

Iliotibial Band (ITB) Syndrome.



What is it?

ITB syndrome is a common knee injury that usually presents as pain on the outside of the knee. This is caused by inflammation of the thick band of connective tissue which originates near the pelvis, travels down the outside of the leg and inserts below the knee cap.

What Causes this?

ITB syndrome is caused by excessive friction, as the band slides back and forth over the bony contours of the knee (see picture below). It is common, therefore, in repetitive activities, such as running and cycling. Certain postures may contribute to the condition. Poor foot posture due to abnormal rotation of the foot and leg (**pronation**), causes the arch of the foot to flatten and the leg to twist more than normal. This can increase the stress on the band. Other contributing factors are pre-existing ITB tightness and muscular weakness around the knee and hip, especially muscles in the buttock region.

What are the signs & symptoms?

Main Symptoms: Pain over the outside of the knee. This may start as a diffuse ache, but progress into a painful, sharp, localised pain. Palpation usually reveals tenderness approximately 2cm above the knee joint line, and there may be some swelling around this area. Typically the pain begins after a long run, or several minutes into a run, however if severe, it may hurt at rest. The pain may be aggravated by running downhill, or sitting for long periods of time with a bent knee. A special test, called the “Obers test” can be performed to detect tightness of the ITB.

Additional Symptoms: Occasionally a tight ITB can produce symptoms of pain around the hip region. Remember, the band crosses the hip joint too.



What will physiotherapy consist of?

Treatment requires activity modification, manual therapy, and stretching and strengthening of the affected limb. The goal is to minimise the friction and inflammation of the ITB as it slides over the bony contour of the knee. If the condition is left untreated the injury may become *chronic* leading to further weakness and shortening of the ITB. Physiotherapy may include:

Massage encompasses a variety of techniques and is given with sufficient pressure through the superficial tissue to reach the deep lying structures. It is used to increase blood flow, decrease swelling, reduce muscle spasm and promote normal tissue repair.

Mobilisation is a manual technique where the joint and soft tissues are gently moved by the physiotherapist to restore normal range, lubricate joint surfaces, and relieve pain.

Ultrasonic Therapy transmits sound waves through the tissues stimulating the body's chemical reactions and therefore healing process, just as shaking a test tube in the laboratory speeds up a chemical reaction. It reduces tissue spasm, accelerates the healing process and results in pain relief.

Interferential Therapy introduces a small electrical current into the tissues and can be used at varying frequencies for differing treatment effects. E.g. pain relief, muscle or nerve stimulation, promoting blood flow and reducing swelling/inflammation.

Other treatments that may be used

Laser Therapy emits beams of light into the tissues of the body, stimulating chemical reactions and having a similar effect to ultrasound though using light energy instead of sound energy.

Acupuncture is an oriental technique of introducing needles into the skin to increase or decrease energy flow to promote pain relief and healing.

Injection Therapy is a specialist procedure, which needs the consent of your G.P. A non-harmful steroid and local anaesthetic are injected directly into the injured structure. It has a dramatic effect on removing inflammation and promoting healing.

Podiatry involves an analysis of the foot mechanics and structure during walking or running and correction as appropriate.

What should the patient do to help their condition?

Active Rest – keep active but avoid activities that aggravate your condition i.e. any activity that places repetitive strain on your knee, such as running or lifting heavy weights at the gym.

Apply an ice pack – for a maximum of 20 minutes. Do this in acute injuries where there is swelling, inflammation and pain. A bag of frozen peas wrapped in a damp cloth works well because it moulds to the shape of the knee. Ensure that the skin does not change colour (the sign of an ice burn).

Take ibuprofen/ analgesia - according to the directions on the packet, up to the maximum daily dose. It is not suitable for people who have a history of stomach ulcers, or for some people with asthma. If in doubt, ask your pharmacist for advice.

