

## Physio Top Tips for Cyclists

By Mark Matthews Bphty MCSP

We all know that the wagon will only go as fast as the donkey that pulls it, yet how many of us actually spend the same time scrutinising ourselves as what we do on our bikes? What starts off as a slight niggle can soon escalate and hamper your performance.

Cycling is such a repetitive motion that any slight variation can lead to irritation of tissues, pain and imbalance of musculature. We all have different breaking points, some of us reach these quickly and pains begin, some take a lot before the wheel falls off, and some just never reach that point. This depends on many variables i.e. genetics, type of training, amount of training and it's a delicate art of knowing your limits while combining recovery with training i.e. the fitter you are, the more your body can handle.

Being able to locate a structure that is causing the pain i.e. plica, cartilage, muscle, tissue is only the beginning of resolving that niggle. To achieve long term resolution, you need to find the underlying problem that caused the structure to be irritated in the first place and correct it accordingly. An x-ray or MRI scan may help identify the structure, but often cyclist's symptoms gradually build up and generally investigations will come back clear. Health professionals and patients alike can become too fixated on the structure and focus resolving this without considering the cause as to why it has become inflamed in the first place.

Knees are one of the most common symptomatic structures with cyclists and yet very rarely is it the cause of the problem. It is a classic example of "piggy-in-the-middle" being at the mercy of the hip, pelvis and ankle and their movements.

So many injuries, particularly cycling, are related to poor biomechanics and poor posture and positioning. Think of you legs when cycling, they are like pistons in a car engine, if your doing 80rpms for 3 hours your leg will have done 14,400 revolutions! Any asymmetry or overuse of a muscle can quickly cause a structure to become irritated.

The number one destroyer for cyclists is bike set-up. We all have different body shapes and it is vital that your bike matches your body and the length of your limbs. A bike fitting is vital and is one of the first questions I will ask a cyclist. A little effort in correcting heights and length can have a huge effect in improving power and get your body into the correct biomechanical set-up, reducing the likelihood of problems occurring. Once on the bike, you need to be able to maintain your correct positioning of your pelvis and lumbar (core) region. Think of this as the foundation you would build a house on, if its unstable or positioned incorrectly, you've got a leaning tower of Pisa! Core stability is vital to everyday life, with sport it is absolutely essential to have good stability to achieve your potential.

The next biggest is pedalling technique. We all feel our legs moving around but how many of us actually spend time 'feeling' our legs move around? With cleats, it is all too easy to cheat and get into a bad rhythm during various phases of the revolution of your leg. Spending time on those base-training off-season sessions to concentrate on

even pressure through the cleat should result in a symmetrical rhythm, therefore a symmetrical 'burn' in both legs at the end. If your cramping up consistently on one leg or the ache is more intense then you need to review your technique again.

Another major issue is flexibility. As we train, we are stressing our systems and tissue, inducing an adaptive response so that it can deal with this stress in the future. The 'burn' we feel is actually minor damage done to the tissue, as it heals it shortens the tissue, over time this can tighten around joints and change our biomechanics. Being able to maintain certain positions on a bike is reliant of having sufficient length of certain tissues. A restriction in one area leads to compensation in another resulting in certain tissues being stressed far more and increasing the chances of damage. Long (30-40sec) sustained stretching to all major muscle groups and regions involved is absolutely crucial to you achieve your capabilities.

Watch this space for the next instalment of Top Tips about pedalling technique, core stability and key stretches essential for cyclists.

If you have a question or would like a niggle assessed then please e-mail me and we can organise an appointment [kiwi.physio@googlemail.com](mailto:kiwi.physio@googlemail.com)

Mark Matthews BPhy MCSP

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