

CYCLOPEDIA

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



Left: Andy Catlin

In 2018 the Department for Transport gave local councils the authority to install CCTV cameras to increase the policing powers over cycle lanes so as to more readily catch offending motorists. The police can also combat unlawful use of cycle lanes by issuing fines against offenders. The best tactic for keeping the cycle lanes clear in your community may be to petition your local council about the parked cars in them, and suggest they install traffic signs and/or CCTV cameras to monitor the situation.

Richard Gaffney



Legal

Cars in bike lanes

Q What's the law on parked cars in cycle lanes? Could the police prosecute the drivers for obstruction? Do local authorities have the power to enforce clear cycle lanes?

Roger Sceats

A Whether a motorist may park or use a cycle lane depends on the cycle lane itself. As per Rule 140 of the Highway Code, a cycle lane marked by a solid white line means that a motor vehicle **MUST NOT** drive or park in the cycle lane during its times of operation. The time of operation will be designated by nearby signage. If there is no such signage, then motorists are always forbidden from entering the cycle lane. Motorists who drive or obstruct a mandatory cycle lane during its period of operation risk a fine of up to £130.

If the cycle lane is marked by a broken white line, it is merely advisory. That means it should be left available for cyclists but may, according to Rule 140 of the Highway Code, be used by other road users when its usage is 'unavoidable'. The use of advisory cycle lanes may still be regulated by street signs, such as no stopping and/or no parking or double yellow lines. In that case, drivers can stray into the advisory cycle lane but cannot park or stop there.

Your Experts



DR KATE HATTERSLEY
Cycling GP
{Health}



RICHARD HALLETT
Cycle's
Technical Editor
{Technical}



RICHARD GAFFNEY
Principal Lawyer,
Slater + Gordon
Lawyers
{Legal}

Technical

Braking bad

Q The Shimano cantilever brakes on my 1980s tourer have never been great. I tried Tektro CR720 and Avid Shorty Ultimate but neither seemed to fit due to the rims, which are 26mm (external). Any ideas?

Ian Chambers

A Cantilever brakes can be tuned by adjusting the length of the straddle wire, which alters the 'pull ratio'. Your brakes use post-mounted blocks, which can be moved through their eye-bolts to alter the orientation of the brake arm when the block reaches the rim.

One option would be to move the blocks inwards relative to the arms, rotating the arms outwards and reducing the angle between the straddle cable and the arms. Adjust the system so the cable is at about 85° when the blocks reach the rim. This will increase cable pull.

I would also try different blocks, such as the Koolstop blocks tested in Cycle Dec 18/Jan 19.

Richard Hallett

Cycling UK Forum

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



A healthy diet will help control blood sugar levels for type 2 diabetics

Left: Alamy

Cycling UK Forum

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

Health

Type 2 diabetes

Q Any advice for people with type 2 diabetes? I'm getting back into touring. I ride to work but want to do longer rides.

Komet, via the Cycling UK forum

A The great news is that cycling more is going to improve just about every aspect of your health. Exercise is all about increasing your metabolic rate and burning off excess calories, which is exactly what is needed to prevent or reduce the impact of type 2 diabetes. Cycling will lower your blood sugar levels and help you lose weight, which will increase your sensitivity to your own insulin.

Cycling longer distances simply means building up your fitness and taking in regular carbohydrate snacks before during and after you ride. If you start with a couple of hours, you can soon build up to all-day rides if that is what you want to do. Before you start to push hard, you should be confident your blood sugar is reasonably well controlled and that you do not have any symptoms that suggest a heart condition, such as chest pain or excessive breathlessness.

If your blood sugar is controlled by diet or by metformin tablets, then there is no risk of a low blood sugar episode during exercise. You simply need to take in enough energy to balance what you are expending, just like everybody else, or you will get the 'bonk'. You will need to take on about 1g of carbohydrate for every kilogram you weigh each hour (e.g. 75g for a 75kg man). Carry plenty of snacks!

If you are on insulin or other drugs, you

will need to monitor your blood sugar regularly but you are probably already used to doing this. Your diabetes nurse will be able to advise you on the best way to balance your blood sugar in this situation. There is a lot more information on the Diabetes UK website, diabetes.co.uk.

Dr Kate Hattersley

Technical

If the shoe fits

Q I have lymphoedema in one leg, caused by being struck from behind by a car many years ago, and have swollen feet. I can only find cycling shoes for tiny Italian feet. Can you please advise where I may be able to get cycle touring shoes to suit toe-clips that are suitable for high insteps and swollen ankles?

Rob Parrish

A Take a look at the Leather Classic Look cycling shoes sold by cycletouringsupplies.co.uk, which are suitable for toe-clips and straps. You may also need to investigate the world of orthotic inserts to address issues with a high instep; try cyclefit.co.uk.

