

Saddle up and be 'at one' with your bike

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It is an age old question and one that arouses much debate. It is critical to your cycling but can often be overlooked, causing problems that can, with some application, be avoided.

If you are fortunate enough to have your bikes custom built then you may never have given much thought to your saddle position. A custom built bike is tailored specifically to your measurements and so you can just jump on and go.

Saddle position can be determined either by scientific formula or by how it feels. I am in the camp of scientific formula. It is important to get it right and more so than ever if you suffer from postural ailments such as lower back pain.

Cycling is perfect for anyone who carries extra weight or is rehabilitating from injury or illness.

You and your bike should be a team you should feel 'at one' when you cycle. They say it takes five years for cycling to become instinctive but you can certainly go some way towards the optimum position with help.

A position that once felt just right can become increasingly uncomfortable if tougher rides shorten and tighten muscles, and



Cruising: You and your bike should be a team

this can force you to ride lower to avoid discomfort, reducing your pedalling efficiency and with that your enjoyment.

Getting the right position is crucial to get the best from the working range of muscles involved in pedalling. The prime movers are the quadriceps, hamstrings and gluteals, with the calves helping out at the ankle.

With most of the force being generated at the hip and knee, the angle of 'bend' in both these areas is very important. The theory goes that, for any movement, the group of muscles

involved will work optimally in any given range.

In the nineties, sports scientists began to look at the body on the bike, focusing on the angle of knee bend at the bottom of the pedal stroke rather than the saddle height itself which had previously been the focus.

In 1994, a team identified a knee bend of 25-35 degrees at the bottom of the pedal stroke to be optimal for power and injury prevention. They also connected a lower saddle height with an increased risk of knee injury. Recommending that saddle

heights be set towards the higher range for those with a history of knee problems.

Although I am writing specifically about cycling, it is acknowledged that without the necessary range of movement in the hamstrings the pelvis will be pulled under and the lower back flattened, placing it in a poor position to handle load and increasing the likelihood of pain and problems.

The hamstrings are sensitive to overuse resulting in lower back pain. There is a huge focus on hamstrings during Pilates.

The following is a hamstring test you can follow to ascertain your range.

Lie on your back with your spine rested keeping one leg stretched along the floor:

Draw the other leg in towards you and then slowly lengthen the leg towards the ceiling.

Support your leg behind the hamstring or calf depending on your flexibility.

Never force the stretch or support behind the knee. Keep your head rested to the floor.

Your lower back has to stay in neutral.

Neutral is a relaxed and natural spine. It is not flat to the floor but neither is it arched. Most people will have a natural 's' shape to their spine but this is not always the case. Your 'neutral' spine may take time to perfect. Again, Pilates is something that with practice will achieve this.

Your range of movement is determined by your neutral

spine. Hold this position and estimate the angle of your knee extension. The optimal angle is 145-155 degrees.

Keep a note of this and then look at your cycling position.

On the bike record your current position including the angle of your knee bend.

Now compare your current riding position with the 25-35 degree 'ideal' knee angle at the bottom of the pedal stroke.

Next, note the difference between the on-the-bike angle at the knee and the hamstring range of motion test.

Are you expecting your leg to stretch further when on the bike than it can in the hamstring test? If you have a big difference between the two it is likely that you are already suffering from lower back ache.

You should begin to work on your hamstring stretches and in the interim give your lower back less pressure by reducing your saddle height.

You must never change your position dramatically. Do this marginally (millimetres) to avoid sudden change and note down the changes.

It is not as complicated as it may sound. You are simply aiming to lengthen your hamstrings to give you the best power output and most comfortable riding position. The formula simply gives you something to go on and offers a logical way to change your position.

Get it right and you can enjoy miles of uninterrupted pleasure.

There are several ways to tackle a stile...

I'VE been finding out about the Lake District's Miles Without Stiles scheme for Active Cumbria this month.

It's a great idea - simple but effective. The National Park is removing man-made barriers such as stiles, kissing-gates and steps from a number of paths to make them more accessible to people with limited mobility.

No doubt, your first thought, like mine, will be of wheelchair users, but Miles Without Stiles benefits so many more people - people who, whenever they plan a walk, have to think carefully about the obstacles they may face along the route.

Families with pushchairs struggle with steps and simply cannot get over stiles or through narrow kissing-gates. Older people, sometimes with knee or

Guidebook writer Vivienne Crow shares her love of the great outdoors



hip problems, struggle if they are faced with one stile after another.

And what about dog-walkers? People expect our canine companions to be able to take stiles with a leap and a bound, but that's not always the case.

A couple of years ago I was out walking on Gowbarrow with some friends, including Christianne, who is visually impaired. Having slowly and carefully negotiated the rugged, stony path beyond Aira Force, we reached a ladder stile.

Christianne climbed it without any problems, but then it was her guide dog Bramble's turn. She got to the third step and then slipped,

somehow managing to twist as she fell, smashing her back on the bottom rung.

While we stood open-mouthed, sure that she'd broken some important bones, she simply got back on her feet and began to try again.

We managed to stop her, but it took three of us to then lift this hefty golden retriever over the locked gate next to the stile.

From a purely selfish - and somewhat lazy - point of view too, I could sometimes do without stiles.

I'm only 5ft 4in, so step stiles that require walkers to step up 2ft or more are a problem.

Come the winter, I absolutely refuse to stand on top of high ladder stiles with a thick crust of ice on them. I've perfected a technique that involves me sitting

on the top rung, lifting my legs high in the air and doing a sort of bum shuffle at the same time - not very dignified, but it gets me over without risk to life or limb.

And then there are those times when I'm simply too tired for yet another stile...

I was recently coming down from the fells, hot and tired after a long, tough walk above Seathwaite, when I reached an annoyingly tall ladder stile. I looked at it wearily and sighed... and then I looked at the larger-than-normal hog-hole in the wall beside it.

I glanced around to make sure there was no one else nearby; then I took my rucksack off, shoved it through the hole and crawled through behind it.

If only all ladder stiles could be that easy!

