

Eastern Sports & Spinal Care
'Performance Focused Physio'

Setup and Saddle Up

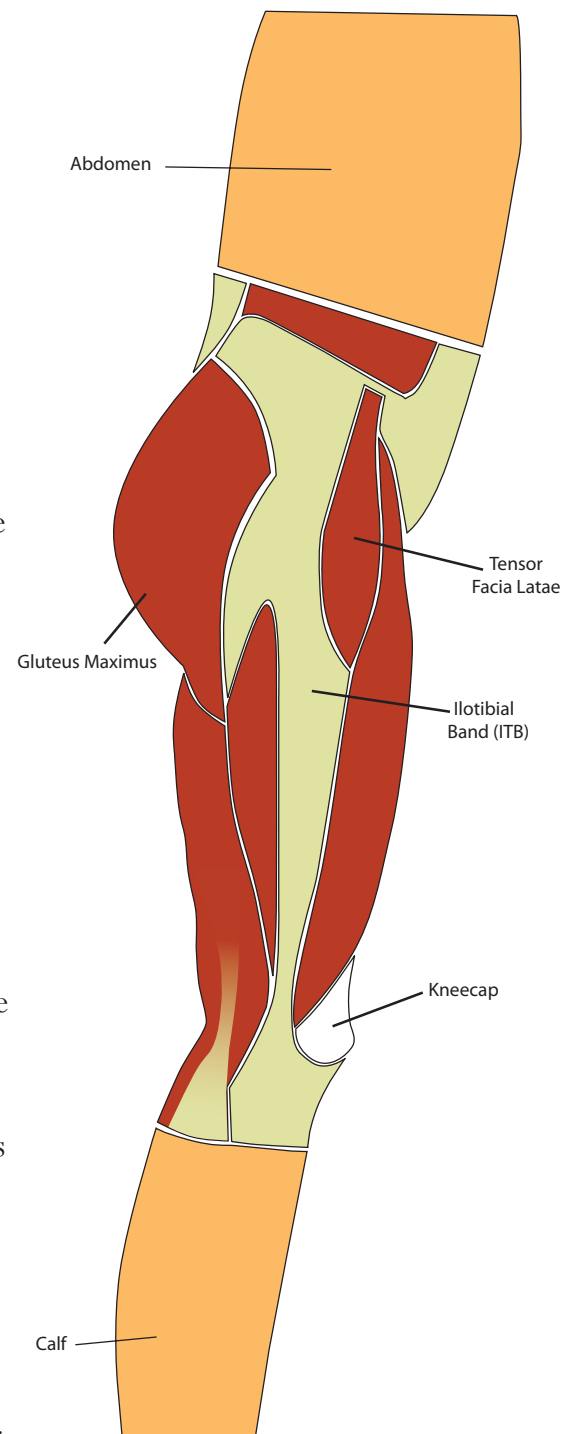
With South Australia's obvious obsession with the Tour Down Under, it is easy to get swept up in the excitement and you may be very keen to pull the bike out of the shed. However, before you dust it off and hop on, there are a few things to consider and this exceeds checking the tyres and testing the brakes...

It's all about the actual bike set up – where is the saddle in relation the pedals (cleats) and the handle bars etc. While considering all these aspects of setting the bike up correctly, it is tempting to place it in the 'too hard' or 'too busy' basket. But you owe it to your legs and back, your comfort and your performance.

This guide does not include step-by-step instructions on how to set the bike up, but rather includes a few useful tips on how to minimize the likelihood of injury and enhance your performance.

The nature of this sport is repetitive and involves a lot of loading through the knee joints and pelvis and therefore the muscles and ligaments around it. An example of an injury that commonly occurs, with an improper bike set-up is the Illiotibial Band (ITB) friction syndrome or cyclist's knee. This affects the ITB which is a thick, tendon-like, band down the side of the leg that is too taut during the push-through phase and grinds repeatedly against the bony prominence on the outside of the knee (lateral femoral condyle) which results in significant inflammation and pain with riding. If this remains unaddressed your body may develop unhelpful compensating strategies and can result in injuries elsewhere.

