

# POSTERIOR TIBIAL TENDINOPATHY

## What is posterior tibial tendinopathy?

Tendons are strong bands of connective tissue that attach muscle to bone. When a tendon is acutely injured it is called a strain. Tendonitis is when a tendon is inflamed. When there are micro-tears in a tendon from repeated injury it is called tendinosis. The term tendinopathy refers to both inflammation and micro-tears.

Posterior tibial tendinopathy causes pain along the inner side of the lower leg, ankle or foot. The posterior tibial tendon helps point the foot down and in.

## How does it occur?

Posterior tibial tendinopathy occurs from overuse of the tendon. This tendon attaches to a bone in the foot called the navicular and helps stabilize your arch. If your arch flattens out more than normal when you walk or run it is called over-pronation. When you over-pronate you strain your tendon and are more likely to get posterior tibial tendinopathy.

## What are the symptoms?

Symptoms include:

- pain or tenderness on the inner side of the shin, ankle or foot
- pain with lifting up your foot
- pain walking or running

## How is it diagnosed?

Your healthcare provider will review your symptoms and examine your leg, ankle and foot. Your foot will be tender along the tendon and where it attaches to the navicular bone. You may be asked to walk or run to see if you over-pronate.

## How is it treated?

Treatment may include the following:

- Apply ice packs to your foot for 20 to 30 minutes every 3 to 4 hours for the first 2 to 3 days or until the pain goes away. Thereafter, ice your foot at least once a day until the other symptoms are gone.
- Do ice massage. Freeze water in a cup and then peel back the top of the cup. Massage the ice into the painful tendon for 5 to 10 minutes.
- Elevate your lower leg and foot by placing a pillow underneath it. Try to keep your foot above the level of your heart.

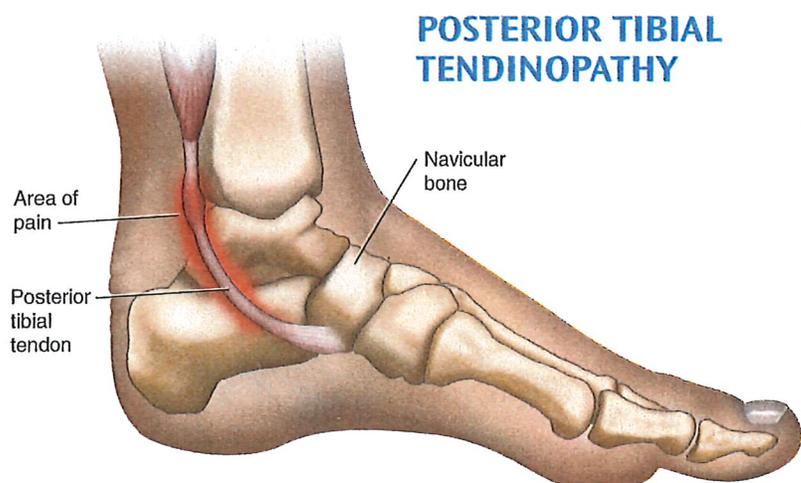
- Your provider may recommend special arch supports or inserts for you shoes called orthotics, either custom-made or off the shelf.
- Tape your foot to give extra support to your arch, the navicular bone and the attachment of the posterior tibial tendon.
- Sometimes a cast is needed for a few weeks until the pain and inflammation go away.
- Use crutches until you can walk without pain.
- Take anti-inflammatory medicine or other pain medicine prescribed by your provider (adults aged 65 years and older should not take non-steroidal anti-inflammatory medicine for more than 7 days without their healthcare provider's approval).
- Do exercises to improve your tendon strength and flexibility. The exercises will help you return to your normal activity or sports.

## When can I return to my sport or activity?

The goal of rehabilitation is to return you to your sport or activity as soon as is safely possible. If you return too soon you may worsen your injury, which could lead to long-term damage. Everyone recovers from injury at a different rate. Return to your sport or activity will be determined by how soon your injured tendon recovers, not by how many days or weeks it has been since your injury occurred. In general, the longer you have symptoms before you start treatment, the longer it will take to get better.

