

Iliotibial Band Syndrome

Introduction



Iliotibial Band Syndrome

©MMG 1999

Welcome to BodyZone Physiotherapy's patient resource about Iliotibial Band Syndrome.

Iliotibial band (ITB) syndrome is an overuse problem that is often seen in bicyclists, runners, and long-distance walkers. It causes pain on the outside of the knee just above the joint. It rarely gets so bad that it requires surgery, but it can be quite bothersome. The discomfort may keep athletes and other active people from participating in the activities they enjoy.

This article will help you understand:

- how ITB syndrome develops
- how the condition causes problems

- what treatment options are available

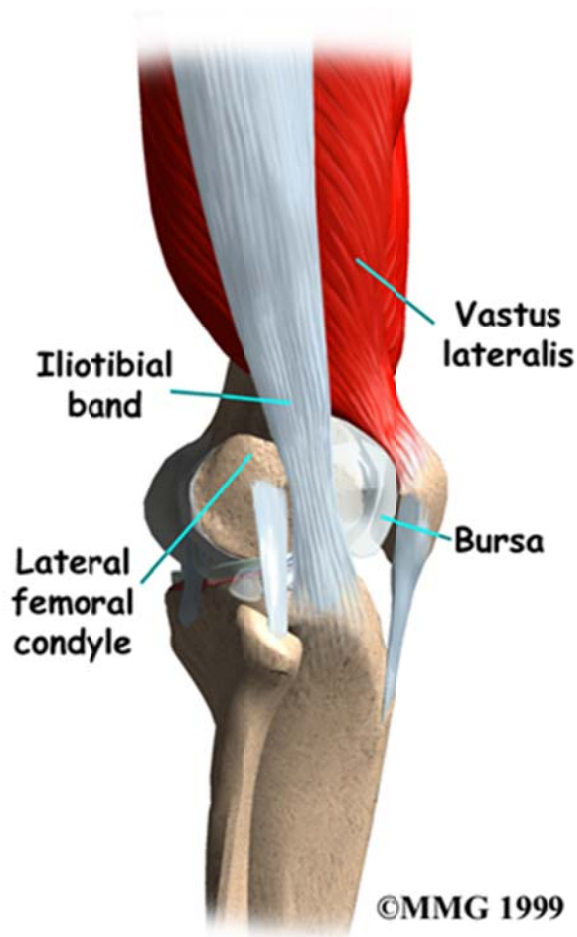
Anatomy

What is the ITB, and what does it do?

The ITB is actually a long *tendon*. (Tendons connect muscles to bone.) It attaches to a short muscle at the top of the thigh called the *tensor fascia lata*. The ITB runs down the side of the thigh and connects to the outside edge of the *tibia* just below the middle of the knee joint. You can feel the tendon on the outside of your thigh when you tighten your hip muscles. The ITB crosses over the side of the knee joint, giving added stability to the knee.

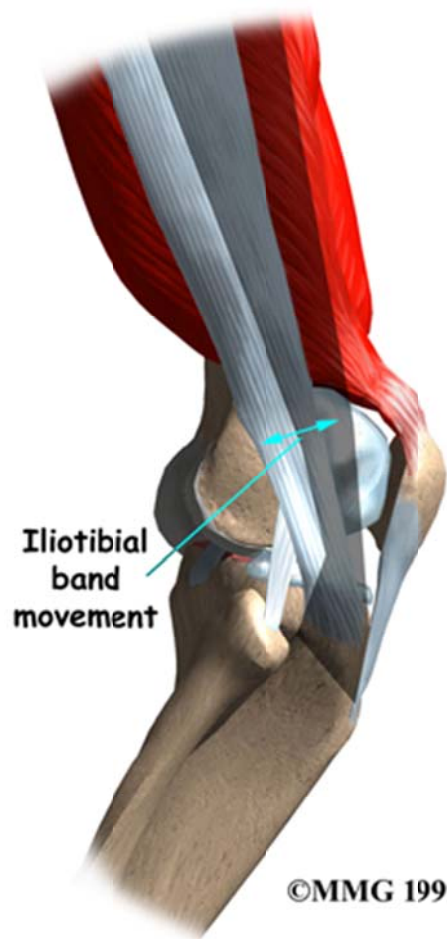
The lower end of the ITB passes over the outer edge of the **lateral femoral condyle**, the area where the lower part of the *femur* (thighbone) bulges out above the knee joint. When the knee is bent and straightened, the tendon glides across the surface of the femoral condyle.

Lateral Femoral Condyle



A *bursa* is a fluid-filled sac that cushions body tissues from friction. These sacs are present where **muscles or tendons** glide against one another. A bursa rests between the femoral condyle and the ITB.