The first step in management is consulting a physiotherapist to address biomechanical factors. At **Eastern Sports and Spinal Care** we can assist you by conducting a thorough assessment and develop a specific, individualised exercise program to address muscle imbalances or other biomechanical factors.



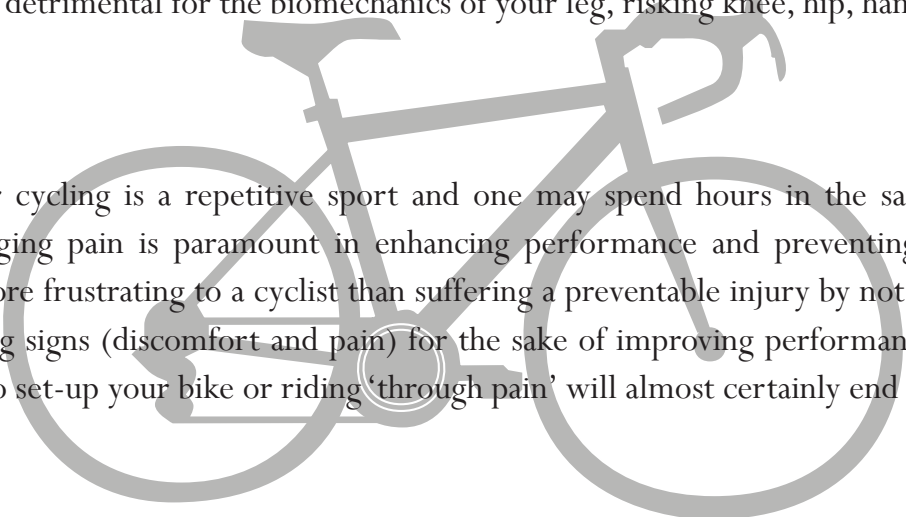
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Some important tips:

- Posture: When you are on the bike ensure that you are comfortable and that you have no discomfort in your back, hips and knees.
- Make sure your saddle is not too high. This can result in over-flexing your neck (by looking forward) and back, you may end up with headaches and rocking of your pelvis while riding. A rocking pelvis can result in injury to the back and gluteal muscles and can also affect your performance. A lot of energy is lost through this action because it does not allow a direct transfer of power from the legs to the pedals which wastes valuable energy.
- Make sure your saddle is not too low. This will result in your knees flexing more than required and you may be working outside the strongest range of your quadriceps muscles – this again may affect your performance and reduce efficiency.
- Make sure the ball of your foot is on the pedal. This will allow maximum efficiency since you also utilise your calf muscles to a greater extent, taking full advantage of the strong push-off power that your gastrocnemius (calf muscles) generate.
- Make sure your toes are pointing forward and not outwards. This can have significant implications for the biomechanics around your knee joint and hips.
- Make sure the handle bars are within comfortable reach. This is to avoid excessive bending at the hips and hyper-flexion of the low back. This can have a negative impact on your cycling efficiency and generation of power. It can be detrimental for the biomechanics of your leg, risking knee, hip, hamstring and ITB injury.



Remember cycling is a repetitive sport and one may spend hours in the saddle. Comfort and acknowledging pain is paramount in enhancing performance and preventing injuries. There is nothing more frustrating to a cyclist than suffering a preventable injury by not paying attention to the warning signs (discomfort and pain) for the sake of improving performance. Not taking the time to set-up your bike or riding ‘through pain’ will almost certainly end up in an injury.

To prolong your cycling career (competitive or social) or improve your performance, contact us on **8331 0606** to arrange an appointment with one of our physiotherapists.

Reference

Moore F (2008): *Correct bicycle set-up to minimise the risk of injury*. *SportEX Medicine*, 37, 6-9.

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