

## **Pes Anserine Bursitis**

The pes anserinus is the tendon insertion of three thigh muscles (sartorius, gracilis, and semiindinosus) into the upper portion of the tibia, just below the knee to the inner side of the front of the leg. Where the tendon attaches to bone, there is a bursa sac between the bone and the tendon. The bursa functions like a water balloon to reduce friction and wear of the tendon against the bone. With this syndrome there is inflammation and pain of the bursa (bursitis), tendon (tendinitis), or both.

### **Frequent Signs and Symptoms**

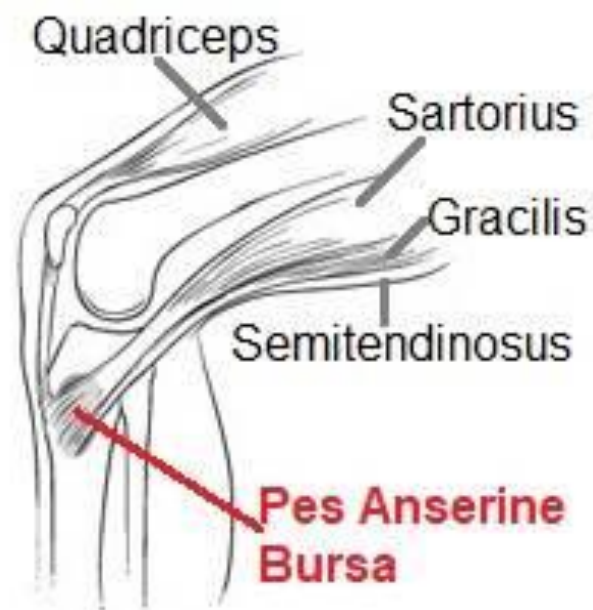
- Pain, tenderness, swelling, warmth, or redness over the pes anserinus bursa and tendon on the front inner leg just two to three inches below the knee.
- Pain that is usually tolerable when beginning to exercise but progressively gets worse as the activity continues.
- Pain with running or bending the knee against resistance.
- Crepitation (a crackling sound) when the tendon or bursa is moved or touched.

### **Etiology (Causes)**

- Strain from a sudden increase in the amount or intensity of activity or overuse of the lower extremity. This is usually seen in an endurance athlete or an athlete that is just beginning to run.
- Direct trauma to the upper leg.

### **Risk Factors**

- Endurance sports (distance runs, triathlons)
- Beginning a training program
- Sports that require pivoting, cutting (sudden change of direction while running), jumping, and deceleration
- Incorrect training techniques, including excessive hill running, recent large increases in mileage, and inadequate time for rest between workouts



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- Poor physical conditioning (strength and flexibility)
- Inadequate warm-up before practice or play
- Knock knees
- Arthritis of the knee

### Prevention

- Appropriately warm-up and stretch before practice or competition.
- Allow time for adequate rest and recovery between practices and competition.
- Maintain appropriate conditioning:
  - Cardiovascular fitness
  - Knee and thigh flexibility (especially hamstring muscles)
  - Muscle strength and endurance
- Use proper training technique, including reducing running mileage and shortening stride length.
- Arch supports (orthotics) may be helpful for those with flat feet.

### Outcomes

This condition is usually curable within six weeks if treated appropriately with conservative treatment and resting of the affected area.

### Potential Complications

- Prolonged healing time if not appropriately treated or if not given adequate time to heal.
- Chronically inflamed tendon and bursa, causing persistent pain with activity that may progress to constant pain.
- Recurrence of symptoms if activity is resumed too soon, with overuse, with a direct blow, or when using poor technique.

### Treatment Considerations

Initial treatment consists of medication and ice to relieve the pain, stretching and strengthening exercises (particularly the hamstring muscles), and modification of the activity that initially caused the problem to occur. These all can be carried out at home, although 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 may be prescribed to reduce stress to the tendon. A knee sleeve or bandage can be worn and may help keep the tendon and bursa warm during



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activity as well as reduce some of the symptoms. An injection of cortisone into the bursa may be recommended. Surgery to remove the inflamed bursa is usually only considered after at least six months of conservative treatment or when the condition reoccurs many times and the bursa is very large.

### Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within seven days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed for this condition. If your physician does prescribed pain medications, use only as directed.
- Cortisone injections reduce inflammation. However, these are done only in extreme cases; there is a limit to the number of times cortisone may be given, because it weakens muscle and tendon tissue. Anesthetics temporarily relieve pain.

### Modalities (Heat and Cold)

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

### Notify My Office If Symptoms Worsen