Exercise/Postural programme – comply with the prescribed exercise/postural programme. **Your physio will instruct you as to which of the exercises to begin with, when to add the others, as well as how to progress the exercises.**

1. Standing ITB stretch.



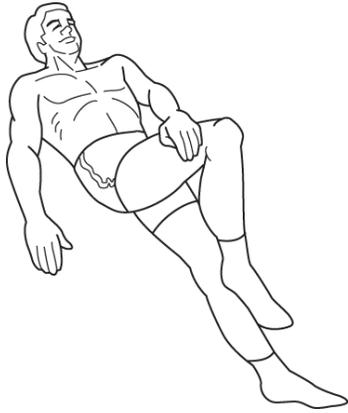
1. Standing ITB Stretch.

A. Stand with your affected/ painful leg facing a wall. Place your affected leg behind and across the non-affected leg (in the diagram above the right leg is the affected). Without leaning forwards, slowly push the hip on the affected side towards the wall – feel it stretch and hold for 30 seconds.

B. Increase the stretch by repeating the above, with the addition of raised arms.

C. Progress the stretch further by bending downwards and diagonally while reaching out and extending the arms with clasped hands.

2. Hip external rotator stretch.



3. Starting Position: Lie on your back on a table or firm surface. Bend one knee and cross it over the other knee.

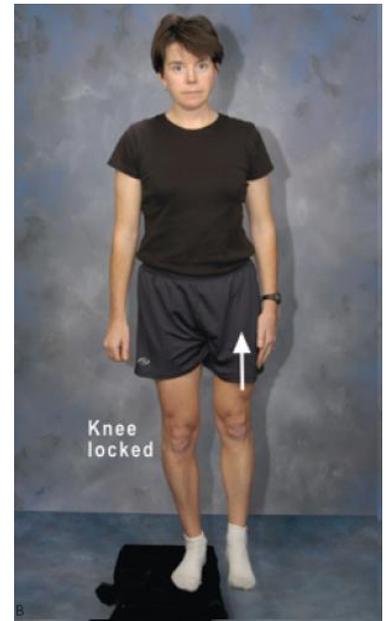
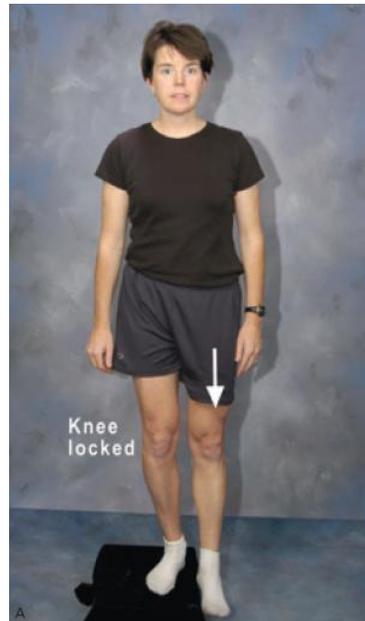
Action: Using the opposite hand to the knee, which is bent, slowly pull your knee across your body. Stretch until resistance is felt and hold for 30 seconds. Repeat 5 times.

3. Gluteus Medius Strengthening.

(A) Stand on a platform and lower the unaffected leg (left leg in diagram) toward the ground slowly. Unsure that your knees remain locked.

(B) Through contraction of the (right) gluteus medius, you then elevate the leg, returning the pelvis to a level position.

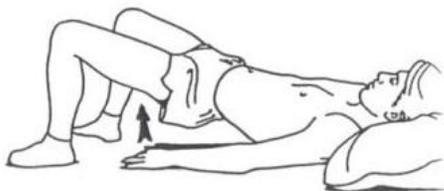
Repeat both exercises 10 times. Perform 3 sets of 10.



4. Hip abductor strengthening



5. Bridging.



4. Lying on your unaffected side, tighten the front thigh muscles on your affected leg and lift that leg 8 to 10 inches away from the other leg. Keep the leg straight. Hold for 10 seconds.

5. Lie flat on your back with your knees bent 90 degrees. Lift your bottom of the floor so that your hips and torso are level. Hold for 10 seconds.

Repeat both exercises 10 times. Perform 3 sets of 10.

What if physiotherapy does not help or resolve my condition?

It is very rare that physiotherapy does not resolve this condition, in these cases a cortisone injection may be appropriate and in very extreme cases surgery is a possible option. These options can be discussed with your therapist if appropriate.