SUBTALAR DISLOCATION

Description

Subtalar dislocation is an injury to a joint in the foot below the talus (below the ankle joint) causing adjoining bones to be displaced from their normal position and no longer touch each other. A subluxation of this joint is uncommon; this is when the joint surfaces still touch but are not in normal relationship to each other.

Common Signs and Symptoms

- Severe pain when attempting to move the foot or ankle and inability to stand or walk on the foot
- Tenderness, obvious deformity, swelling, and bruising at the injury site
- Numbness or paralysis below the dislocation from pinching, cutting, or pressure on the blood vessels or nerves (uncommon)

Causes

- Direct blow, twisting injury, or landing wrong on the foot and ankle
- Congenital abnormality (you are born with it), such as a shallow or malformed joint surface

Risk Increases With

- Participation in contact sports, sports that require jumping and landing (basketball, volleyball), and sports in which shoe cleats are worn; running or fast walking; 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:
  - Cardiovascular fitness
  - Ankle and leg muscle strength
  - Endurance and flexibility
- For jumping sports (basketball, volleyball) or contact sports, protect vulnerable joints with supportive devices, such as braces, wrapped elastic bandages, tape, or high-top athletic shoes.
- For sports that require cleats or spikes on the athletic shoe, use cleats or spikes of the appropriate length for the sport and the turf or field conditions.
- Avoid irregular surfaces for running, fast walking, or track and field events.
- Wear proper protective equipment and ensure correct fit.

Expected Outcome

With appropriate reduction (repositioning of the joint) and immobilization, complete healing of ligaments requires a minimum of 6 weeks. Stiffness of the subtalar joint nearly always occurs after healing and rehabilitation are completed.

Possible Complications

- Damage to nearby nerves or major blood vessels, as well as associated fracture or joint cartilage injury due to the dislocation or reduction of the dislocation
- Prolonged healing or recurrent dislocation if activity is resumed too soon
- Death of bone cells caused by interruption of the blood supply (rare)
- Excessive bleeding in the foot or at the dislocation site, causing pressure and injury to nerves and blood vessels (rare)
- Unstable or arthritic joint following repeated injury or delayed treatment

General Treatment Considerations

After immediate reduction (repositioning of the bones of the joint) by trained medical personnel, treatment consists of ice and medications to relieve pain. Although reduction can be performed without surgery, surgery is occasionally necessary to restore the joint to its normal position, as well as to repair ligaments and tendons. Elevating the injured foot and ankle at

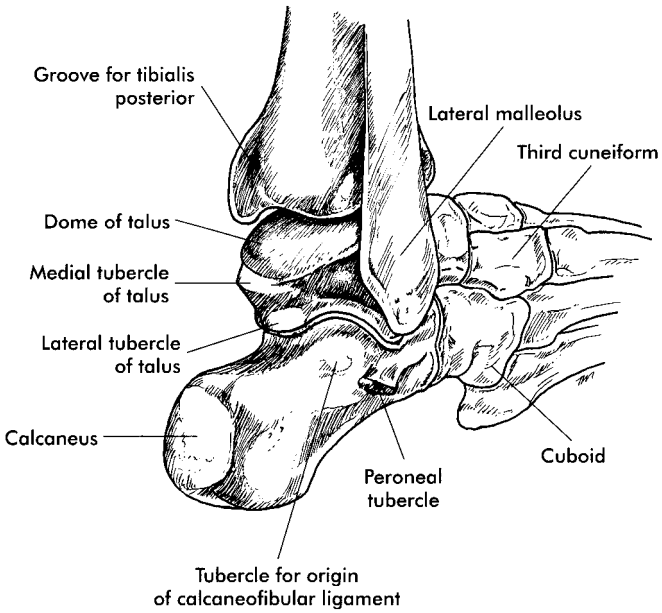


Figure 1

From Baxter DE: The Foot and Ankle in Sport. St. Louis, Mosby Year Book, 1995, p. 175.

or above heart level helps in reducing swelling. Immobilization by splinting, casting, or bracing for 2 to 8 weeks is usually recommended to protect the joint while the ligaments heal. After immobilization, stretching and strengthening of the injured and weakened joint and surrounding muscles (due to immobilization and injury) are necessary. These may be done with or without the assistance of a physical therapist or athletic trainer.

