

Q & A

Your technical, legal and health questions answered.

This issue: heart-rate irregularities, derailleur adjustment, 650B tyres, and 'cyclists dismount' signs



MEET THE EXPERTS



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HEALTH

HEART-RATE SPIKES

Q I have been alarmed by some readings on my heart-rate monitor. I am a fit, 63-year-old cyclist. My maximum heart rate used to be around 180, but I've had the odd spike above 200. Normally, these spikes occur near the start of a ride; when I slow down they pass and rarely reoccur. I discussed this with my GP who, after a 24-hour monitor, pronounced me fit and well. Last night, I did a 10-mile time trial without warming up properly. My HR quickly went up to about 220, and stayed high for a few minutes. My options now seem to be:

1. Go back to my GP and demand more tests/referral to specialist.
2. Cut back on high-intensity riding.
3. Carry on regardless.

I'd welcome your advice.

K MURISON

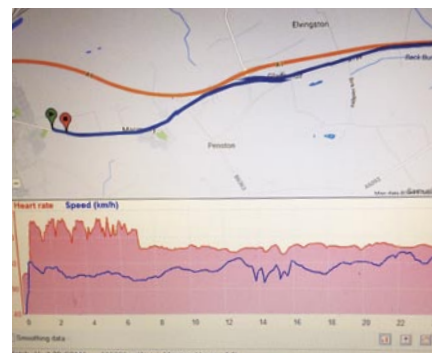
A If we assume that your heart-rate monitor is correct (not always the case, so it may be worth trying another one to confirm your findings), then I think this requires further attention. Various methods can be used to calculate maximum predicted heart rate, most of which give similar but slightly different estimates. Since all individuals vary, they can only ever be estimates. One rule-of-thumb formula, which has been around for many years, is '220 - age'. By this method, your predicted maximum rate would be 157bpm (beats per minute), well below the 220bpm you have been experiencing. Therefore, the implication would be that your 220bpm may be abnormal.

Presence of any other cardiac symptoms such as chest pain, breathlessness or dizziness would add further weight to this argument. It is also important to know whether your resting heart rate and rhythm is normal and whether you get any palpitations at other times. From your question, I believe that you have had a 24-hour ECG performed. If this was normal, I wonder whether you went cycling during the time you wore the

monitor and, if so, whether your heart rate went up to 220bpm during that period?

I would encourage you to go back and talk to your GP again, taking your data with you. Your GP should consider your heart monitor readings alongside any symptoms, examination findings, and the results of tests done so far. Your doctor will then be able to advise you regarding any further cardiac investigation that may be required. In the meantime, I suggest you ease off the high-intensity riding.

DR MATT BROOKS



● Sustained heart-rate spikes above one's normal maximum should not be ignored



● The top screw limits the derailleur's top gear position and vice-versa

TECHNICAL ADJUSTING GEARS

Q Is there a technique for setting the Shimano derailleur gears found on mountain bikes? With constant use, these gears often start to miss a cog or will not go in at all. I'm struggling to adjust them as I do not know which screw is which. Could they not be different colours?

RON COLEMAN

A There are two basic adjustment procedures with indexed derailleur gears. First up are the limit screws, which prevent the mechanism carrying the chain over the end of the cassette. On modern Shimano derailleur gears, up to the new Shadow MTB type, the limit screws are at the back of the upper pivot casting or 'b-knuckle'. If the chain will not shift into either the largest or smallest sprocket, check that the relevant limit screw is not the cause. Unscrewing it will allow the mech to move across further. Make sure you don't go too far, or the chain may come off the cassette and jam the transmission. Shimano's lower gear limit screw is placed below the high gear screw (see picture).

Assuming the chain can shift to all the sprockets, any difficulty in shifting into a specific gear is usually due either to sticking control cables, in which case they should be cleaned or replaced, or to cable wear, in which case the indexing must be adjusted. This is done using a barrel adjuster, usually found on MTB transmissions at the shift lever.

A quick method of adjustment is to screw in the barrel adjuster to leave about one turn remaining and then, with

the chain running freely on the smallest sprocket, take up slack in the cable and tighten it. The first click of the shifter should move the chain onto the next sprocket. If not, screw the barrel adjuster out a quarter turn at a time until it does. Next, shift the chain to one of the middle sprockets and use the barrel adjuster to get the chain running straight onto it rather than at a slight offset. This will ensure that the indexing matches the cassette.

RICHARD HALLETT

TECHNICAL DRAG-BRAKE LEVER

Q I have a bike with a drag brake at the rear and a V-brake at the front. The rear brake lever needs to pull a longer section of cable to achieve a braking action. Can you recommend a brake lever for the rear drag brake? A V-brake lever is not very effective.

J SILVERTOWN

A Levers for full-length MTB-style linear-pull brakes need to pull more cable to actuate the brake than do levers suitable for cantilever and road bike calliper brakes. If used with a brake not designed to work with such levers, a V-brake lever brings the brake blocks up to the rim quickly. The brake will feel 'hard' and under-powered, however, since a lever that pulls a lot of cable has a low mechanical advantage. When used with a V-brake calliper, it translates into effective braking due to the high mechanical advantage of long V-brake arms.

You don't specify what your rear drag brake is, but it sounds like you need a lever that pulls less cable, not more. In that case, a Shimano BL-R550 brake lever, which is designed to work with calliper and cantilever brakes, will do the job if you use flat handlebars. You'll need to stick with the V-brake lever for the front brake.



