Iliotibial Band Syndrome in Runners

The iliotibial band (ITB) is a wide sheath of fascial tissue that travels down the outside aspect of the thigh and is considered a continuation of the tensor fascia lata which is one of the outside gluteal muscles. At the knee the ITB inserts both on the patella and into the lateral bony prominence of the tibia.



Iliotibial band syndrome (ITBS) refers to the pain felt over the lateral (outside) aspect of the knee. It is a result of repetitive friction caused by the ITB rubbing over a bony prominence as the knee moves from a bent position (flexion) to a straightened position (extension) such as in running or cycling. In a running stride the common impingement zone is said to be around 30 degrees of knee flexion in the early stance phase. The eccentric contraction of the gluteals in which the leg decelerates to prepare for foot strike causes increased tension through the ITB, thereby increasing frictional forces.

ITBS is the most common cause of lateral knee pain in runners and is the second most common running-related injury overall. Research has shown that it affects from 5% to 14% of all runners. ITBS is generally diagnosed through a detailed subjective history and physical examination by your physiotherapist.

Factors that can predispose to developing iliotibial band syndrome include:

- Adverse strength in the hip stabilising muscles (external rotators)



- Reduced flexibility in the ITB (or more likely the gluteus maximus and tensor fascia lata)
- Choice of running surface/footwear
- Increased training volume
- Abnormal running mechanics (with particular focus on internally rotated and adducted hip and knee movements)

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Conservative treatment of ITBS is generally very successful, with most cases being fully resolved without surgical involvement. Management revolves largely around strengthening of the hip stabilisers and concurrent running re-training to develop neuromuscular control. Myofascial releases from both the physiotherapist and patient focusing on the gluteals, hamstrings and quadriceps have also been found to be helpful to reduce sensitivity and trigger points, thereby reducing ITBS symptoms.

The structuring of this rehabilitation should be at the direction of your physiotherapist but will generally include an acute phase of symptom management with activity modification (e.g no downhill running or running every third day), followed by a graded return to activity as your strengthening program progresses from more isolated to functional training.

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