Muscles or Tendons Glide



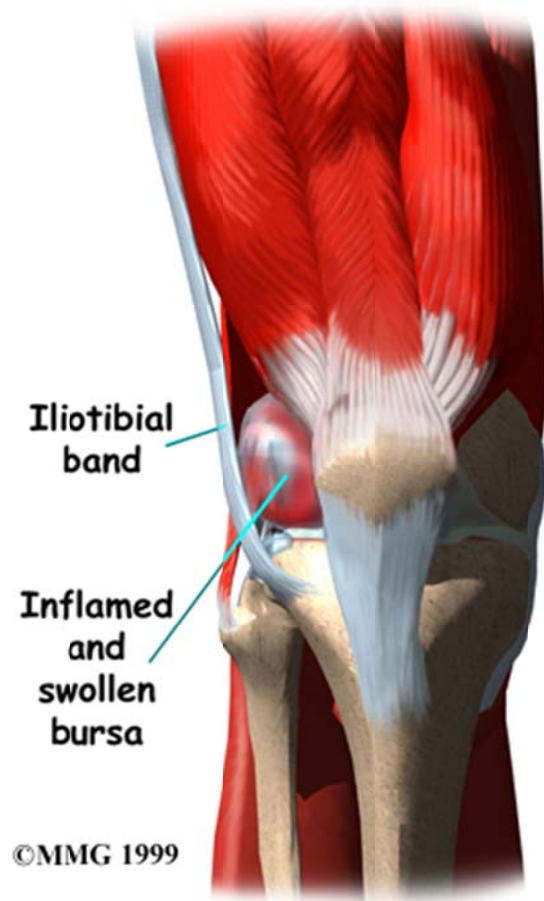
Normally, this bursa lets the tendon glide smoothly back and forth over the edge of the femoral condyle as the knee flexes and straightens.

Causes

How does ITB syndrome develop?

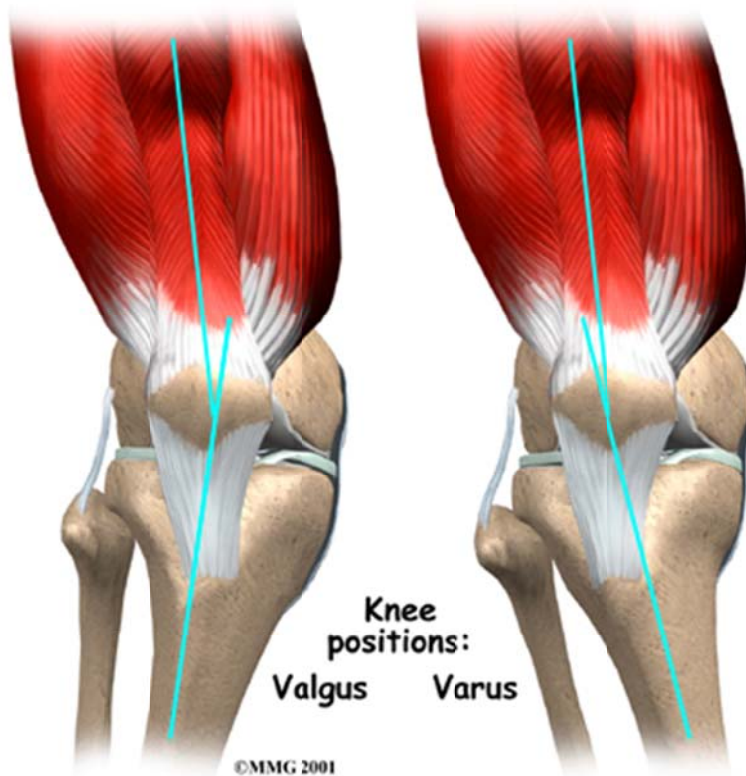
The ITB glides back and forth over the lateral femoral condyle as the knee bends and straightens. Normally, this is not a problem. But the bursa between the lateral femoral condyle and the ITB can become **irritated and inflamed** if the ITB repeatedly snaps over the condyle with repeated knee motions such as those from walking, running, or biking.

Irritated ITB



People often end up with ITB syndrome from overdoing their activity. They try to push themselves too far, too fast, and end up running, walking, or biking more than their body can handle. The repeated strain causes the bursa on the side of the knee to become inflamed.

Some experts believe that the problem happens when the knee bows outward. This can happen in runners if their feet are worn on the outside edge, or if they run on slanted terrain. Others feel that certain foot abnormalities, such as foot pronation, can cause ITB syndrome. (Pronation of the foot occurs when the arch flattens.)



Recently, health experts have found that runners with a weakened or fatigued *gluteus medius* muscle in the hip are likely to end up with ITB syndrome. This muscle controls outward movements of the hip. If the *gluteus medius* isn't doing its job, the thigh tends to turn inward. This makes the knee angle into a *knock-kneed* position. The ITB becomes pinched against the bursa on the side of the knee. This is also called a *valgus deformity* of the knee.

People with bowed legs may also be at risk of developing ITB syndrome. The outward angle of the bowed knee makes the lateral femoral condyle more prominent and can make the snapping worse. This condition is also called a *varus deformity* of the knee.

Symptoms

What does ITB syndrome feel like?

The **symptoms of ITB syndrome** commonly begin with pain over the outside of the knee, just above the knee joint. Tenderness in this area is usually worse after activity. As the bursitis grows worse, pain may radiate up the side of the knee and down the side of the leg. Patients sometimes report a snapping or popping sensation on the outside of the knee.