or three rides a week of around 20 miles each. I don't find this too hard, but I went for a 30-mile ride today and ran out of energy at about 25 miles in. Any tips for training and keeping energy up on the slightly longer rides?
Gazelain, via the forum

A You will find excellent resources on the Cycling UK website both for training for a charity ride and for nutrition while cycling. See cyclinguk.org/article/cycling-guide/training-plan-for-sportives-and-charity-cycle-rides and cyclinguk.org/eat-drink-cycling respectively.

The principle is to gradually increase the length of your rides at an easy pace to build up your endurance. You need to fuel up beforehand with slow-release carbohydrates, such as porridge, and to take in regular quantities of energy foods throughout the ride. The traditional amount is 30-60g per hour of cycling.

Some cyclists like glucose gels while others prefer solid food such as flapjacks or beans on toast. On a long audax ride, there are food stations along the route; your charity ride may include some. To be on the safe side, carry snacks, such as a banana or flapjacks, and don't forget to carry water – or electrolyte solution if it is hot weather. Before long you will be riding 100 miles without difficulty.

Dr Kate Hattersley

Technical

Aksiuming for trouble?

Q I am purchasing an e-bike from Ribble, which has the same rear wheel setup as the Orbea Gain you tested recently. Is the Mavic Aksium wheel 'fit for purpose' as a rear wheel on an ebikemotion hub?
Dick Foxon

A The Orbea Gain's rear wheel is an Orbea-built wheel with a Mavic Aksium rim. My comments referred to the wheel's one-cross spoke lacing and to the several spokes with the thread visible inboard of their nipples. The spoke threads on a correctly-built wheel should be hidden within the nipples. If not, it's likely the spokes are too short, in which case one or more nipples may shear off at the head.

Spokes laced two- or three-cross are better than one-cross (or radial) at transmitting drive torque, which is likely to be significant on an e-bike. These aren't problems with Mavic's Aksium wheels per se, and should not be for a wheel correctly built with a Aksium rim – including one with an ebikemotion X35 hub.

Richard Hallett



Visible threads on a true wheel suggest overly short spokes

Technical

Round in non-circles

Q My bike has an 11-speed (11-32) Shimano cassette, Shimano RS500 (34-50) chainrings and Shimano 105 derailleurs and shifters. If I wanted to fit Osymmetric chainrings instead of round ones, what would be the impact on chain length, the front derailleur and anything else that I've not thought of?
John Peach

A Assuming you fit Osymmetric chainrings (oval-shaped rings designed to enhance a rider's power output by eliminating the dead spot in each pedal stroke) with the same number of teeth, there will be no effect on chain length or on the rear derailleur. The front mech will have to be raised to clear the outer chainring at its maximum radius, which may mean fitting a new inner wire.

The main impact will be on your pedalling technique: non-circular chain rings mean the pedals rotate at a non-constant speed, which may feel odd at first. You'll soon become accustomed to it, at which point pedalling with circular chainrings will in turn feel strange.

Richard Hallett



Non-round chainrings may affect front shifting, but you can use the same chain

Get in touch

EMAIL your technical, health, or legal questions to cycle@jamespembroke.com or write to Cyclopeda, Cycle, PO Box 313, Scarborough, YO12 6WZ. We regret that Cycle magazine cannot answer unpublished queries. But don't forget that Cycling UK operates a free-to-members advice line for personal injury claims, **TEL: 0844 736 8452**.