Iliotibial Band Syndrome

Definition and Home Stretches

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Iliotibial Band: Definition

• The iliotibial band (ITB) is a dense fibrous band running from the lateral pelvis to the lateral tibial condyle (Gerdy’s Tubercle).

• The ITB receives contributions from the gluteus maximus and the tensor fascia lata muscles.

• The action of the ITB and its associated muscles is to flex, abduct, and medially rotate the hip. In addition, the ITB contributes to lateral knee stabilization.

• During knee extension the ITB moves anterior, while knee flexion moves the ITB posterior.
ITB Syndrome: Definition

- ITB Syndrome is an overuse condition of the distal ITB near the lateral femoral condyle and at Gerdy’s tubercle.
- Irritation and inflammation occurs due to the band rubbing over the lateral femoral condyle.
- The bursa underlying the ITB is also prone to swelling due to friction.

http://www.drpribut.com/sports/itbfiction.gif
ITB Syndrome: Etiology

- ITB syndrome is most common in athletes i.e., long distance runners, cyclists, and gymnasts.
- Males and females are equally affected, with those between the ages of 15-50 being most prevalent.
- The most vulnerable range of knee flexion for this condition is at 30-40 degrees; this is where the ITB crosses the lateral femoral condyle.
- Most commonly unilateral, yet activities that stress both lower extremities simultaneously such as horseback riding or skiing may predispose one to bilateral ITB syndrome.
Potential Causes

- Leg length asymmetry
- Over/under pronation
- Genu varum/valgum
- Anatomically thicker and/or wider ITB
- Weak or imbalanced gluteal, hamstring and quadriceps muscles.
- Tight ITB
- Poor shock absorption
- Running on hills and hard surfaces
- Over training
- Knee instability
- Improperly adjusted bicycle seat or pedals

Clinical Signs and Symptoms

- Lateral knee pain that has increased over the past days or weeks.
- Increased pain with downhill running.
- Pain occurring during knee extension, just prior to heel strike.
- Snapping or squeaking in knee during running and walking.
- May be associated with Patellofemoral Pain Syndrome.
Home exercises: Rationale and Goals

- Stretching the tight ITB will lengthen the muscles and fascia surrounding it, thus decreasing irritation over areas of friction; It will also release myofascial adhesions.
- Proper stretching can lead to more appropriate biomechanics.
- Home stretching is an integral portion of ITB syndrome treatment as it helps to maintain long term muscle balance.
- Having the patient be active in their treatment will result in a better prognosis.
Stretch #1

- Place affected side down onto 6 inch firm foam roller.
- Use arms and top leg to support weight.
- Roll from hip to just above knee and back.

Time: ______ min/leg
Times per day: ______
Times per week: ______
Stretch #2

- Cross affected leg behind other leg.
- Place opposite hand on hip to stabilize and lean away from affected leg.
- Reach arm overhead.

Hold: _____ seconds
Sets: _____
Times per day: _____
Times per week: _____

* Use wall or table for balance if needed
Stretch #3

- Bend and cross affected leg over other leg.
- Hold affected knee with opposite hand or elbow.
- Twist upper body toward affected leg.

Hold: _____ seconds
Sets: _____
Times per day: _____
Times per week: _____

http://www.nismat.org/ptcor/itb_stretch
Stretch #4

- While seated, cross affected ankle onto opposite knee.
- Lean forward.
- Feel stretch in buttock.

Hold: _____ seconds
Sets: _____
Times per day: _____
Times per week: _____
Gluteal Strengthening Exercise

- Lay on unaffected side.
- Raise top leg 45 degrees with toes pointing toward the ceiling then lower.
- Keep leg straight and in line with body.

Repetitions: _____ per leg
Sets: _____
Times per day: _____
Times per week: _____
References