

# PES ANSERINUS SYNDROME



## ■ ■ ■ Description

The pes anserinus is the tendon insertion of three muscles of the thigh into the upper leg (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.

## ■ ■ ■ Common Signs and Symptoms

- Pain, tenderness, swelling, warmth, or redness over the pes anserinus bursa and tendon on the front inner leg just 2 to 3 inches below the knee
- Pain that is usually slight when beginning to exercise and is 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

## ■ ■ ■ Causes

- Strain from a sudden increase in amount or intensity of activity or overuse of the lower extremity, usually in the endurance athlete or the athlete just beginning to run
- Direct trauma to the upper leg

## ■ ■ ■ Risk Increases With

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

## ■ ■ ■ Preventive Measures

- 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 mileage run and shortening stride length.
- Arch supports (orthotics) may be helpful for those with flat feet.

## ■ ■ ■ Expected Outcome

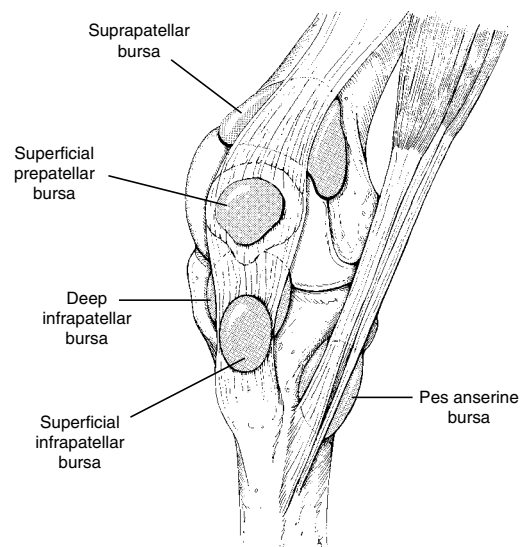
This condition is usually curable within 6 weeks if treated appropriately with conservative treatment and resting of the affected area.

## ■ ■ ■ Possible 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

## ■ ■ ■ General 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 may help keep the tendon and bursa warm during activity and 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 6 months of conservative treatment or when the condition recurs many times and the bursa is very large.



**Figure 1**

From Scuderi GR, McCann PD, Bruno PJ: Sports Medicine: Principles of Primary Care. St. Louis, Mosby, 1997, p. 369.

■ ■ ■ Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 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 prescribe 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.

■ ■ ■ Heat and Cold

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage.
- 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 Our Office If

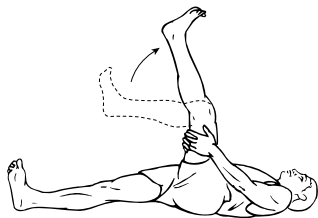
- Symptoms get worse or do not improve in 2 weeks despite treatment
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

EXERCISES

➤ RANGE OF MOTION AND STRETCHING EXERCISES • Pes Anserinus Syndrome

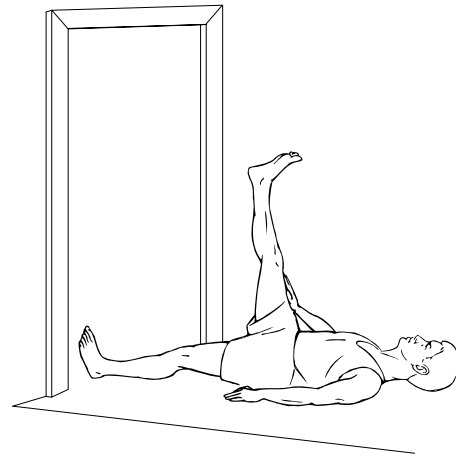
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Flexible tissue is more tolerant of the stresses placed on it during activities.
- Each stretch should be held for 20 to 30 seconds.
- A *gentle* stretching sensation should be felt.



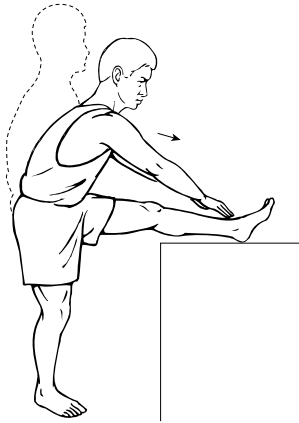
FLEXIBILITY • Hamstrings

1. Lie on your back with your leg bent and both hands holding on to it behind the thigh as shown.
2. Your hip should be bent to **90 degrees** and the thigh pointing straight at the ceiling.
3. Straighten out your knee as far as you can. Keep your thigh pointing straight toward the ceiling.
4. Keep the other leg flat on the floor.
5. Hold this position for \_\_\_\_\_ seconds.
6. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



