



POPLITEUS TENDINITIS

■ ■ ■ Description

Popliteus tendinitis is characterized by inflammation and pain at the knee joint on the back part of the outer side of the knee and the outer side just above the knee at the popliteus tendon. The popliteus tendon is the tendon attachment of the popliteus muscle from the back of the leg bone at the knee to the outer side of the knee. This structure is important for slowing the knee as it straightens and rotating the leg bone. It is important for walking or running downhill or on banked terrain. This is usually a grade 1 or 2 strain of the tendon. A *grade 1 strain* is a mild strain. There is a slight pull without obvious tearing (it is microscopic tendon tearing). There is no loss of strength, and the tendon is the correct length. A *grade 2 strain* is a moderate strain. There is tearing of fibers within the substance of the tendon or where the tendon meets the bone or muscle. The length of the muscle-tendon-bone unit is increased, and there is usually decreased strength. A *grade 3 strain* is a complete rupture of the tendon, which is rare and is usually associated with severe injury to the knee.

■ ■ ■ Common Signs and Symptoms

- Pain and tenderness over the popliteus tendon at the outer knee or back of the knee on the outer side
- Pain that is worse when standing on the leg with the knee bent slightly or when walking or running, just as the foot of the affected leg lifts off the ground
- Pain that is worse when rotating the leg
- Pain that starts or recurs after running a particular distance
- Crepitus (a crackling sound) when the tendon is moved or touched (uncommon, except when tested just after exercising)

■ ■ ■ Causes

- Overuse of the popliteus muscle-tendon unit, usually in an athlete who runs or trains on hills or banked surfaces

■ ■ ■ Risk Increases With

- Sports or activities that require a lot of downhill walking or running, such as with backpacking, cross-country running, and distance running; also, running on a banked track or next to the curb on the street (a banked surface)
- Poor physical conditioning (strength and flexibility)
- Inadequate warm-up before practice or play
- Flat feet

■ ■ ■ 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:
 - Knee and thigh flexibility
 - Muscle strength and endurance
- Use proper training technique, including reducing mileage run, shortening stride length, and changing the side of road or track you run on.
- Arch supports (orthotics) can 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, although many people feel better in 10 to 14 days.

■ ■ ■ Possible Complications

- Prolonged healing time if not appropriately treated or if not given adequate time to heal
- Chronically inflamed tendon, causing persist 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 training technique

■ ■ ■ General Treatment Considerations

Initial treatment consists of medication and ice to relieve the pain, stretching and strengthening exercises of the quadriceps and hamstring muscles, and modification of the activity that initially caused the problem. 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) may be prescribed for those with flat feet to reduce stress to the tendon. A knee sleeve or bandage may help keep the tendon warm during activity and reduce some of the symptoms. Modification of training techniques, including running uphill and changing the side of the road or track you run on (banked the other way) may help reduce stress to the muscle. An injection of cortisone to the inflamed area around the tendon may be recommended for persistent cases. Surgery to remove the inflamed tendon lining or degenerated tendon tissue is rarely necessary and usually only considered after at least 6 months of conservative treatment.

■ ■ ■ 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 may be prescribed as necessary by your physician. 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)

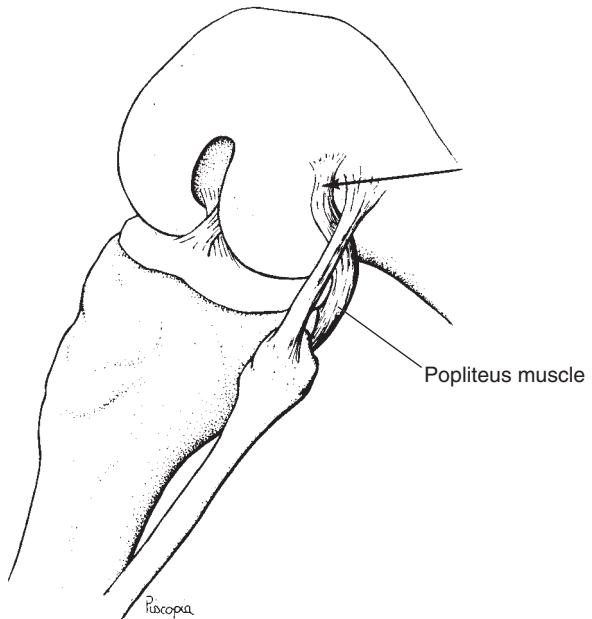


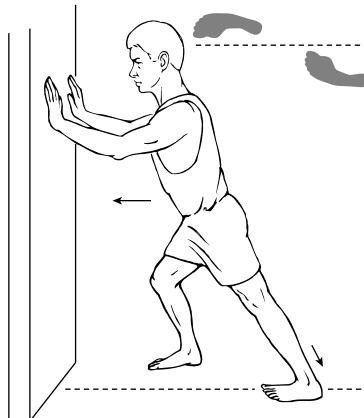
Figure 1

From Nicholas JA, Hershman EB: The Lower Extremity and Spine in Sports Medicine. St. Louis, Mosby Year Book, 1995, p. 926.

