

# Iliotibial Band Syndrome

## What is it?

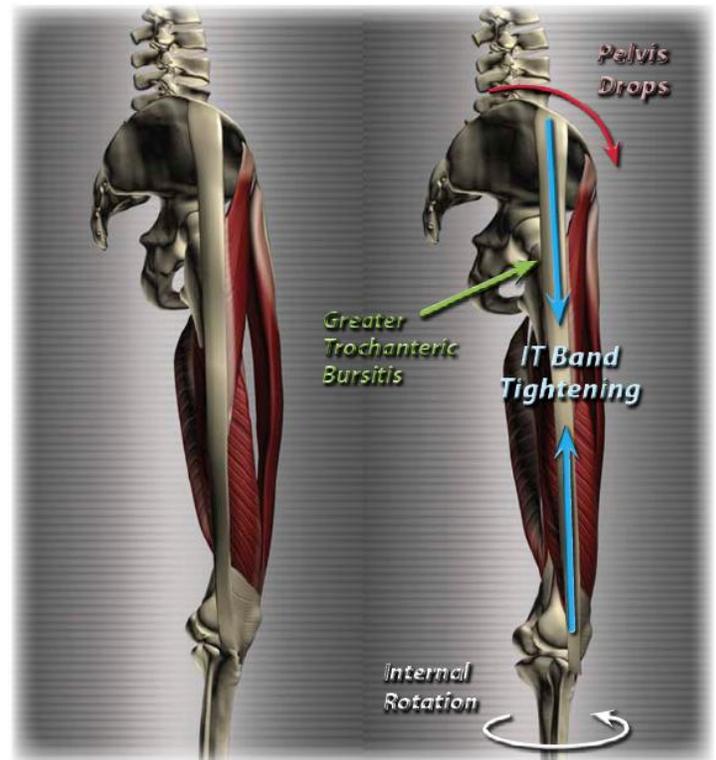
The IT (Iliotibial) band is a tough band of fibrous tissue that runs down the outside of the thigh. The upper fibers of the IT band start at the hip and the lower fibers insert below the knee on the outside of the tibia (shin bone). It works with the surrounding muscles to assist in flexion and stabilization of the knee. It also assists with hip movements out to the side and internal rotation.

IT band syndrome is an irritation of this tissue due to excessive tightening or shortening of the band. It is commonly felt as localized pain on the lower thigh or outside of the knee where the IT band inserts. It may also be painful at any point along its length. A tight IT band is often the cause of greater trochanteric bursitis (at the prominent knob of the hip bone). Pain can be aggravated by activities such as running, climbing and descending stairs, or getting out of a car. Pain is usually worse during activity and can lessen during rest. This is because activity tends to promote more tightening of the band and more friction over the bony prominences the band crosses.

## How did I get it?

There are many anatomical factors that can contribute to the development of this condition. People with bowed legs, excessive internal rotation of the lower leg, pelvic muscle imbalances and leg length differences may be prone to developing this problem. This is a repetitive stress injury so excessive training, or always running on the same side of a curved road is thought to contribute to IT band syndrome.

Biomechanical problems in the feet are also a major contributor to the development of this syndrome. Specifically, excessive pronation or flattening of the arches can lead to extra stresses on the outside of your thigh. When the



*Under the skin, postural changes caused by a flattened arch can have profound effects on certain muscles and joints. Here the Iliotibial Band tightens, leading to potential inflammation at the hip and knee.*

feet flatten, the lower leg is turned inwards (internal rotation). This moves up the chain to rotate your thigh inwards. This creates a bowing of the knee and added strain on the outside of the knee. When you are running or moving on flattened arches, the tightened IT band may rub over bones in the hip or knee or just get irritable from the tightness, triggering inflammation and pain.

