



# PERONEAL TENDON SUBLUXATION AND DISLOCATION

## ■ ■ ■ Description

Peroneal tendon subluxation and dislocation are injuries to the ankle in which one or both of the peroneal tendons are displaced from their normal position behind the outer ankle. The peroneal tendons are the attachments of the muscles of the outer leg to the (1) outer foot (peroneus brevis) and (2) bottom of the inner foot (peroneus longus). These structures are important in standing on your toes, in the pushing-off phase of running or jumping, and when turning your foot outward. These tendons slide in a groove behind the outer ankle bone and are maintained in their normal position by ligament-like tissue (retinaculum). In subluxation of one or more of these tendons, the tendon slides back and forth from its normal position in the groove. A dislocation of the tendon is when the tendon is completely out of its groove. The peroneus brevis usually is the only tendon to come out of the groove.

## ■ ■ ■ Common Signs and Symptoms

- A pop or snap heard at the time of injury
- Pain, swelling, tenderness, and bruising at the injury site, behind the outer ankle, that initially is worsened by standing or walking
- Pain and weakness when trying to push the foot toward the injured side
- Often, no problem walking forward after a few days to weeks but a persistent problem when trying to cut or pivot on the injured leg, moving toward the side of injury
- Crepitus (a crackling sound) when the tendon is moved or touched
- Numbness or paralysis below the dislocation from pinching, cutting, or pressure on the blood vessels or nerves (uncommon)

## ■ ■ ■ Causes

- A sudden, forceful flexion to a (most often outwardly turned) ankle that the peroneal muscles try to resist; results in the retinaculum tearing or stripping off from the bone, allowing the tendon to slide out of position within the groove
- Severe ankle sprain
- Congenital abnormality (you are born with it), such as a shallow or malformed groove for the tendons

## ■ ■ ■ Risk Increases With

- Participation in snow skiing or ice skating
- Sports that require jumping and landing (basketball, gymnastics, volleyball)
- Sports in which pivoting is important (football, soccer)
- Exercise on uneven terrain or surfaces
- Previous foot or ankle sprains or dislocations or repeated injury to any joint in the foot
- Poor physical conditioning (strength and flexibility)

## ■ ■ ■ Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
  - Leg and ankle strength
  - Flexibility and endurance
- For participation in jumping (basketball, volleyball) or contact sports, protect vulnerable joints with supportive devices, such as wrapped elastic bandages, tape, braces, or high-top athletic shoes. Avoid irregular surfaces for running or other activities.
- Complete the full rehabilitation course after an ankle injury before return to practice or competition.

## ■ ■ ■ Expected Outcome

Untreated, chronic pain and disability may occur. Full recovery can be expected with appropriate treatment.

## ■ ■ ■ Possible Complications

- Chronic pain and disability and recurrent dislocation if activity is resumed too soon
- Rupture of the tendon from recurrent subluxation or dislocation
- Unstable or arthritic joint following repeated injury or delayed treatment

## ■ ■ ■ General Treatment Considerations

For acute injuries, the initial treatment consists of ice and medications to relieve pain and inflammation. Elevation of the injured ankle also helps reduce swelling. There is controversy regarding the treatment of acute injuries. Nonoperative treatment involves casting the leg, foot, and ankle while not walking on the foot for up to 6 weeks. Others recommend early surgery to repair the retinaculum to bone. For chronic injuries, surgery to hold the tendons within their groove is usually recommended. The leg and ankle are then immobilized in a cast or brace to allow healing. After immobilization (with or without surgery), stretching and strengthening of the injured and weakened surrounding muscles around the ankle (due to the injury, immobilization, and surgery) are necessary. These may be done with or without the assistance of a physical therapist or athletic trainer.

## ■ ■ ■ Medication

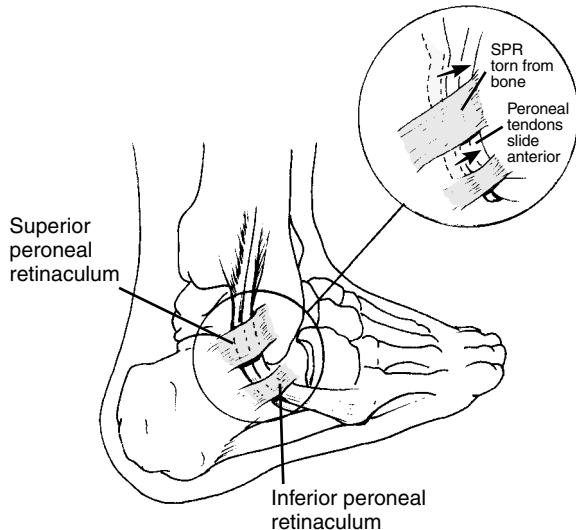
- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.

### ■ ■ ■ Cold Therapy

Cold is used to relieve pain and reduce inflammation. 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.

### ■ ■ ■ Notify Our Office If

- Pain, tenderness, or swelling worsens despite treatment
- You experience pain, numbness, or coldness or a blue, gray or dusky color appears in the toenails
- Any of the following occur after surgery: signs of infection, including fever, increased pain, swelling, redness, drainage, or bleeding in the surgical area
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)



**Figure 1**

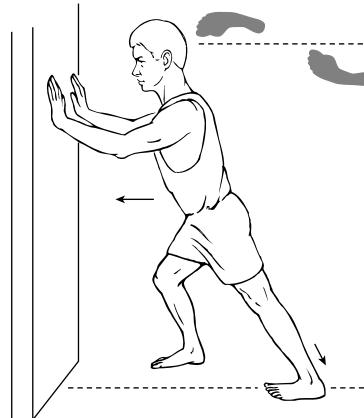
From Shankman GA: Fundamental Orthopaedic Management for the Physical Therapy Assistant. St. Louis, Mosby Year Book, 1997, p. 130.

