

The Bane of Many Runners: The Iliotibial Band

We have been seeing many runners in clinic and at training runs who are experiencing lateral thigh and leg pain. So now seems like a good time to address the topic of iliotibial band friction syndrome (ITBS).

You may have heard of or experienced iliotibial band syndrome ITBS, but might not know much about the diagnosis. ITBS is the most common cause of pain on the lateral, or outer side, of the knee in athletes, particularly those who participate in sports that require a lot of bending and extending of the knee, such as running and cycling. Understanding the anatomy and function of the iliotibial band (ITB) is the first step in treating pain associated with ITBS.

The ITB is the largest and toughest connective tissue in the human body. It is a fascial structure, which means it is a very thick sheet of connective tissue that covers muscle and connects muscle to bone. The ITB originates from the side of the hip bone (the iliac crest) and includes tissue from the tensor fascia lata and gluteus maximus muscles. It extends to the outside of the shin bone (tibia), just below the knee. The ITB has a few functions. It moves the leg out from the body, aids in bending and extending the knee and twists the leg internally. New research indicates that another main function of the ITB is energy conservation. Because of its elasticity, the ITB can provide more economical exercise.

As with any structure in the body, the ITB can cause debilitating pain and sideline the most seasoned runner. Because there is no attachment of the iliotibial band to the outer side of the knee, repetitive bending and extending of the knee causes the tissue to rub. The pain may occur because the ITB becomes irritated as it rubs along the outside of the thigh bone and creates bursitis. Another and more widely accepted reason is because the ITB rubs on a layer of fat that has a high concentration of nerves along the outside of the knee.

Specific anatomy or muscle imbalances also may contribute to ITBS. These include high or low arches in your feet, different leg lengths, anatomical alignment abnormalities of the legs or weakness or imbalance in your leg muscles. Over-training and training habits can also be factors. For example, excessive hill running (both up and down hills) means lots of bending and extending of the knee, which may irritate the ITB. Repetitive running routes can also cause ITBS, as can poor conditioning, lack of cross training, inadequate warm up and stretching and excessive foot strike. Recognizing the underlying cause of your pain will help with treatment and prevention.

Initial treatments include anti-inflammatories, ice, stretching and altering training habits that may be causing the pain. You can stretch the ITB by crossing the unaffected leg in front of the affected leg and leaning into the unaffected side. Check online for diagrams to help. Foam rolling can also help to loosen and stretch the ITB. Foam rollers can be found at sporting goods stores and online.

If these treatments do not alleviate pain, a sports medicine-trained physician can help you determine the cause and develop a treatment plan. Other treatment options include physical therapy, a running gait analysis, orthotics and even steroid injections if the pain becomes intense and debilitating.

We are in the home stretch for the Amway River Bank Run. The race is just a handful of weeks away, so maintain your focus on making it to the finish line on race day. If you have any questions or are struggling with an injury or lingering pain, the experienced sports medicine physicians at Spectrum Health Orthopedics would be pleased to help. You can call us at (616)267-8860 or learn more on our [website](#).