## How is it treated?

**Exercise:** Stretching exercises are directed at lengthening the IT band and the muscles of the outside of your hip, to try and relieve some of the tightness. Strengthening exercises can be directed at your gluteal region to stabilize the pelvis and try to prevent pulling of the IT band at the knee. Remember, the IT band is not a

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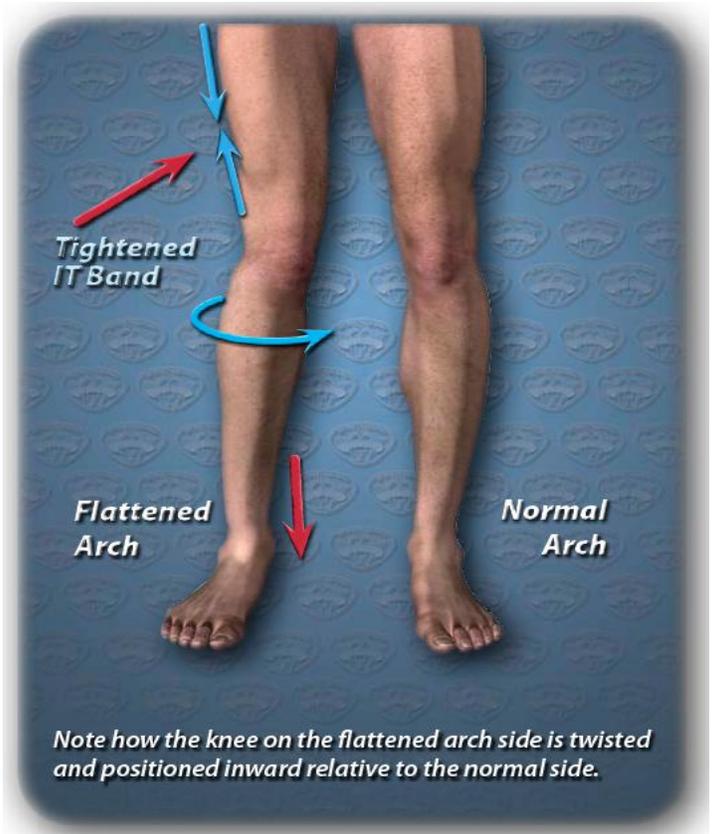
muscle, but a thick band of fibrous tissue (think of a tough piece of leather) so it is very resistant to being stretched.

**Anti-Inflammatory Agents:** These may include ice and oral anti-inflammatory medications. Ice can be applied directly to the site of pain to decrease the inflammatory response. These may provide some temporary relief from the pain of inflammation, but are not helpful in addressing the underlying cause of your condition.

**Rest and/or Training modification:** Rest is often recommended to reduce inflammation. You may be advised to decrease your training time or distance. You may also be advised to avoid activities such as running and try biking or swimming. Altered or reduced training schedules may be suggested in combination with running form advice. Shortening your stride and avoiding hills may be part of your strategy. It is important to remember that although rest by itself may decrease your pain temporarily, it does not address the reason why you have developed this problem in the first place.

**Steroid Injections:** A local cortisone injection to the side of inflammation can help temporarily reduce the pain of IT Band syndrome. This is a last resort and only done when all other treatments have failed.

**Custom Foot Orthotics:** The proper foot orthotics can go a long way to taking the stress off of your IT band. The right custom-made, biomechanical orthotics can address the underlying cause of your knee dysfunction. Abnormal joint positions can be reversed, thereby allowing function to be restored and tissues to heal. A **biomechanical** foot orthotic, unlike many custom orthotics, is designed to completely support the corrected position of your foot. They are also designed with your weight and specific activity level in mind creating true biomechanical shock



mechanical function takes the abnormal stress off the outside of your knee and allows the IT band to heal.

## How long will it take to heal?

This depends on how long you have had the problem (chronicity), how active you are, and how much you modify your activities. By correcting the cause of your problem with a *premium custom* foot orthotic, you can expect 50-70% relief the first month, 70-90% the second month and 90-100% the third. The benefit of using an orthotic is that a reduction in training or activity is often not necessary to reduce the stress on your knee – the orthotic is doing that for you. Once your body has adapted to the new corrected position, activity levels can generally be maintained while your body heals.

*This document provides a general overview on this topic and may not apply to everyone. To find out if this condition applies to you and to get more information on this subject, talk to your health care provider.*