Medication

- General anesthesia or muscle relaxants may be used to help make the joint repositioning possible.
- 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. 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.

Heat and Cold

- 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.
- 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.

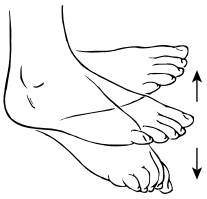
Notify Our Office If

- Pain, tenderness, or swelling worsens despite treatment
- You experience pain, numbness, or coldness in the foot
- Blue, gray, or dusky color appears in the toenails
- Any of the following occur after surgery:
  - Increased pain, swelling, redness, drainage, or bleeding in the surgical area
  - Signs of infection (headache, muscle aches, dizziness, or a general ill feeling with fever)
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

➢ **RANGE OF MOTION AND STRETCHING EXERCISES** · Subtalar Dislocation—Phase I

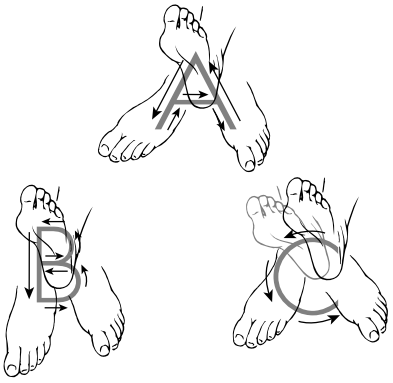
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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.



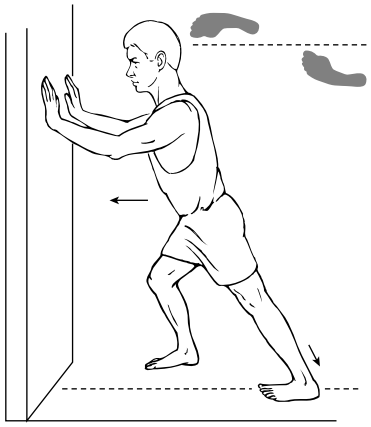
RANGE OF MOTION · Active Dorsi/Plantar Flexion

1. Pull your toes and foot toward your body as far as possible, then point the foot and toes away from body as far as possible.
2. Perform this exercise with the knee straight and then with the knee bent.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.



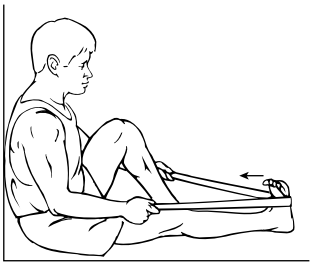
RANGE OF MOTION · Ankle Alphabet

1. Write all the capital letters of the alphabet with your foot and ankle. The motion should come from your foot and ankle, not your hip or knee.
2. Move the foot and ankle slowly, writing the letters as large as possible/comfortable for you.
3. Repeat exercise _____ times, _____ times per day.



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.



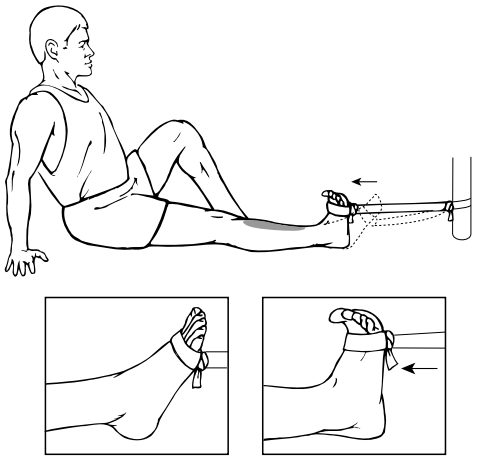
STRETCH · Gastrocsoleus

1. Sit with your leg straight out in front of you and loop a towel around the ball of your foot as shown in the diagram.
2. Pull your foot and ankle toward you using the towel.
3. Keep your knee straight while doing this. Do not let your knee bend.
4. Hold this position for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.

➢ **STRENGTHENING EXERCISES** · Subtalar Dislocation—Phase I

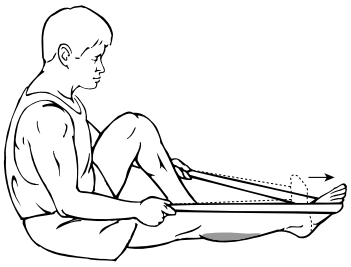
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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.



