

# CYCLOPEDIA

# Knowhow



**DAN JOYCE**  
Editor

Dan has trophies for hill climbing but prefers to take it easy

Making sense of commonly misunderstood subjects

## Steep hill solutions

### How do I get better at hill climbing?

**B**etter in the sense of faster is mostly about improving your power-to-weight ratio. On this those tiresome fitness articles are correct. To climb hills quicker you need to reduce your bodyweight or train more to get stronger, ideally both. Reducing the bike's weight also helps a bit.

'Better' doesn't have to be racing related, however. It can mean 'getting to the top of a steep hill without walking' or 'going for a hilly ride and enjoying it rather than hating it'. Here's what you can do *other than* dieting and training.

#### TECHNIQUE

Don't go too hard at the bottom of a long or difficult hill. Start slowly to stave off fatigue. Downshift as soon as your speed starts to dip and keep pedalling at an easy(ish) cadence. Don't stay in the same gear, pedalling slower and slower, then desperately downshift. Gears shift better if you ease off the pedalling pressure, which you can't do if you're already straining to turn the cranks.

#### FIT LOWER GEARS

Drop-bar bikes in general and road bikes in particular are over geared. You can verify this by



Photo: pamierrcc

visiting Hardknott Pass when the Fred Whitton sportive takes place. Many fit riders will struggle to make the climb. Some will walk up it.

Smaller chainrings and/or larger sprockets are the answer, but these are mostly found in mountain bike groupsets and they're designed to work with mountain bike derailleurs and shifters. Drop-bar shifters typically have the wrong cable-pull ratio to operate mountain bike derailleurs, which limits you to the larger gears that manufacturers deem appropriate for road bikes. Fortunately there are workarounds – see below and also [cyclinguk.org/cycle-magazine/feature-does-your-bike-need-lower-gears](http://cyclinguk.org/cycle-magazine/feature-does-your-bike-need-lower-gears).

Don't listen to anyone who says you should be able to ride up any hill using a 34/28 bottom gear. It's macho nonsense. The best bottom gear is the one you'll happily pedal up any hill, while still being able to balance. If you fancy 20/36 or 30/51 as a bottom gear (15-16in on 700C wheels), fit that.

## Use an e-bike

If lower gears aren't sufficient, you need more power: an e-bike gives you an extra 250 Watts. For hill climbing, the other important number is torque. More torque means better climbing.

If you'll be riding with electric assistance most or all of the time, a mid-motor with high torque (e.g. 65-85Nm) will get you up steeper hills best. That's why high-end e-mountain bikes and e-cargo bikes use such motors.

If you only want a helping hand on hills, however, and will spend a lot of each ride cycling without assistance, a lighter bike with a motor that produces less drag when it's switched off may be better for you – even if it has less torque. A 40Nm motor will still get you up most hills.

## Lower gear ideas

Workarounds to beat the system and get hill-friendly gear ratios.

#### Wolf Tooth RoadLink £20



Derailleur hanger extender that enables you to run an 11-40t 10- or 11-speed cassette on a road bike. [wolftoothcomponents.com](http://wolftoothcomponents.com)

#### Spa Cycles Super Compact TD2 Chainset £79



With chainrings as small as 40 (outer) and 24 (inner) this is a genuinely compact double. You'll need a square-taper BB. [spacycles.co.uk](http://spacycles.co.uk)

#### Microshift BS-M11 shifters £85



Run 2x11 or 3x11 Shimano MTB gears on your drop-bar bike! Also available for 10- and 12-speed, and 11- and 12-speed SRAM. [microshift.com](http://microshift.com)

#### Jtek Shiftmate 8 £30



Shiftmates change the pull ratio of cables. #8 lets a Shimano 11-speed road lever operate an 11-speed MTB derailleur. [jtekengineering.com](http://jtekengineering.com)

#### Microshift Advent X £229.97



1x10 groupset with an 11-48t cassette (£39.99+) and clutch derailleur (£59.99). Drop-bar shifters are £129.99. [microshift.com](http://microshift.com)