

TECHNICAL/LEGAL/HEALTH
YOUR QUESTIONS
OUR ANSWERS

Q&A

LEGAL

CLUB RUN CRASH

Q During a recent chain-gang, a crash occurred when the third rider in the line ran into the back of the second rider after the first rider braked. The third rider fell off and sustained fractures to wrist and elbow. Rider three is now suing rider one for damages. I was not involved, but if rider three wins it will surely be impossible to

Third-party liability insurance, such as CTC's, is important if you ride in a group as you might cause a crash



ride in bunches or road races. Is the claim likely to succeed?

M WEAVER

A Cyclists do need to take care when riding in a bunch. The slipstream effect is greater the closer you are to the rider in front, but riding too close leads to greater risk. It is sensible to keep your hands on the hoods and to position yourself slightly offset so that you can see ahead. Sudden movements, often over-reactions, can cause pile ups. Make a clear signal to riders around you and remember to look over your shoulder. Each member of the group must be vigilant.

Riding close together can also enhance the safety of the group as they will be more visible in traffic. Motorists are frequently unaware that the law permits cyclists to ride two abreast, and many readers will no doubt have been on the receiving end of abuse from motorists in these circumstances.

It would be inappropriate for me to comment on an ongoing case, particularly if the cyclists are CTC members and if CTC is supporting one or more of the injured cyclists in a claim through Slater & Gordon. Occasionally, we are instructed by cyclists injured in a pile up. Whether or not it is possible to pursue a claim depends on the individual circumstances of the case, and whether we can identify and prove negligence on the part of one or

more cyclists.

There have been very few reported cases in relation to injured cyclists riding in a group. In a recent High Court case, *Thomas v Warwickshire County Council*, Mr Thomas, an experienced cyclist, sustained a serious head injury when he fell from his bike during a group ride when he struck a defect on the road surface. Mr Thomas was travelling at 25mph, riding two abreast with 20 other cyclists, 15cm from the rear wheel of his fellow rider when he struck the defect. The judge held that it was reasonable to assume cyclists would ride two or even three abreast but significantly, and very harshly in my view, he held the claimant to be 60% contributory negligent on the basis he was riding closely behind the bike in front.

When riding in a group it is particularly important to have third-party liability insurance in the event that there is a pile up and you are identified as the culprit. As a CTC member, you will have up to £10million of indemnity cover. Affiliated clubs also have the benefit of indemnity insurance. If you are the innocent injured party you may, of course, pursue a claim through the CTC Legal Services scheme.

The outcome of the litigation referred to in Mr Weaver's question will not impact on the future of group cycling. Incidents will occasionally happen.

PAUL KITSON

MEET THE EXPERTS



CHRIS JUDEN
CTC Technical Officer
and qualified engineer



DR MATT BROOKS
Cycling GP



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CONTACT
THE
EXPERTS

Send health and legal questions to the Editor (details on p88). We regret that Cycle magazine cannot answer unpublished health and legal queries. Technical and general enquiries, however, are a CTC membership service. Contact the CTC Information Office, tel: **0844 736 8450**, cycling@ctc.org.uk (general enquiries) or Chris Juden, technical@ctc.org.uk (technical enquiries). You can also write to: CTC, Parklands, Railton Road, Guildford, GU2 9JX. And don't forget that CTC operates a free-to-members advice line for personal injury claims, tel: 0844 736 8452.

HEALTH

HIGH BLOOD PRESSURE

Q A year ago, an over-65's health check (I am 70) showed that I have high blood pressure. I was prescribed Amlodipine 5mg tablets and my blood pressure has dropped. But I suffered side effects, the worst being shortage of breath, especially when climbing hills. I felt I might have to give up riding with my club. (I do a road ride of 40 miles or so every weekend and a mountain bike ride of about 20 miles every Thursday.) When I mentioned this to my doctor, she suggested coming off the tablets for two weeks. I did and felt 10 years younger, easily keeping up with clubmates. I think this shows that Amlodipine is not suitable for me. Is there anything else I could use for my blood pressure?
WH JACKSON

A Hypertension (high blood pressure) is a common medical problem, which is important as it increases the risk of other conditions including heart attack and stroke. It usually refers to a blood pressure above 140/90. Treatment is through a combination of lifestyle factors – a healthy diet, exercise, not smoking and maintaining a normal BMI – and medication.

Those medicines used for hypertension tend to be grouped together based on their mechanism of action. Amlodipine is a calcium-channel blocker. Other frequently used classes of drug are ACE inhibitors (e.g. lisinopril and ramipril) and thiazide diuretics (e.g. indapamide and bendroflumethiazide). Beta-blockers

Like all medicines, those that tackle hypertension (high blood pressure) have side effects

(e.g. atenolol) and alpha-blockers (e.g. doxazosin) are also used although not usually as first-line treatment.

All medications have side-effects. Many are relatively minor, and a particular side-effect will not affect everyone. Some side-effects are not too troublesome and can be tolerated. However, given the problems that you have experienced with shortness of breath while taking amlodipine, it would seem sensible to try another drug.

NICE provide some clear guidance on treatment of hypertension. In your age group, the next drug to try would be an ACE inhibitor such as lisinopril or ramipril, assuming there are no contra-indications. There is always an element of trial and error in the process as it is not always possible to predict which of us will get troublesome side-effects with any given medication. It is, however, usually possible to find one or more drugs which are both effective at controlling your blood pressure and acceptable to you in terms of adverse effects.