Richard Hallett

Traditional cycle touring shoes like these are still available



Technical

Axle woes

Q Since replacing the solid axle hub on our 1984-built bespoke tandem, we've had problems with rear wheel security under effort. I've tried standard QRs, which have been pretty hopeless. I've tried a steel adjuster for the drive side. I've tried Allen key skewers. I've also tried a Surly Hurdy Gurdy chain tug but found that fiddly. Any suggestions?

Arthur Findley

A Quick release skewers vary in the clamping force they can generate, which depends on factors including the movement ratio of the actuating cam and the skewer rod material and diameter; titanium skewers stretch more than steel and need a greater movement ratio, which lessens clamp force.

Modern low-cost QRs, with the cam on the outside of the lever, are less effective than those with an internal actuating mechanism. Shimano and Mavic skewers work well, as do older Campagnolo examples with the cam inside the head. It doesn't help having that low-friction chrome-plated finish on forward-facing ends. If a classic Campagnolo skewer won't work, maybe a return to a solid axle is called for?

Richard Hallett



Replacing this skewer with a classic Campagnolo one may prevent slippage

Get in touch

EMAIL your technical, health, or legal questions to cycle@jamespembroke.com or write to Cyclopedia, 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**.

Knowhow

Making sense of commonly misunderstood cycling subjects



DAN JOYCE
Cycle Editor

Technical

Are clipless pedals better than flats?

For most kinds of racing, yes. For most cycling that isn't racing, no; they're an alternative that you may prefer, not an essential upgrade. You might want them on some of your bikes, all of them, or none.

The efficiency myth

Clipless pedals are said to be more efficient because you can 'pedal circles' rather than stamping up and down. It's persuasive: with your feet locked in, it feels like you're powering through the whole pedal stroke. The truth is that even pro cyclists don't pull up on the pedals in any useful way (see cyclinguk.org/cycle-magazine/peddalling-dynamics). They just press harder on the descending pedal and lighter on the rising pedal.

There is evidence that at maximal efforts – i.e. sprinting – higher power outputs are possible on clipless. That's probably due to the more secure footing enabling you to pedal quicker, since power is force times cadence. Being able to apply power to the descending pedal *slightly* earlier may also be a factor.

Conversely, at very low cadences – i.e. out of the saddle on steep hills – clipless makes it easier to drag the pedals over the 'dead spot', where the cranks are approaching vertical. Outside of these scenarios, flat pedals have been proven to be just as efficient.

Clipless systems

An at-a-glance guide to some of the more popular options.

Name	Cleat	Advantages
Crank Bros	2-bolt	Lightweight, sheds mud
Look Keo	3-bolt	Release-tension adjustability
Shimano SPD	2-bolt	Ubiquitous, durable, cheap
Shimano SPD-R	3-bolt	Durable, good foot support
Speedplay	4-bolt	Ergonomic adjustability
Time ATAC	2-bolt	Lots of float, sheds mud



Shimano's PD-T421 Click'r pedal (left) and R1 shoe (right)

Clipless pros

- You'll look pro! Don't underestimate the desire to look like a serious cyclist.
- Your feet won't slip off the pedals. This is important if you're sprinting, pedalling at high cadences (on a fixie?), or riding in the rain or mud. But toe-clips and/or straps also do this, and pedals with pins are surprisingly grippy with the right footwear.
- The pedals are usually smaller, so you're less likely to catch one when cornering.
- Stiff-soled clipless shoes allow efficient power transfer. (But then you only need stiff shoes because your pedals are the size of lollipops! A big stiff pedal is as good as a stiff shoe.)

Clipless cons

- You can't ride your bike in anything but clipless cycling shoes – and compatible ones at that: the cleats and pedals must match. Wrong shoes? No ride.
- For walking, cleated shoes are either adequate (recessed) or terrible (non-recessed).
- You have to unclip and clip in whenever you stop and start. It's a hindrance around town.
- If you fail to get your feet out of the pedals (it's a right of passage...) you'll hit the deck, still attached to your bike.
- Your feet are basically locked into one position. ('Float' is the ability to move your feet within this limitation.) So each cleat's fore-aft position and rotational angle has to be right to prevent aches and pains. On flats, you can place your feet however you wish – and adjust this as you ride. ●

I'm sold: clip me in!

There are two categories of clipless pedal. Those designed for road cycling are single-sided and use a large cleat that sits proud of the sole, attached by (usually) three bolts. Those designed initially for mountain biking are usually double-sided and use a smaller, recessed cleat attached by two bolts. (Some cycling shoes, like Shimano's R1, accept both two- and three-bolt cleats.) Road pedals are really only good for road cycling, while 'mountain bike' pedals also suit commuting, touring, general leisure use, and even road riding. If you're nervous about going clipless, it's hard to beat Shimano's PD-T421 Click'r pedals (RRP £49.99). They're easy to unclip from and double as flat pedals.

Jargon buster

Why 'clipless' when you clip in? Because they don't have toe-clips and straps, like racers used to.