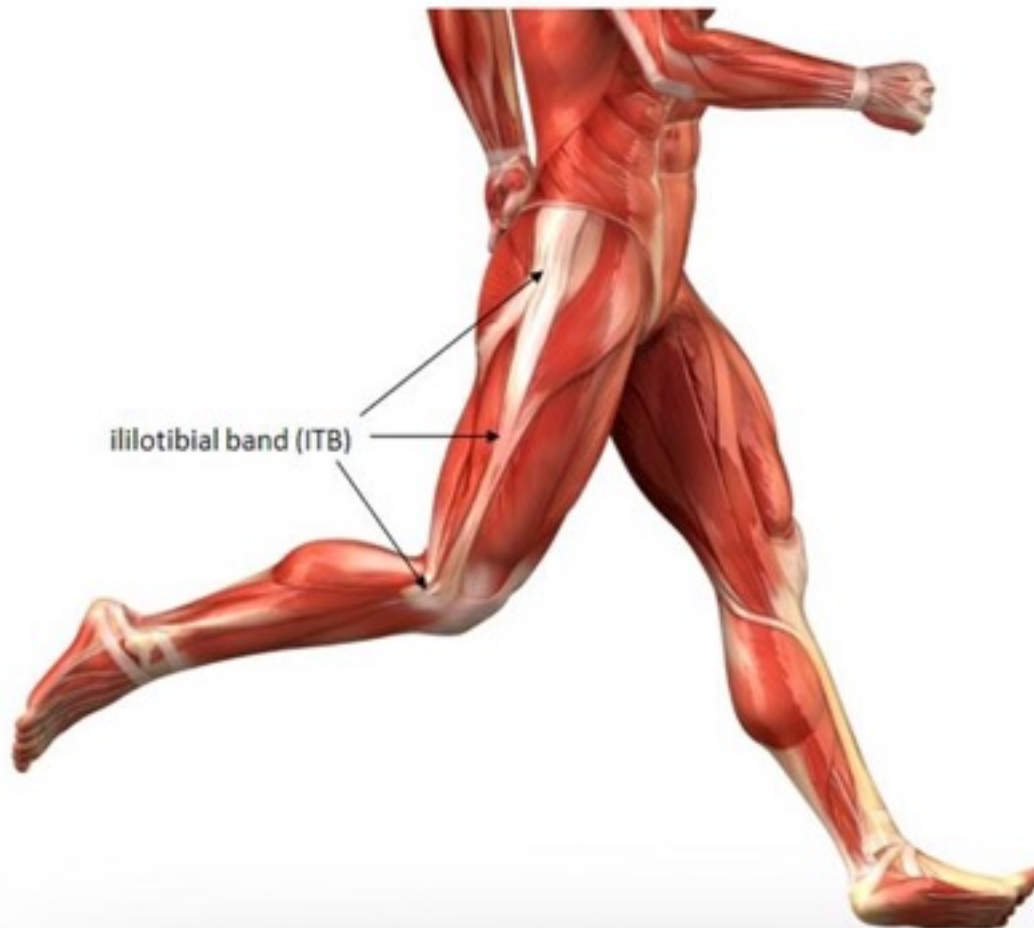


2. Iliotibial Band syndrome

Iliotibial band (ITB) syndrome (so called “runners knee” although often seen in other sports e.g. cyclists and hill walkers).

It is usually an overuse injury with pain felt on the outside of the knee.

Typically a sufferer will report pain on the outside of the knee not linked to any traumatic event. Pain will tend to get worse with activity and ease with rest. There may be some stiffness experienced on moving the knee after long periods of rest and possibly swelling around the area of pain.



Anatomy: The ITB is a structure which is attached around the hip area to a muscle called Tensor Fascia Lata, Fascia is a sheath-like tissue that surrounds muscles and muscle groups. The fascia lata surrounds the hip and thigh. The iliotibial tract (ITT) is a lateral thickening of the fascia lata, originating from the iliac crest of the pelvis and continues down the outer third of the thigh. At the level of the greater trochanter, fibres from the gluteus maximus (GM) and Tensor fascia lata (TFL) musculature merge with the ITT posteriorly and anteriorly.

It then continues down the outside of the thigh and blends into a fascial insertion on the outside of the knee (Gerdy's tubercle). The ITT attaches superficially to the fascia of the vastus lateralis musculature. The distal extension of the ITT provides lateral stabilisation to the knee joint through its attachment to the distal femur and the proximal tibia; the iliopatellar branch of the ITT aids in decelerating medial glide of the patella and leg flexion.

Due to the biological structure of the ITB you cannot
"foam roll" knots out of the ITB
massage the ITB to improve its flexibility
stretch the "ITB"
stimulate a healing response by dry needling

Causes of pain: Anatomically your ITB blends into the knee joint capsule so has no actual point of connection commonly seen in tendons. When you bend your knee it has been suggested tension in the ITB is transferred from the front to the back. The ITB is not free to move therefore cannot cause a friction type injury. A bursa lies under the ITB and it is this that may be irritated and cause pain. It has been proposed that so called Iliotibial band friction syndrome (ITBFS) is secondary to repetitive knee movement through an impingement zone of 30 degrees of leg flexion. This injury is most common in long distance runners because the activity involves repetitive leg flexion and extension approximately 800 times per mile.

Typically ITB injuries result from poor lower limb biomechanics (refer to our **HEALTH ROOMS** blog on lower limb alignment), footwear issues, running on a camber or alteration in training.

Weakness or failure to contract the Gluteus Maximus (GM), Gluteal Medius and TFL during the first 35% of stance can result in excessive adduction of the stance leg in the frontal plane, causing increased tension of the ITT. Long distance runners with ITBFS have weaker hip abduction strength in the affected leg compared with their unaffected leg. Fatigue and weakness of the GM, TFL, and Gluteus Medius may occur later during a run, resulting in an altered or "Trendelenberg gait" (raised hip on that side and the knee drifting inwards. This modified gait has been shown to increase tension on the ITT and is a risk factor for ITBFS. Abnormal pronation of the ankle joint may cause greater than normal internal rotation of the tibia, accompanied by increased tension on the ITT at its insertion point on Gerdy's tubercle during each foot strike, predisposing to injury

Expert diagnosis and appropriate treatment is essential to resolve ITB syndrome and return you to running.

RISK FACTORS FOR ITB injury

Extrinsic risk factors may include:

1. Worn out running shoes. A running shoe loses approximately 50% of its ability to absorb ground reactive forces after 300-500 miles. The more worn out the shoe, the more ground reactive forces are transferred to the knee.
2. Training programs that increase mileage or incorporate hills inappropriately. Weekly mileage should be increased by no more than 5-10% per week allowing for adaptation of the muscles, tendons, ligaments and bone to the increased stress.
3. Running at an improper pace. Placing too much strain on untrained legs may lead to fatigue and injury. Long runs to improve aerobic conditioning should be slow, at 65-70%

maximum heart rate. Anaerobic threshold training can be conducted with shorter runs at 85-100% maximum heart rate.

4. Running on a cambered surface or slippery surface.

Treatment:

Address any biomechanical issues with active exercise, strengthening and stretching.

Movement screening and video analysis are useful in identifying biomechanical contributory factors

Consider use of orthotics.

You may need to decrease your volume of running and consider other factors such as cadence and stride length.

If you think you are suffering from ITB syndrome arrange an appointment with a **HEALTH ROOMS** Physiotherapist. We have vast experience in the treatment of ITB syndrome and other injuries related to running.

To receive the best care and to help you get back running pain free as soon as possible book an appointment at the **HEALTH ROOMS**.