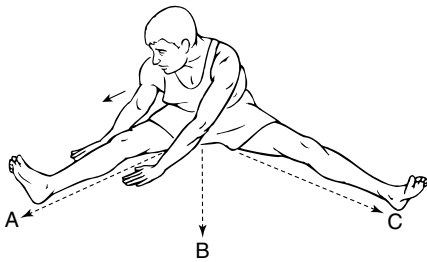
FLEXIBILITY • Hamstrings, Doorway

1. Lie on your back near the edge of a doorway as shown.
2. Place the leg you are stretching up the wall keeping your knee straight.
3. Your buttock should be as close to the wall as possible and the other leg should be kept flat on the floor.
4. You should feel a stretch in the back of your thigh.
5. Hold this position for \_\_\_\_\_ seconds.
6. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



### FLEXIBILITY • Hamstrings, Ballet

1. Stand and prop the leg you are stretching on a chair, table, or other stable object.
2. Place both hands on the outside of the leg you are stretching.
3. Make sure that your hips/pelvis are also facing the leg you are stretching.
4. Slide your hands down the outside of your leg.
5. Lead with your chest/breast bone. Keep your chest upright and back straight. Do not hunch over at the shoulders. Keep your toes pointing up.
6. You should feel a stretch in the back of your thigh.
7. Hold this position for \_\_\_\_\_ seconds.
8. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



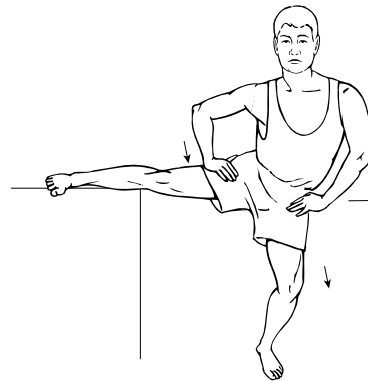
### FLEXIBILITY • Hamstrings/Adductors, V-Sit

1. Sit on the floor with your legs spread as wide as possible in front of you. Your knees must be straight.
2. Lean over one leg with both hands. Keep your chest upright and reach for your toes. (Position A)
3. Hold this position for \_\_\_\_\_ seconds. Relax and return to your starting position.
4. Now reach forward between your legs. (Position B)
5. Repeat for Position C.
6. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



### FLEXIBILITY • Adductors, Lunge

1. Spread your legs wide while standing. Then assume a partial “squat” position.
2. “Lunge/Lean” away from the side you want to stretch, shifting your weight toward the bent leg.
3. Hold this position for \_\_\_\_\_ seconds.
4. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.



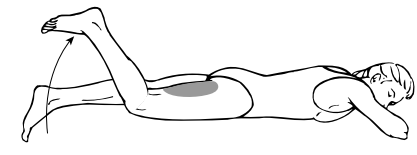
### FLEXIBILITY • Adductors, Ballet

1. Stand and place the leg you want to stretch on a counter, chair, or other sturdy object.
2. Gradually bend the opposite knee and gently lunge away from the leg you are stretching.
3. Hold this position for \_\_\_\_\_ seconds.
4. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.

**> STRENGTHENING EXERCISES • Pes Anserinus Syndrome**

These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Strong muscles with good endurance tolerate stress better.
- Do the exercises as *initially* prescribed by your physician, physical therapist, or athletic trainer. Progress slowly with each exercise, gradually increasing the number of repetitions and weight used under their guidance.

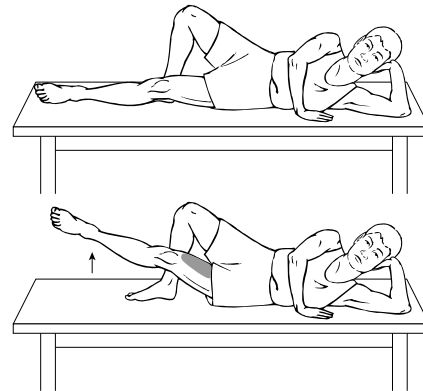


**STRENGTH • Hamstring, Curls**

1. Lie on your stomach with your legs out straight.
2. Bend knee to 90 degrees. Hold this position for \_\_\_\_\_ seconds.
3. Slowly lower your leg back to the starting position.
4. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.

**Additional Weights: OK TO USE DO NOT USE!!!**

**If okay'd by your physician, physical therapist, or athletic trainer, a \_\_\_\_\_ pound weight may be placed around your ankle for additional weight.**



**STRENGTH • Hip Adduction**

1. Lie on your side as shown with the injured/weak leg on the bottom.
2. Place the foot of your top leg flat on the floor for balance. It may be in front or behind the bottom leg.
3. Lift the bottom leg as shown. Hold this position for \_\_\_\_\_ seconds.
4. Slowly lower your leg to the starting position.
5. Repeat exercise \_\_\_\_\_ times, \_\_\_\_\_ times per day.

Notes:

(Up to 4400 characters only)

Notes and suggestions