

KNEE PAIN AND CYCLING

Why do we get it and how do we prevent it?

What causes cycling injuries?

Most injuries in cycling actually occur in males and are associated with high speed and/or result from collisions with motor vehicles. This accounts for up to 60% of cycling injuries. The remaining injuries are typically due to overuse and are much more preventable than the aforementioned injuries.

When you consider that in a one hour ride at 90 RPM, each leg will make a cycle of knee flexion and extension 2,700 times, it is not surprising that the most common overuse injury in cycling tends to be patellofemoral or anterior knee pain.

What causes patellofemoral pain in cycling?

There are many causes of patellofemoral pain in cycling, the most common cause being improper bike fit. Additionally, improper pedal stroke can contribute significantly as a study of competitive cyclists has shown that those who exhibited knee pain cycled with increased ankle dorsiflexion and hip abduction as compared to those who did not have knee pain. Other factors that can contribute include muscle imbalance, improper foot wear, increasing volume too quickly, increasing intensity too quickly, and using too large of a gear when riding.

How do you treat it?

Physical therapy is typically helpful in decreasing symptoms associated with patellofemoral pain syndrome as well as identifying the musculoskeletal issues that may be contributing to the problem. In addition to physical therapy treatment, assessment of bike fit is critical in order to determine if that is a contributing factor to the onset of knee pain. Additionally, an honest assessment of one's training program is essential to insure that an appropriate base period was done prior to interval training and that there was not a significant increase in volume in a short period of time, which created an overuse syndrome.

How do you prevent anterior knee pain in cycling?

1. The most important factor in preventing onset of anterior knee pain in cycling is to ensure that your bike has been fitted appropriately. It is also important to have your bike fit reassessed as your volume increases and fitness and/or flexibility changes occur.
2. In addition to bike fit, it is also very important to include stretching and strengthening as part of your exercise regimen to prevent muscle imbalance.
3. Increase volume and intensity gradually.
4. Add intensity only after developing sufficient base fitness.
5. Maintain a cadence of 85 to 100 RPM to avoid pushing too large a gear. Change gears based on cadence, not speed.