

CYCLOPEDIA

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



Left: Getty Images

Cycling differs from driving in that, legally, there's no minimum eyesight standard



Legal

Limited vision

Q I have a diabetes annual eye test, and years ago I was diagnosed with Age Related Macular Degeneration. It did not prevent me cycling but this year's examination showed there was now a haemorrhage in the left eye, requiring a referral to a macular clinic.

If I was involved in an accident that was not my fault, could a defence lawyer claim I should not be cycling? If I'm prescribed medication that warns that it may impair driving or using machinery, could a cycle be classed as a machine?

John B Scothern

A The issue of 'driving eyesight rules' was highlighted following the death of teenager Cassie McCord, who died when an 87-year-old man lost control of his vehicle in 2011. It emerged he had failed a police eyesight test just days prior. This has led to a crackdown by a number of police forces.

Under rules laid down by the DVLA, a car driver must be able to read a number plate from 20 metres away. If the individual cannot do so without corrective lenses, then these must be worn accordingly. This rule is not extended to cyclists. Nevertheless, if an individual were to knowingly operate their cycle

Your Experts



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without appropriate corrective lenses and they were to have an accident, a defence lawyer may well argue that their condition caused or contributed to the accident. The burden would be on the lawyer to prove that. Every case will be fact specific.

In response to the second question: you can be found guilty of a criminal offence for 'cycling under the influence of drink or drugs' (although cyclists are not required to provide breath, blood or urine samples). If you are in any doubt whether the medication you are taking may impair your ability to cycle, you should talk to your doctor to confirm whether or not this is the case.

If you are involved in a collision, members of Cycling UK can take some comfort: you have third-party insurance from your membership.

Richard Gaffney



Sram's GX 2x10 MTB shifters will work a Sram Apex double drivetrain

Technical

Drops to flats

Q I want to convert my drop-bar Sabbath September to a flat bar. It has 10-speed 11-32 Sram Apex at the rear and Sram Rival 34-50 up front. I can't seem to find a flat-bar shifter for the double, only for triples.

Andy Longfellow

A Your Sram derailleur mechanisms require Sram shifters; they won't work with Shimano shifters, for example, as the cable pull ratios differ. Sram rear derailleurs employ 'Exact Actuation'; the curved inner wire guide-seat on the rear mech is shaped such that all gear shifts require the same amount of cable pull. Usefully, Sram make flat bar shifters that work with its road front and rear derailleurs. The firm's GX 2x10 model will meet your brief.

Richard Hallett

Cycling UK Forum

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



Electronic shifters like these Ultegra Di2 ones require less finger strength

► Technical

Easier shifting

Q I'm thinking of swapping the 3x10 Ultegra gearing on my 2007 Trek SLR 1500 to 2x11 Shimano 105 5800, as arthritis in my left hand makes the upshift from the inner to middle rings difficult. I'd also like easier-to-use brakes. Will an 11-speed cassette fit my hub? *Peter Grimshaw*

A No, an 11-speed cassette will not fit your 10-speed Freehub body; it's slightly wider. Depending on the rear wheel, which should be a Bontrager Select, it may be possible to swap the Freehub body for an 11-speed. This would require some re-spacing of the rear hub and re-dishing of the wheel.

Otherwise, it's new 11-speed wheel time. Consider Shimano Ultegra Di2

I ♥ my e-bike

An e-bike can help with some cyclists' heart problems. Visit: cyclinguk.org/tags/electric-bikes

electronic shifting in that case. It will make life much easier for your left hand. If you stick with mechanical shifting, your best plan may be to fit Tiagra 10-speed (4700), which will allow you to keep your 10-speed wheel. Braking and shifting performance are comparable with 105 5800 components.

Richard Hallett

Health

Pressure points

Q I've been told my blood pressure (148/84) is too high. At home, rested, my BP is 125/74. I cycled to the surgery. Would that make it higher? *Peter Ashworth*

A No. Vigorous exercise will transiently raise blood pressure, but it falls within a few seconds of stopping. What will raise your blood pressure is going to the surgery and having it checked!

Your home readings are good, assuming they're correct. The readings in surgery are not particularly high for someone otherwise low-risk. Ask what your Q2-Risk Value is. It's the statistical risk of an 'event' – stroke, heart attack, etc. – over the next ten years. Less than 10% is good; more than 20%, you likely need drugs for blood pressure and maybe cholesterol.

If offered an ECG, note that your cycling may give rise to an 'abnormal' recording.

The heart is a muscle; it thickens with exercise. This can be misinterpreted as evidence of high blood pressure disease.

Douglas Salmon



A good reason not to let your disc brake pads wear down to the metal backing plates...

Technical

Disc broke

Q My hydraulic disc-braked rear wheel recently locked on a descent. I was near home so walked the bike back after disengaging the calliper. The rotor showed some nasty gouges around the braking area. Is it overheating? Something wedged between pad and disc? Or just overly worn brake pads? *Colin Gerrard*