➤ **RANGE OF MOTION AND STRETCHING EXERCISES** • Popliteus Tendinitis

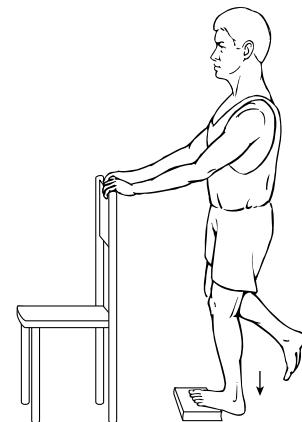
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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.



STRETCH • Gastrocsoleus

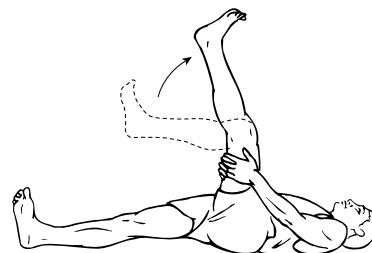
1. Stand **one** arm length from the wall as shown. Place calf muscle to be stretched behind you as shown.
2. Turn the **toes in** and **heel out** of the leg to be stretched.
3. Lean toward wall leading with your waist, allowing your arms to bend. **Keep your heel on the floor.**
4. First do this exercise with the knee straight, then bend the knee slightly. Keep your heel on the floor at all times.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



STRETCH • Gastrocsoleus

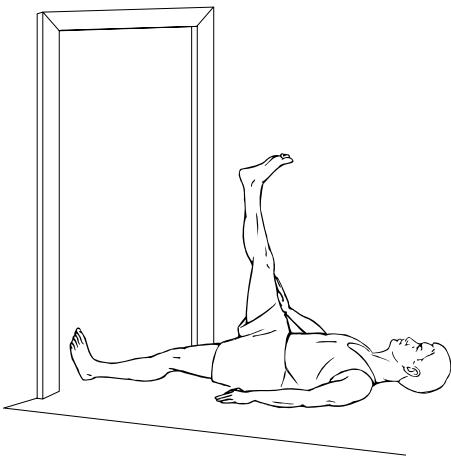
Note: This exercise can place a lot of stress on your foot and ankle and should only be done after specifically checking with your physician, physical therapist, or athletic trainer.

1. Place your toes and the ball of your foot on a book(s) or the edge of a stair. Your heel should be off the ground.
2. Hold on to a chair or stair rail for balance.
3. Allow your body weight to stretch your calf.
4. First do this exercise with the knee straight, then bend the knee slightly.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



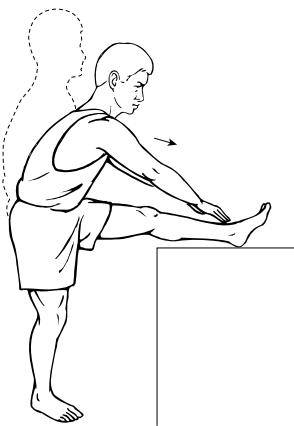
FLEXIBILITY • Hamstrings

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.



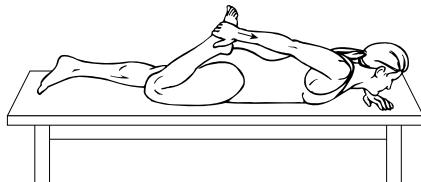
FLEXIBILITY • Hamstrings, Doorway

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.



STRETCH • Quadriceps, Prone

1. Lie on your stomach as shown.
2. Bend your knee, grasping your toes, foot, or ankle. If you are too "tight" to do this, loop a belt or towel around your ankle and grasp that.
3. Pull your heel toward your buttock until you feel a stretching sensation in the front of your thigh.
4. Keep your knees together.
5. Hold this position for ____ seconds.
6. Repeat exercise ____ times, ____ times per day.

➤ **STRENGTHENING EXERCISES** • Popliteus Tendinitis

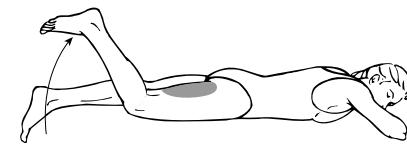
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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, Isometrics

1. Lie on your back on the floor or a bed.
2. Bend your knee approximately _____ degrees.
3. Pull your heel into the floor or bed as much as you can.
4. Hold this position for _____ seconds. Rest for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.



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.

Notes:

(Up to 4400 characters only)

Notes and suggestions