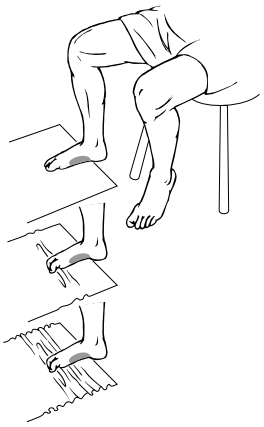
STRENGTH · Dorsiflexors

1. Attach one end of elastic band to fixed object or leg of table/desk. Loop the opposite end around your foot as shown.
2. Slowly pull the foot toward you. Hold this position for _____ seconds. Slowly return to starting position.
3. Repeat exercise _____ times, _____ times per day.



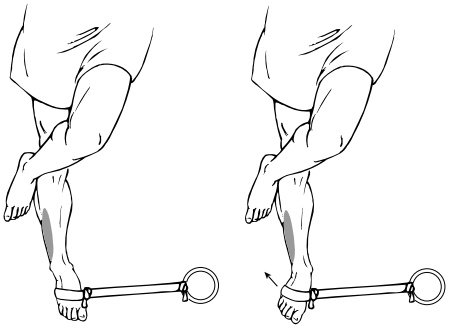
STRENGTH · Plantarflexors

1. Loop elastic band around foot as shown. Pull the band toward you with your hands.
2. Push your toes away from you slowly. Hold this position for _____ seconds. Slowly return to starting position.
3. Repeat exercise _____ times, _____ times per day.



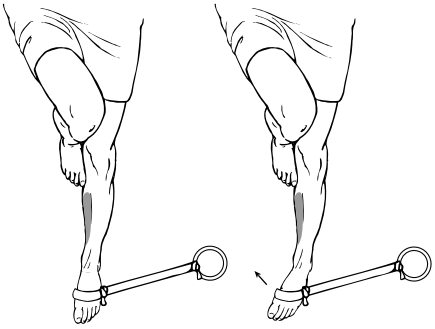
STRENGTH · Towel Curls

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.



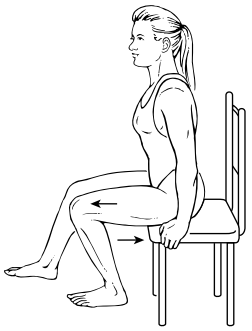
STRENGTH · Ankle Inversion

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.

➢ **RANGE OF MOTION AND STRETCHING EXERCISES** · Subtalar Dislocation—Phase II

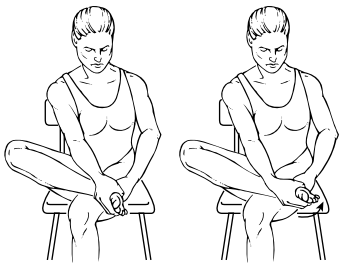
These are some of the exercises you may ***progress to*** after the start of your rehabilitation program. *You may still continue with all exercises from Phase I.* Progress with these exercises only after you have consulted with your physician, physical therapist, or athletic trainer again. Your exercises will be progressed as appropriate as your condition improves. 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.



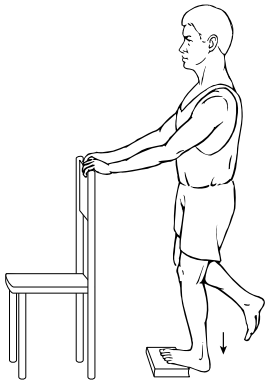
RANGE OF MOTION · Ankle Dorsiflexion

1. Sit on the edge of a chair as shown.
2. Place your _____ foot closest to the chair.
3. Keep your foot flat on the floor and move your knee forward over the foot.
4. Hold this position for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.



RANGE OF MOTION · Ankle Inversion

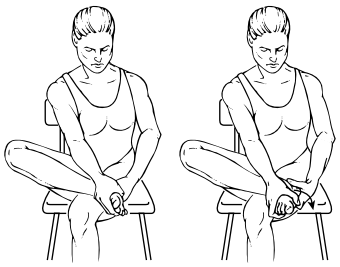
1. Sit with your _____ leg crossed over the other.
2. Grip the foot with your hands as shown and turn the sole of your foot upward and in so that you feel a stretch on the outside of the ankle.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.



