

## What is it?

The iliotibial band is a band of strong connective tissue which runs from the pelvic bone (ilium) down the outside of the thigh to the top of the shin bone (tibia). See figure 1. Iliotibial band friction syndrome (ITBFS) is a condition which describes the rubbing of this band of tissue as it passes over a bony bump on the outside of the knee joint. It is one of the most common overuse injuries of the knee in runners and cyclists.

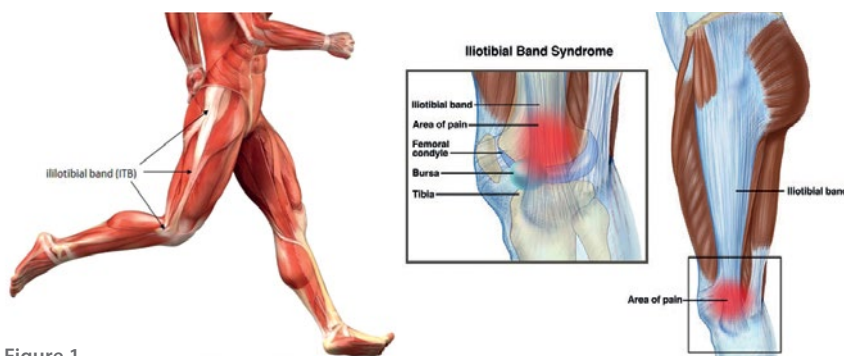


Figure 1

## What are the symptoms?

Iliotibial band friction syndrome results in pain felt on the outside of the knee. This pain is often aggravated by activities which involve repeated bending and straightening of the knee such as running. It typically develops gradually. Initially, the pain may begin as a dull ache down the side of the knee which appears near the end of a session and disappears when you stop. However, if you continue to exercise and cause further rubbing of the iliotibial band, the pain may progress to become more intense and appear earlier in a session.

## How did I get it?

Iliotibial band friction syndrome is an overuse injury. When the knee is bent and straightened the iliotibial band slides over a bony bump on the outside of the knee. When this is performed repeatedly or when the band is excessively tight, wear and tear of the band can develop as it flicks over the bony bump. Risk factors include weak hip abductors, bow legged limb alignment, leg length discrepancy and tight calf musculature. Some of the types of activities which can cause this condition is a sudden increase in running mileage regardless of whether it is on one day or cumulative i.e. increase in weekly running mileage, over striding, running downhill, running on a cambered road surface which causes the leg length discrepancy, poor bicycle fitting e.g. when the seat of the bicycle is not adjusted appropriately to suit the rider. Running down hill in particular can be extremely provocative due to the joint angles and forces.

## What should I do?

Iliotibial band friction syndrome generally does not improve on its own if the cause is not addressed and you continue to exercise in a way which aggravates the injury. If you suspect that you have ITBFS you can begin initial treatment yourself. This should consist of icing the area of pain following exercise. Icing should consist of crushed ice wrapped in a moist towel applied for 15—20

minutes over the outside of the knee or ice in a paper cup massaged up and down the outside of the knee until the skin is numb. This should be repeated over a 1—2 hours period. If you have or suspect you have iliotibial band friction syndrome, you shouldn't ignore the problem. This may lead to your problem getting worse such that your pain becomes more severe and is felt more frequently. Iliotibial band friction syndrome generally does not produce any long-term effects, as

long as it is properly diagnosed and appropriately managed. Recovery usually takes a number of weeks. During this period you can often keep exercising, depending upon the severity of your pain. In a small number of cases recovery may be prolonged. In these cases surgery may be required to relieve pain. This is only performed after conservative or non-surgical treatment has failed however this is rarely required.

## How is a diagnosis made?

The diagnosis of ITBFS is suggested by the characteristic nature of the knee pain and physical examination findings. Sometimes X-rays, MRI or a bone scan may be required to rule out other possible causes of pain such as a bone stress fracture.

## What does rehab involve?

The focus of rehab is to correct the strength and mobility problems. To maintain fitness it will be important to cross train performing exercises other than the inciting activity. Since some runners experience their ITBFS symptoms only at specific training paces, it may possibly be okay to continue running at a different pace if you can run without a limp and without pain. Similarly cyclists may be able to cycle at certain gears but not others.

### Movement modification:

It is important to review running / cycling technique to ensure that there are no obvious, reversible and treatable errors that predispose to ITBFS.

### Activity Modification:

Reducing provocative activities such as running and / or cycling will facilitate recovery. Ensuring the bicycle is set up appropriately to suit the rider may assist as well as experimenting and selecting the appropriate gear ratios. Avoiding running on cambered roads and downhill will be necessary.

### Medication:

Pain medication tends not to be particularly effective for ITBFS. A trial of anti-inflammatories or simple pain relief medication like paracetamol may, however, be worthwhile initially or if the symptoms are severe.

### Physical therapy:

Exercise therapy, in particular strengthening and flexibility exercise, should be the mainstay of treatment. This can be done through formal physical therapy which should include a home exercise program.

### Cortisone Injection:

A cortisone injection does not cure the problem but can provide effective pain relief. Such injections have been used for over forty years and side effects are very rare. Approximately 25 percent of ITBS patients have complete resolution of symptoms, 50 percent derive benefit for a few weeks, and 25 percent gain no benefit. A cortisone injection could be considered if 6 to 12 weeks of physiotherapy treatment has not been

helpful. A cortisone injection may also be used in well-trained athletes who develop symptoms shortly prior to an important race or event.

### Irritant Injections:

Although they can be quite painful, irritant injections such as PRP are increasingly popular. It acts to irritate the tissue and infiltrate growth factors that promote healing. PRP has increasing evidence in tendinopathy but currently there is no evidence in ITBFS. Degeneration is a component of ITBFS so it may be of some use although no definitive statement can be made as to its effectiveness.

### Surgery:

Surgery is a last resort. Surgery can be quite effective if needed but most symptoms resolve without surgical intervention.

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