## EXERCISES

### ➤ RANGE OF MOTION AND STRETCHING EXERCISES • Peroneal Tendon Subluxation and Dislocation

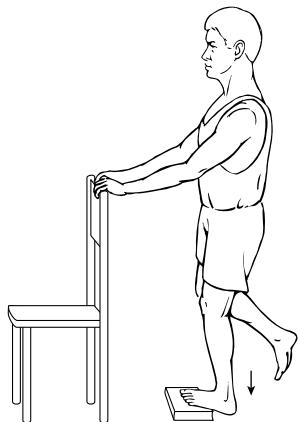
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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

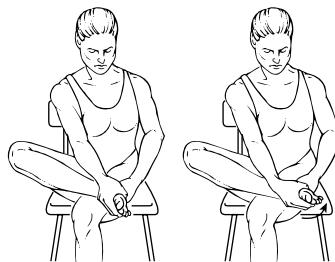
1. Stand *one* arm length from the wall as shown. Place calf muscle to be stretched behind you as shown.
2. Turn the *toes in* and *heel out* of the leg to be stretched.
3. Lean toward wall leading with your waist, allowing your arms to bend. *Keep your heel on the floor.*
4. First do this exercise with 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 • Gastrosoleus

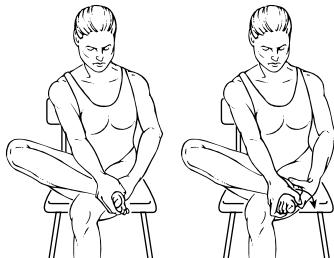
**Note:** This exercise can place a lot of stress on your foot and ankle and should only be done after specifically checking with your physician, physical therapist, or athletic trainer.

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.



#### RANGE OF MOTION • Ankle Inversion

1. Sit with your \_\_\_\_ leg crossed over the other.
2. Grip the foot with your hands as shown and turn the sole of your foot upward and in so that you feel a stretch on the outside of the ankle.
3. Hold this position for \_\_\_\_ seconds.
4. Repeat exercise \_\_\_\_ times, \_\_\_\_ times per day.



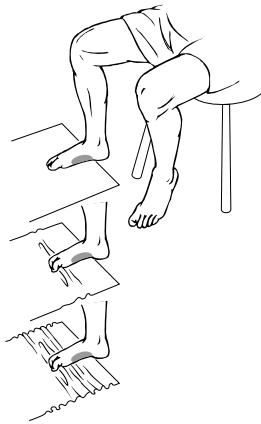
#### RANGE OF MOTION • Ankle Eversion

1. Sit with your \_\_\_\_ leg crossed over the other.
2. Grip the foot with your hands as shown and turn the sole of your foot upward and out so that you feel a stretch on the inside of the ankle.
3. Hold this position for \_\_\_\_ seconds.
4. Repeat exercise \_\_\_\_ times, \_\_\_\_ times per day.

➤ **STRENGTHENING EXERCISES • Peroneal Tendon Subluxation and Dislocation**

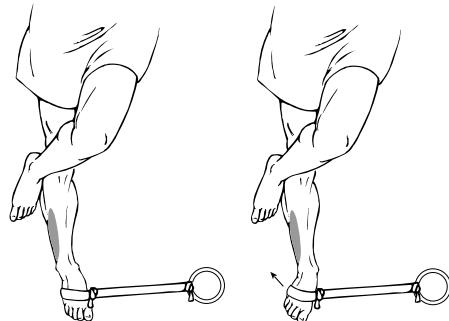
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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.



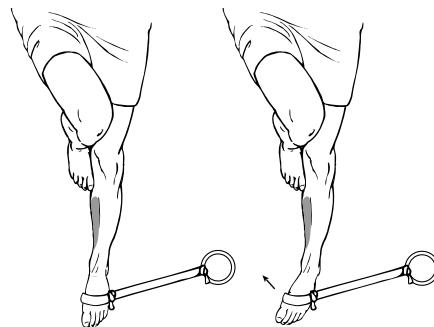
**STRENGTH • Towel Curls**

1. Sit in a chair and place a towel on a noncarpeted floor. Place your foot/toes on towel as shown. (You may also stand to do this exercise rather than sit.)
2. Curl/pull towel toward you with your toes while keeping your heel on the floor. Move towel with toes only. Do not move your knee or ankle.
3. If this is too easy, place a light weight (book, hand weight, etc.) at the far end of the towel.
4. Repeat exercise \_\_\_\_ times, \_\_\_\_ times per day.



**STRENGTH • Ankle Eversion**

1. Attach one end of elastic band to fixed object or leg of table/desk. Loop the opposite end around your foot.
2. Turn your toes/foot outward as far as possible, attempting to pull your little toe up and outward. Hold this position for \_\_\_\_ seconds.
3. Slowly return to starting position.
4. Repeat exercise \_\_\_\_ times, \_\_\_\_ times per day.



**STRENGTH • Ankle Inversion**

1. Attach one end of elastic band to fixed object or leg of table/desk. Loop the opposite end around your foot.
2. Turn your toes/foot inward as far as possible, attempting to push your little toe down and in. Hold this position for \_\_\_\_ seconds.
3. Slowly return to starting position.
4. Repeat exercise \_\_\_\_ times, \_\_\_\_ times per day.

Notes:

(Up to 4400 characters only)

Notes and suggestions