DR MATT BROOKS



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TECHNICAL

BROKEN CRANK

Q The right-hand crank on my hybrid recently snapped at the pedal hole, spilling me onto the road. I've had the bike for four years, clocking up over 10,000 miles. When the crank snapped, I was starting a small climb, standing on the pedals to stay in a high gear. Might the crank have been cracked from new?
KEITH RICHARDS

A This break has all the signs of a fatigue fracture: the darker, smoother part is the zone of gradual crack growth and the rough, bright surface is the final tearing fracture. The origin of the crack will be a tiny flaw in the metal,

perhaps an included fragment of foundry slag or a surface scratch, at which the stresses of your pedalling tended to concentrate, alternately pulling apart then closing up the metal around this flaw, until it became an actual crack.

This crack then grew slightly deeper into the metal with each subsequent reversal of strain, which became so great that another crack formed on the opposite side of the pedal hole. At this stage there should have been a visible hairline crack radiating from the side of pedal axle's shoulder. It might have been possible to make it open slightly by standing on the 6 o'clock pedal, but you'd need an assistant to observe that. Finally, there wasn't enough metal remaining to support >

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your hill-storming lunge on the pedal.

Some metals, such as steel and titanium, are resistant to the formation of cracks at surface flaws. Aluminium isn't. It looks to me most likely that this crack started at the interface with the pedal shoulder. Some cranks come with thin steel washers to protect their surface against scoring by the pedal shoulder as it is tightened. I strongly recommend these washers with pedals where the spanner flats cut into the shoulder. It appears that your pedals, however, have a smooth circular shoulder, which I'd have thought unlikely to damage the crank enough to start a crack. The shoulder will nevertheless rub the surface upon tightening and a washer might not.

Thirty years ago it would not have been hard to find someone who'd broken a crank. Some cranks had a reputation for fracturing at the pedal hole. But to be fair: at that time, the use of lightweight alloy cranks was spreading from the cossetted realm of cycle sport to the knockabout world of travel and transport; and the end of a crank does tend to knock against things! So manufacturers always had an answer to complaints. Articles were written nevertheless, reporting that other cranks with more metal around the pedal hole didn't seem as failure prone. When new designs of crank appeared they tended likewise to be fatter at the ends. I guess they were made thick enough that surface scratches shouldn't matter anymore. And the problem went away.

This broken Sram crank, however, doesn't swell visibly around the pedal hole and is somewhat reminiscent of those older, thinner designs...

Anyway: if you're a big strong guy and like to stomp up hills, my advice is to use pedal washers, and choose heavy cranks that are especially meaty around the pedal hole.

CHRIS JUDEN



TECHNICAL

MORE COMPACT DOUBLE

Q I'd like lower gears on my Scott Metrix road bike, which has Sora 18-speed gearing via 50-34 chainrings and an 11-30 cassette. I

imagine the options are:

1. New cassette with 36 teeth, presumably with a new rear derailleur and a longer chain.

2. New chainrings (44-26). The front derailleur might work, but a new crank will be needed to take a small ring. A couple of years ago you suggested 'bolting an inner onto a Stronglight ST55 single chainwheel'.

RICHARD FOXLEY

A That's a good summary of the least-cost options. Option 1 is simplest and most certain to work. Any 9-speed Shimano MTB mech will work perfectly with a 9-speed road shifter. So don't stint yourself: get a 'Shadow' type 9-speed mech that'll let you fit a '29er' cassette with up to 36 teeth. Sora quality would be Deore RD-M592-SGS. Or upgrade to SLX RD-M662-SGS or XT RD-M772-SGS. SGS means longest cage, which you will need even though you only have a double, because the cassette has such a wide range.

As for option 2: Spa Cycles still supply that cheap and truly compact ST55 double, but you'll need a new, square-taper bottom-bracket (seek Spa's advice on spindle length) and must hope that your existing front mech will cope despite the lack of shift-assist pins on this outer chainwheel – and it being smaller than the 50 your existing mech is designed to fit over. Fortunately, your bike has a clamped-on mech that can be slid down the seat-tube, but there's still a potential problem with the outer ring being more sharply curved than



A 9-speed Shadow-type Shimano MTB mech works with 9-speed Shimano road shifters. Fit an 11-36 cassette!

These days, cranks seldom crack at the pedal holes. But if you're a big guy, use chunky cranks and fit pedal washers

the outer cage. This shape mismatch opens an unavoidable gap over the teeth at the back of the cage, through which a shifting chain may over-shoot, then jam as you pedal the overshot links forward into the narrowing gap! So it's safest not to go too much smaller than 50. I think 46 should be safe enough and would put 28 on the inside. (The tooth difference isn't the same, but that's not vital except between a triple's outer and middle.)

Another option is to fit a Sora triple crank on the same bottom-bracket. Look for a secondhand one, with worn-out chainrings, because you'll be swapping all of them for something different! Instead of the outer, fit a Stronglight chainguard ring (from Spa Cycles). They come in sizes to fit an outer ring (flipped around to go instead of the middle ring) with 44 teeth, except not even Stronglight makes 130mm bcd outers that small. Middleburn do (or will) make a ring like that, and it'll be a better ring, but pricy! With an outer guard to nudge an overshooting chain back into line, you don't need to mind the gap at the back of your cage and can happily use an outer this small with your existing mech. And since difference isn't vital for doubles (unless it's so great the chain drops to the very bottom of the cage, which it won't), put 26 or even 24 on the inside.

CHRIS JUDEN

