

IT Band Syndrome

Terry Ryan NC LMBT 2620

Introduction

Iliotibial (IT) band syndrome is a common knee injury common with distance runners and, to a lesser degree, cyclists. The IT band is a thick band of fibers (fascia) that in general runs along the outside of the thigh and specifically originates at the lateral iliac crest and extends distally to the patella, tibia, and biceps femoris tendon. The gluteal muscles and the tensor fascia latae (TFL) muscle attach to the top, and the lower part of the IT band attaches to the tibia, just below the knee. It functions primarily as a stabilizer during movement, such as running.

Symptoms and causes

The primary initial complaint in patients with IT band syndrome is diffuse pain over the lateral aspect of the knee. An associated, but less frequently encountered, problem may occur at the hip called greater trochanteric (upper head of the femur at the hip joint) bursitis. As with most repetitive motion injuries where activity is continued, the initial lateral achiness progresses into a more painful, sharp, and localized discomfort over the lateral femoral epicondyle and/or the lateral tibial tubercle. Athletes often note that the pain is aggravated while running down hills, lengthening their stride, or sitting for long periods of time with the knee in the flexed position.

The cause is excessive friction of the distal iliotibial band as it slides over the lateral femoral epicondyle during repetitive flexion and extension of the knee resulting in friction and potential irritation. It is unclear why this syndrome does not affect all athletes. The most common causes are 1) tight (TFL) and vastus lateralis muscles, 2) tight hips, and 3) connective tissue adhesions in the quad muscles. However, studies have shown relationships between biomechanical factors, such as genu varum (bow legs), pronation of the foot (subtalar joint pronation), and leg length discrepancy.

Treatment typically requires activity modification, massage, and stretching. A specific treatment plan varies with each athlete, but a general plan is as follows:

1. For any endurance athlete, begin a regular stretching program as preventive maintenance. Perform the stretches shown below preferably every day but at least three times per week.
2. If the athlete has already experienced recurring pain in the lateral knee area, perform the simple kneeling diagnostics test to determine if the quads are tight. Note that the pain may be due to causes other than IT band syndrome, but performing the stretches will usually help.
3. If the athlete is in severe pain, see a medical provider for assessment and treatment, such as cortisone injections if prescribed. Also, rest from the training program for a couple of weeks and try some cross-training activities to reduce stress on the aggravated tissue.
4. Consider myofascial release and deep tissue massage treatment to reduce and/or eliminate the connective tissue adhesions in the quad muscles, specifically the vastus lateralis.



Kneeling position

Purpose: initial stretch for quads

Muscles: vastus lateralis, vastus medialis, vastus intermedius and, to some extent, rectus femoris

Stretch: Hold this position for 2 to 3 minutes, whatever is comfortable, or until the tightness is released.

If you can't do this comfortably, your quads are really tight. Often, a person can do this but the anterior ankle hurts because the anterior lower leg muscles, such as tibialis anterior, are tight. This might be resolved by putting a small rolled towel under the ankles for padding.

IT Band Syndrome
Terry Ryan NC LMBT 2620



Hamstring stretch

From practical experience, the hamstrings will spasm during quad stretches if not stretched slightly before because the hamstrings are contracted during quad stretches.

This is a simple stretch that loosens the hamstrings, calf and lower back muscles. Try not to arch the back when leaning forward.



Rectus femoris stretch

Muscles: rectus femoris

Stretch: Start this stretch kneeling on one knee with other leg in front for balance. Begin by bending down and grabbing rear foot without raising the back leg.; otherwise, the hamstring can cramp. Unlike the other three quads, the rectus femoris attaches above the hip joint, and the hip must be extended, as well as the knee flexed, to stretch adequately the rectus femoris. This stretch can be hard on the supporting knee, so use a cushion.

Use 2-second stretches moving pelvis forward and folded knee to knee of straight leg. Keep torso in same upright position throughout the stretch.



IT Band Syndrome
Terry Ryan NC LMBT 2620



Quad stretch - Position #1

Muscles: Vastus lateralis, Vastus medialis, vastus intermedius and, to some extent, rectus femoris

Stretch: Hold this position for a couple of minutes, whatever is comfortable, or until the tightness is released. Use 2-second stretches moving folded knee to knee of straight leg.

Keep the foot of folded leg tight to lateral buttock but not completely under the buttocks. The knee of the folded leg will tend to point laterally; try to keep it close to the knee of the straight leg. If possible, have assistant gently push folded knee down to the floor and in to the straight leg.

Try to keep lumbar area of back pushed to floor (i.e. minimize arching of the lumbar area).

Triathlon

IT Band Syndrome Terry Ryan NC LMBT 2620

Hip Openers

Endurance sports and general lack of movement will tighten the hips. Because the IT band attaches to muscles and fascia at the greater trochanter (upper head of the femur at the hip joint), the two stretches help open the hips.

The upper two pictures show a crossed-leg hip flexion with more stretch on the upper leg. The lower two pictures show the classic yoga half pigeon stretch.



Triathlon