Iliotibial Band Syndrome

Iliotibial band syndrome is an overuse inflammatory condition due to friction (rubbing) of a band of a tendon over the outer bone (lateral condyle) of the knee. Although iliotibial band syndrome may be caused by direct injury to the knee, it is most often caused by the stress of long-term overuse, such as sometimes occurs in sports training.

A person with this syndrome feels an ache or burning sensation at the side of the knee during activity. Pain may be localized at the side of the knee or radiate up the side of the thigh. A person may also feel a snap when the knee is bent and then straightened. Swelling is usually absent and knee motion is normal. The diagnosis of this disorder is usually based on the patient's symptoms, such as pain at the lateral condyle, and exclusion of other conditions with similar symptoms.

Usually, iliotibial band syndrome disappears if the person reduces activity and performs stretching exercises followed by muscle-strengthening exercises. In rare cases when the syndrome doesn't disappear, surgery may be necessary to split the tendon so it is not stretched too tightly over the bone. The pain is usually relieved by rest and by walking with the knee held in full extension. However, when ambulation and knee flexion are resumed, symptoms return.

What is the iliotibial band (ITB)?

The iliotibial band is a tendinous extension of the fascia covering the gluteus maximus and tensor fascia latae muscles proximally. It descends distally to attach to the lateral condyle of the tibia. It also sends fibers to the lateral aspect of the patella (knee cap). Essentially, the ITB is the linkage between the pelvis, upper leg, and lower leg. Pathology to any structure linked to one of these areas may cause ITB contracture.

What is a possible cause of iliotibial band friction syndrome?

Overuse may cause shortening of the ITB. The knee goes from flexion to extension and excessive pressure from the ITB causes friction over the lateral femoral epicondyle. This repeated motion produces inflammation of the underlying structures and causes pain.

What are the facts concerning iliotibial band friction syndrome?

- Pain localized over lateral femoral condyle
- Discomfort initially relieved by rest
- Pain may radiate toward the lateral joint line and proximal tibia
- Worse if a person continues to run
- No symptoms of internal derangement
- Symptoms frequently develop during downhill running
- Inadequate stretching program

Which anatomic factors may be associated with iliotibial band friction syndrome?

- Hip abduction contracture (ITB tightness)
- Genu varum (Bow legging)
- Heel and foot pronation
- Tight heel cords
- Internal tibial torsion (Inward rotation of the leg)

What are the treatments of iliotibial band friction syndrome?

- Rest
- Ice
- Stretching of iliotibial band/tensor fascia latae, gluteus maximus, calves, hamstrings and quadriceps.
- Transverse Friction Massage.
- Foam Roller.
- Instruct a person to avoid hills, shorten stride, and run on alternate sides of road
- Anti-inflammatory medicine
- Orthotics (if appropriate)
- Ultrasound
- Contrast baths
- Local steroid injection

Friction Massage Treatment Areas

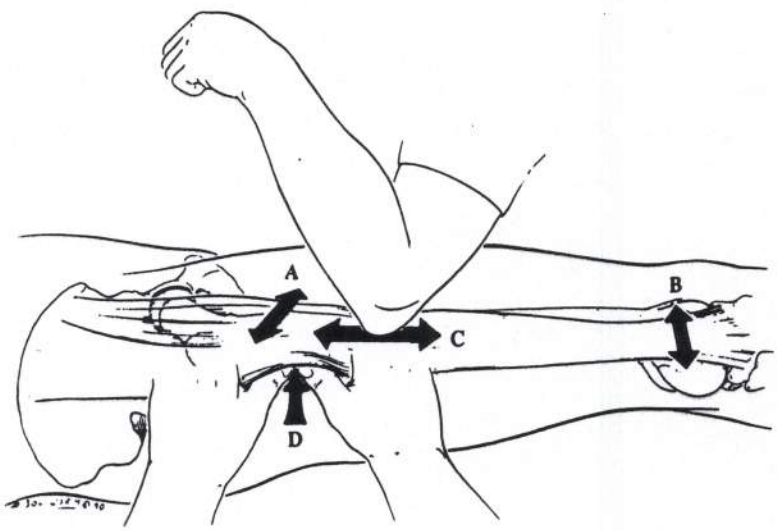
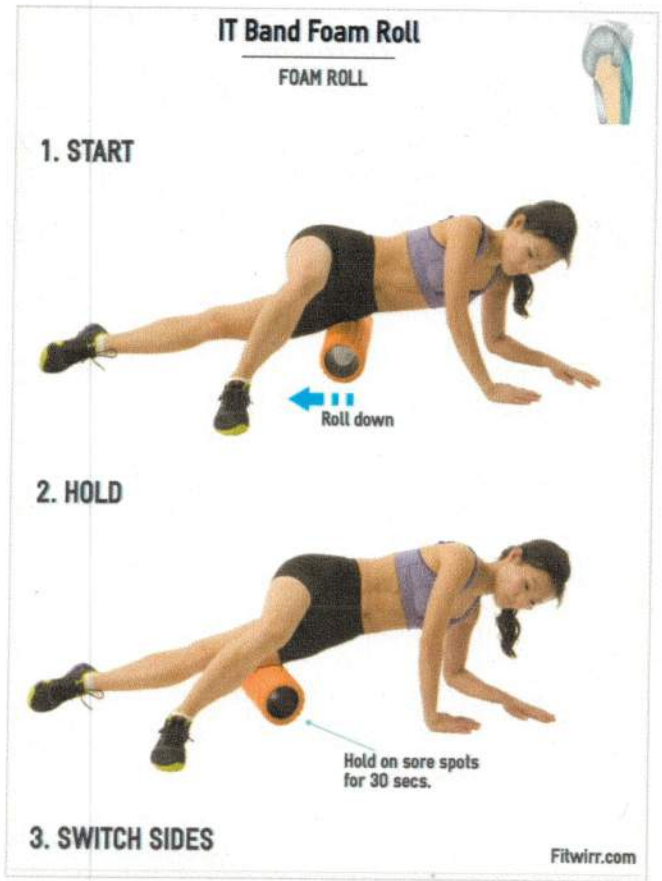


Figure 12-28 Iliotibial band. This muscle may be frictioned where the gluteus maximus and tensor fas. iae latae meet (A), over the lateral epicondyle (B), or at its insertion on the proximal tibia (Gerdy's tubercle, not shown). Other treatments besides friction may include deep longitudinal pressure (C) or a tissue-lifting procedure (D). *Source:* Copyright © 1990 by David Bolinsky.



Stretch: Cross painful leg behind the other. Keeping knees as straight as possible, bend forward at the hips. Hold for 30 seconds and breathe.