

Spring Into Action – Understanding Iliotibial Band Syndrome



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For the month of April, “Our Health” presents three columns guiding you through the new seasons activity changes. This week, part 3 will discuss iliotibial band (ITB) syndrome, a bothersome condition which can cause both hip and knee pain.

The ITB begins with it’s attachment to a small muscle at the front of the hip, the tensor fascia lata. This muscle is only a few inches long, before transitioning completely into the thick band of fibrous tissue which connects on the outside of your knee, just below the knee joint. This tiny muscle can have a large effect on knee pain, as dysfunction here can increase the tension through the length of the band and alter the knee mechanics. As the band crosses both your hip and your knee joint, it can have a mechanical effect on both.

ITB syndrome, frequently experienced by runners and cyclists, is experienced as pain along the outside of the knee, typically felt after activity. Symptoms are generated from friction between the portion of the ITB at the knee and a bony prominence on the long bone of the leg, the femur. Tension within the ITB can also create pain along the inside of the knee through shearing forces.

Just above the knee joint on the outside of the leg, is a tiny prominence used for attachment of other important tissues. When the leg is straight, the ITB lies directly in front of this prominence. When the knee is bent to 20-30^o however, the band lies directly behind this prominence. Therefore, with repetitive bending and straightening of the knee that is combined with strong muscular pull at the hip and knee (as in running and cycling), this portion of the band rubs back and



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forth over this prominence. This will lead to low grade inflammation, swelling, pain and eventually activity avoidance.

There are many connections between the muscles of the pelvis, hip and thigh, which all play an integral role in how the ITB functions. If tension is increased in the band, friction is more likely at the knee joint. Function and distribution of force between the knee and the hip can also be disturbed. As well, the ITB can also affect how the knee cap (patella) tracks during movement, explaining it's role in patellofemoral pain syndrome as discussed in last weeks column on knee pain.

Most significantly, ITB syndrome is not only experienced by runners or cyclists. Due to changes in weight distribution and ligament laxity at the pelvis and hip joint, pregnant women can experience tightness in this tissue which contributes to pain. Seniors with degenerative disease at the hip or knee can also experience this syndrome, as can adolescents during a growth spurt.

Due to the anatomical complexity in this area, identifying areas of true weakness, tightness and restriction which promote friction at the knee is the best strategy to recovery and long term prevention. Many strategies can be used however, mostly focusing on restoring a balance between tissues at the hip and reducing friction between the ITB and surrounding tissues as it travels down the leg, allowing optimal stress distribution.

This concludes April's three part series 'Spring Into Action.' Hopefully you have found this information helpful at reducing injuries this season and found useful answers if you are currently suffering a related

problem. As always, consult a healthcare practitioner for more information or assistance on conditions affecting your mobility.

Enjoy your spring, keep moving and stay healthy.

