

ILIOTIBIAL BAND SYNDROME

(RUNNER'S KNEE)

DESCRIPTION

The iliotibial band is the tendon attachment of hip muscles into the upper leg (tibia) just below the knee to the outer side of the front of the leg. Where the tendon passes the knee at the knee (lateral femoral condyle) there is a bursa sac between the bone and the tendon. This tendon moves over a bony bump at the outer knee as it passes in front and behind it. The bursa functions like a water balloon to reduce friction and wear of the tendon against the bony bump. In this condition, overuse causes excessive friction at this bump resulting in inflammation and pain of the bursa (bursitis), tendon (tendinitis), or both.

FREQUENT SIGNS AND SYMPTOMS

- Pain, tenderness, swelling, warmth and/or redness over the iliotibial band at the outer knee (above the joint), though it may travel up or down the thigh or leg.
- Initially the pain may be present at the beginning of an exercise and lessens once warmed up. Eventually the pain exists throughout the activity and gets worse as the activity continues and may cause the athlete to stop in the middle of training or competing.
- The pain is worsened running down hills or stairs or on banked tracks or running next to the curb on the street. The pain is felt most when the foot of the affected leg hits the ground.
- There may be crepitation (a crackling sound) when the tendon or bursa is moved or touched

CAUSES

Excessive friction of the iliotibial band and the underlying bursa due to repetitive knee bending activities. This is an overuse injury, though direct trauma to the outer knee may cause the bursa to get inflamed. Often the deceleration of running down hills may lead to the excessive friction.

RISK INCREASES WITH

- Sports with repetitive knee bending activities such as distance running and cycling
- Incorrect training techniques that include sudden changes in the amount, frequency or intensity of the training as well as inadequate time for rest between workouts..
- Poor physical conditioning (strength/flexibility) - especially tight iliotibial band.
- Inadequate warm-up prior to practice or play
- Bow legged
- Arthritis of the knee.

PREVENTIVE MEASURES

- Appropriate warm up and stretching before practice or competition
- Give time for adequate rest and recovery between practices and competition
- Appropriate conditioning including knee and thigh flexibility (especially iliotibial band), muscle strength and endurance as well as cardiovascular fitness
- Proper training technique, including reducing mileage run, shorten stride length avoid running on hills and banked surfaces.
- Arch supports (orthotics) for those with flat feet.

EXPECTED OUTCOME

Usually curable within 6 weeks if treated appropriately with conservative treatment and resting the affected area.

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication and ice to relieve the pain, stretching and strengthening exercises (particularly the iliotibial band) and modifying the activity which initially cause the problem to occur. These all can be carried out at home, though referral to a physical therapist or athletic trainer for further evaluation and treatment may be helpful.

An orthotic (arch support) for those with flat feet or a wedge for the shoe for those with tight iliotibial bands may be prescribed to reduce friction to the bursa. A knee sleeve or bandage may help keep the tendon and bursa warm during activity and reduce some of the symptoms.

Altering training techniques by lessening the amount of the training activity, changing the stride length, avoid running on hills or stairs, changing the direction you run on a circular or banked track or change the side of the road you run on if you run next to the curb in the same direction all the time. Cyclists may need to change the seat height or foot position on their bicycles. An injection of cortisone into the bursa may be recommended.

Surgery to remove the inflamed bursa and part of the scarred or inflamed iliotibial band is usually only considered after at least 6 months of conservative treatment.

MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Pain relievers are usually not prescribed for this condition though your physician will determine this. Use only as directed and only as much as you need.
- Cortisone injections to reduce inflammation.

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 - 15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used prior to performing stretching and strengthening activities prescribed by your physician, physical therapist or athletic trainer. Use heat pack or a warm soak.

NOTIFY OUR OFFICE IF

- Symptoms get worse or do not improve in 2 - 4 weeks despite treatment
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.