

# a guide to correct use of your gears

It may sound funny to produce a guide to changing gear but apart from the bikeability courses at primary school, we don't think there is any resource for what is one of the most fundamental tools in cycling. People may feel frightened to ask, but are most relieved when advised.

Keeping your chain in as straight a line as possible is the best way to cycle; 'Crossing the chain' puts pressure on the mechanisms (derailleurs). A common complaint is that there is a rubbing noise - this is most often caused when the chain is crossed - maybe you are riding on the big cog at the front and the big cog on the back. The same gear ratio would be found by riding in the middle cog on the front, and in the middle of the cassette, thus keeping your chain in a straight line.

Try to prepare for the hill, rather than getting to it and cranking through the gears whilst putting pressure on the pedals. When you are pushing on the pedals, it puts strain on the cabling and derailleur causing them to stretch and unsettle the indexing.

To change gear smoothly, release the pressure from your foot off the pedal, and change through the gears one at a time until you are in the correct one for the hill.

If you ride a road bike, the front mech may have a 'trimming' function which allows you to shift the mech out of the line of the chain, therefore preventing it from rubbing. It is an extra 'click' on the gears but moves the mech along just enough to miss the chain. Use this when you are in 3 on the front and in the middle to the top of the cassette at the back.

Don't change the front and back gears at the same time.

A talking point for riding and gear use is cadence - the rate of turnover on your pedals. To keep it easy, you should aim to rotate your right leg full circle at least every second - this would mean you cycle with a cadence of 60RPM (revolutions per minute.) If you get used to cycling in this way, you not only reduce the strain on your legs but you also relieve pressure on the gears by 'spinning.' Generally, cyclists can spin happily at 80-90RPM, with elites and pros reaching 110-115RPM.

Problems with gear shift can be caused by a number of things:

- A worn chain / cassette
- A knocked mech hanger - the piece of metal that the rear derallieur hangs on
- A dry chain
- Something stuck in a chain link such as a small stone
- A stiff link on the chain which makes the gears jump on every revolution
- Stretched cables which cause gears to slip
- Corroded cables make changing stiff
- Rear wheel not fitted correctly

If you ride with your chain aligned, ease off the pedals as you change down your gears, have checked your chain is lubricated and the chain links are free, then it may be time for a mechanic to reindex the gears and possibly replace the inner cables. This is not a particularly expensive job but can transform the ride quality of your bike!