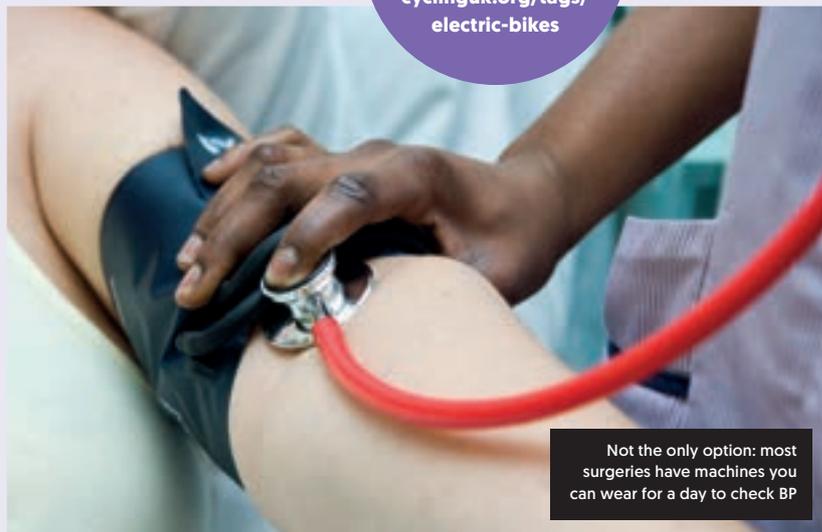
A It's hard to say what has caused the gouging without inspection, but it's most likely to have been caused by worn pads. The miniscule clearance between pads and disc should prevent larger particles from getting between the pad and disc surfaces, which nonetheless can wear rapidly from the fine abrasive grit contained in muddy water. The pads have a backing plate, which may be hard enough to gouge the disc if the pad material wears away completely.

Disc gouging is unlikely to be caused by overheating, which usually simply 'blues' the steel disc. Shimano 'Ice' rotors have an aluminium core sandwiched between thin steel outer layers. The core may soften with extreme heat, allowing the steel outer layers to distort. This may then result in further damage of the sort you describe. ●

Richard Hallett

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**.



Left: Getty Images

Not the only option: most surgeries have machines you can wear for a day to check BP

Know how



DAN JOYCE
Cycle Editor

Making sense of commonly misunderstood cycling subjects

Road positioning

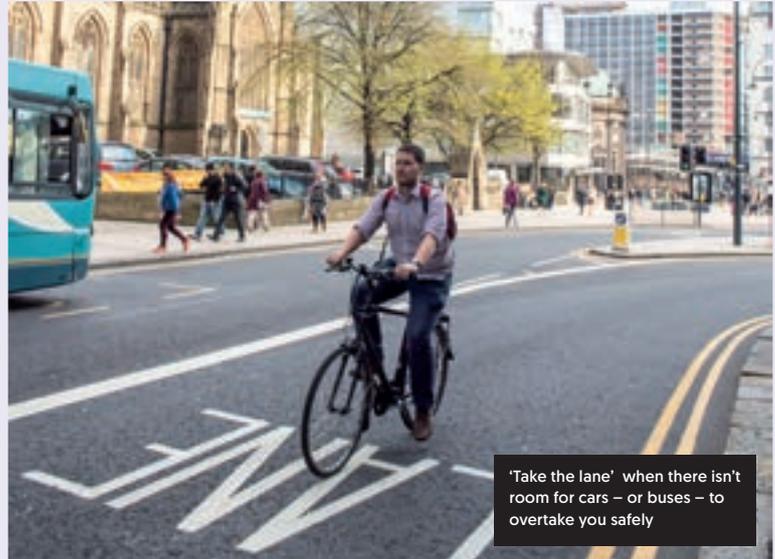
Why it's safer away from the edge

Never hug the kerb. That's rule one of road positioning on a bicycle. Less assertive cyclists worry that being further out may put them in the way of the traffic. It won't: you are the traffic. Being in the traffic stream helps you to be treated like traffic.

Reducing risk

Riding in or near the gutter increases the chances of drivers buzzing past you with inches to spare. You'll have to contend with drains, cambered surfaces, and debris like broken glass that has been 'swept' to the edge of the road by passing cars. And you're less likely to be seen at all by drivers.

The commonest type of car-cyclist collision is the "Sorry, mate, I didn't see you" variety. You must register in a driver's field of vision. You'll do that



Left: Joolze Dymond

'Take the lane' when there isn't room for cars – or buses – to overtake you safely

How to Road positions explained

For more on this topic, visit cyclecraft.co.uk.

Secondary

Riding further out (e.g. 1m) avoids grids/debris. It gives you room for manoeuvre. A good option for faster roads.

Primary

Riding in the centre of the lane improves visibility. It's the best option to deter unsafe passes, particularly on slower urban roads.

In the gutter

Avoid. You're easily overlooked and can become boxed in when wanting to overtake or turn right.

Top Tips



1 Take the lane when the road narrows or there's a pinch point.



2 Also when approaching traffic lights, so cars can't pull alongside.



3 Take your lane when nearing and negotiating a roundabout.

best by cycling where they are looking. Drivers look where their vehicle will be in the next few seconds: directly ahead. They pay less attention to people and objects in their peripheral vision.

Drivers are obliged by the Highway Code (Rule 163) to give you "at least as much space as a car" when overtaking. Let that sink in: at least as much room as a car. That means that they should pull out, cross the central, dashed white line, and pull in again when they are safely past.

By riding further out from the edge of the road, you force overtaking traffic to move further out. It can't stay in the same lane and pass within inches.

How far from the edge?

Normally you'll be a metre out or more. The key factor is not so much the edge of the road as the location of the traffic stream on that road; that is, where cars are actually driving in that traffic lane.

Unless you're turning right, for example, there are two cycling positions to choose from, relative to the traffic stream. One is the centre of the traffic stream – that is, the centre of the lane, rather than the centre of the road. You'll sometimes hear this called

'the primary position', but it's easier to think of it as 'taking the lane'. The other position is about a metre to the left of the traffic stream, so long as that doesn't bring you too close to the kerb. Sometimes called 'the secondary position', you can think of it simply as 'not taking the lane'. ●

Next Issue

Tyre sizing. A 700C tyre is the same size as 29in and most 28in ones, though 27in is bigger. We'll explain this and more.