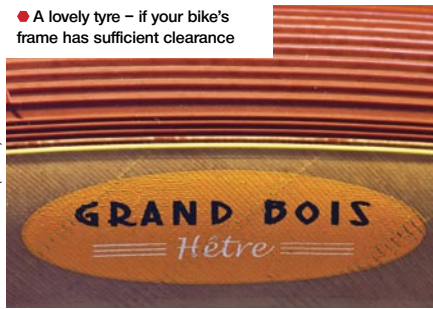
● This Shimano BL-R550 lever pulls less cable than a linear-pull (V-brake) lever

ADVERT TO
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● A lovely tyre – if your bike's frame has sufficient clearance

Photo: WickedVT (Flickr)



» **TECHNICAL SWITCHING TO 650B**

Q I am considering fitting a pair of 650B wheels to my 700C-wheeled Planet-X London Road hybrid to extend its capability on canal towpaths etc. Perhaps Mavic Crossrides with Grand Bois Cyrès (32mm), Lierre (38mm) or Hétre (42mm) tyres. As a 650B expert, I'm wondering if you could advise if these are reasonable options. **MIKE YOUNG**

A The Grand Bois Hétre is a great choice for this purpose, as is the Lierre. There are, however, two obstacles. Firstly, both tyres are smaller in radius than a 700×23c tyre, by about 10mm and 15mm respectively. This will lower your bottom bracket height by the same amount, which may or may not cause problems with pedal clearance depending on crank length, pedal type and terrain. The stated BB drop of 70mm translates to a BB height of 260mm with the Hétre.

Secondly, while the London Road's fork may have enough clearance for 650×42B tyres, the chainstays may not. If that's the case, why not try 700C wheels fitted with the 700×32C version of the Cyrès? **RICHARD HALLETT**

LEGAL CYCLISTS DISMOUNT

Q Transport for London temporarily closed part of CS7 with a sign saying 'cyclists dismount'. Cyclists nipping through without dismounting were given £50 fixed penalties. Do temporary notices saying 'Cyclists dismount' have legal status? Can the police fine cyclists who ignore them? **R BLACK**

A Where there are roadworks, it is not uncommon to come across 'cyclists dismount' signs. The Department for Transport provides guidance about safety for cyclists in 'Safety at Street Works and Road Works: A Code of Practice' (see

bit.ly/ctc-cyclistsdismount).

This states that suitable provisions are to be made for the safety of cyclists passing or crossing works. Particular care is needed where cycle lanes or cycle tracks are affected by street works or roadworks. Cyclists might have to use other parts of the carriageway, a temporary cycle track, or an alternative route. Consideration must be given as to whether access on the carriageway can be preserved for cyclists, even if it needs to be closed to motor vehicles. Where the carriageway is closed but the footway remains open, a 'Cyclists dismount and use footway' white-on-red temporary sign can be used.

Contractors are therefore required by the rules to keep the road open for cyclists if at all possible, and especially if it is also open to cars. The Department for Transport guidelines state quite clearly:

Photo: Terry Freedman (Flickr)



● This sign is advisory rather than mandatory

'Where access is permitted for motor vehicles, "Cyclist Dismount" signs should not be used. The hazards to cyclists at roadworks are rarely great enough to justify this measure. In any case, cyclists are likely to ignore such instructions.'

The legal status of a 'cyclists dismount' sign depends on the type of sign. Where there is a 'cyclists dismount' sign with a bicycle in a red circle, the instructions are mandatory under s.36 of the Road Traffic Act 1988. If not, the signs are advisory and there is no legal obligation to follow them. They may, however, signal a significant increase in the risk of danger, so this does not mean they can be safely ignored. A failure to dismount could be taken into account if there were a collision.

When considering the rights of the police to fine road users, it is also worth remembering that the police can fine a road user for anti-social behaviour. In some situations, this could justify fining a cyclist for riding through a 'cyclists dismount' sign. **PAUL KITSON**



● Pletscher Twin-Leg Kickstand: strong, light

TECHNICAL I CAN'T STAND IT!

Q I am looking for a strong, stable but lightweight double-leg cycle stand. Can you recommend one? I'm not online or computer savvy. **JIM MORAN**

A Some of the double-leg stands on the market are undoubtedly heavy and look to have been designed for the postal bike market. One that does not is made by the venerable Swiss firm of Pletscher, from die-cast aluminium alloy. Weighing under 600g, it costs around £26. You should be able to order it from any shop that has an account with Chicken Cycles, the UK distributor. Stockists include Evans Cycles. **RICHARD HALLETT**

TECHNICAL SADDLEBAG SUPPORT

Q I've bought an anatomical saddle after years riding on Brooks leather ones. It is comfortable but lacks eyes under the seat to support a saddlebag. I want these bag loops. **TOM SMITH**

A Saddlebag eyes are indeed a rarity on today's saddles, which is regrettable. If you propose to stick with your new saddle, you can fit saddle bag loops from manufacturers such as Brooks and Velo Orange to the rear rails. Alternatively, take a look at the Brooks Cambium Carved, which sports an 'anatomical' hole in the middle of the standard Cambium's very comfortable upper. **RICHARD HALLETT**



● The Brooks Cambium Carved has bag loops

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