You may safely return to your sport or activity when, starting from the top of the list and progressing to the end, each of the following is true:

- You have full range of motion in the injured leg and foot compared to the uninjured leg and foot.

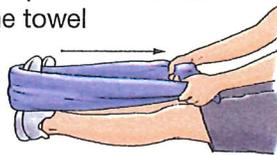


## POSTERIOR TIBIAL TENDINOPATHY (continued)

- You have full strength of the injured leg and foot compared to the uninjured leg and foot.
- You can jog straight ahead without pain or limping.
- You can sprint straight ahead without pain or limping.
- You can do 45-degree cuts, first at half-speed, then at full-speed.
- You can do 20-yard figures-of-eight, first at half-speed, then at full-speed.
- You can do 90-degree cuts, first at half-speed, then at full-speed.
- You can do 10-yard figures-of-eight first at half-speed, then at full-speed.
- You can jump on both legs without pain and you can jump on the injured leg without pain.

## POSTERIOR TIBIAL TENDINOPATHY REHABILITATION EXERCISES

**1. TOWEL STRETCH:** Sit on a hard surface with one leg stretched out in front of you. Loop a towel around the ball of your foot and pull the towel toward your body keeping your knee straight. Hold this position for 15 to 30 seconds then relax. Repeat 3 times.



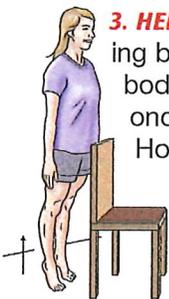
TOWEL STRETCH

**2. STANDING CALF STRETCH:** Facing a wall, put your hands against the wall at about eye level. Keep one leg back with the heel on the floor, and the other leg forward. Turn your back foot slightly inward (as if you were pigeon-toed) as you slowly lean into the wall until you feel a stretch in the back of your calf. Hold for 15 to 30 seconds. Repeat 3 times. Do this exercise several times each day.



STANDING CALF STRETCH

**3. HEEL RAISE:** Balance yourself while standing behind a chair or counter. Raise your body up onto your toes and hold for 5 seconds. Then slowly lower yourself down. Hold onto the chair or counter if you need to. When this exercise becomes less painful, try lowering on one leg only. Repeat 10 times. Do 3 sets of 10.



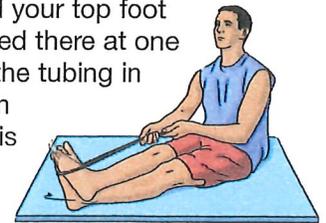
HEEL RAISE

**4. STEP-UP:** Stand with the foot of one leg on a support (like a block of wood) 3 to 5 inches high. Keep your other foot flat on the floor. Shift your weight onto the leg on the support and straighten the knee as the other leg comes off the floor. Lower your leg back to the floor slowly. Do 3 sets of 10.



STEP-UP

**5. RESISTED ANKLE INVERSION:** Sit with your legs out straight and cross one leg over your other ankle. Wrap elastic tubing around the ball of your bottom foot and then loop it around your top foot so that the tubing is anchored there at one end. Hold the other end of the tubing in your hand. Turn your bottom foot inward and upward. This will stretch the tubing. Return to the starting position. Do 3 sets of 10.



RESISTED ANKLE INVERSION

### 6. BALANCE AND REACH EXERCISES

Stand upright next to a chair. This will provide you with balance if needed. Stand on the foot farthest from the chair. Try to raise the arch of your foot while keeping your toes on the floor.

A. Keep your foot in this position and reach forward in front of you with your hand farthest away from the chair, allowing your knee to bend. Repeat this 10 times while maintaining the arch height. This exercise can be made more difficult by reaching farther in front of you. Do 2 sets.



B. Stand in the same position as above. While maintaining your arch height, reach the hand farthest away from the chair across your body toward the chair. The farther you reach, the more challenging the exercise. Do 2 sets of 10.



BALANCE AND REACH EXERCISES