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.



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.

RANGE OF MOTION · Ankle Plantar Flexion

1. Sit in the position shown.
2. Using your hand, pull your toes and ankle down as shown so that you feel a gentle stretch.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.

➢ **STRENGTHENING EXERCISES** · Subtalar Dislocation—Phase II

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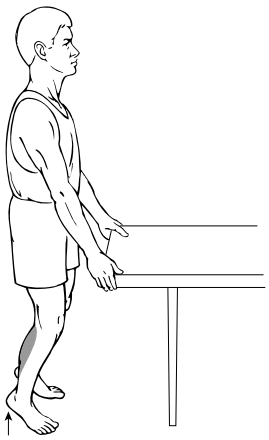
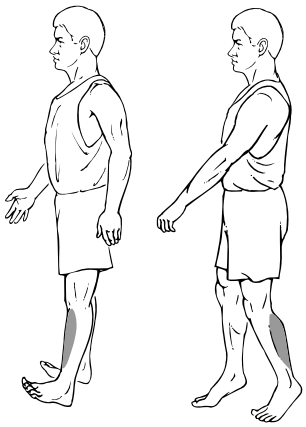


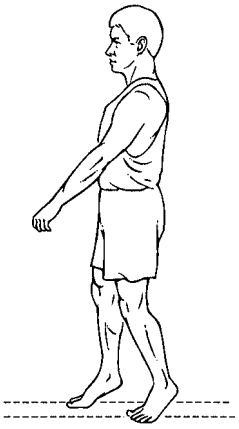
STRENGTH · Plantarflexors

1. Stand with feet shoulder-width apart. Hold on to counter or chair if necessary for balance.
2. Rise up on your toes as far as you can. Hold this position for _____ seconds.
3. Complete this exercise using only one leg if it is too easy using both legs.
4. Repeat exercise _____ times, _____ times per day.



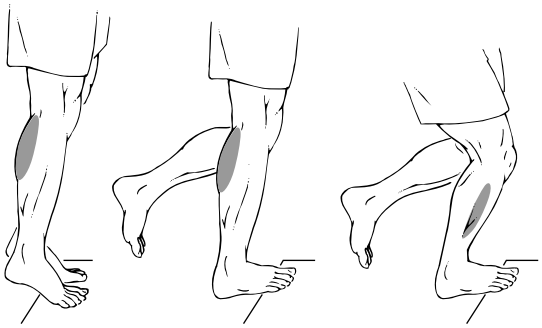
DORSI/PLANTAR FLEXION STRENGTH

1. Walk on your heels and/or toes as shown.
2. When on your toes, walk slowly and concentrate on staying as high on your toes as possible.
3. When on your heels, concentrate on keeping the toes as far off the floor as possible.
4. Repeat exercise _____ times, _____ times per day.



HEEL/TOE WALKING

1. Stand with your uninjured foot on a line as shown.
2. ***Slowly*** rise up onto your toes and back down onto your heel. Keep your balance at all times.
3. Place the injured foot/ankle in front of the uninjured leg, heel to toe.
4. Repeat as above. ***Slowly*** rise up on your toes, as far as you can without pain, keeping your balance.
5. Return to your starting position.
6. Remember, do this slowly and maintain your balance.



PLANTAR FLEXION STRENGTH

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. Stand on the edge of a step as shown with your body weight on the front of both feet. Use both legs to rise up on your toes.
2. From the toe, raise your position with your knee straight. ***Using your injured leg***, lower the heel of the injured side below the level of the step. ***Use the uninjured leg*** to rise back to the starting position in Figure 1. Work up to 3 sets of 15 repetitions.
3. Repeat by lowering the heel of the injured side below the level of the step with the knee slightly bent. Work up to 3 sets of 15 repetitions.
4. When you can perform the above exercises with minimal discomfort, increase the workload by adding a back pack with weights. You may increase the weight in the backpack in increments as tolerated.

Notes: (Up to 4400 characters only)

Notes and suggestions