

A GUIDE TO CALF STRAIN

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What is a calf strain?

A strain is an injury in which muscle fibers or tendons are stretched or torn. People commonly call such an injury a “pulled” muscle. A calf strain is an injury to the muscles and tendons in the back of your leg below your knee.

How does it occur?

A strain of your calf muscles can occur during a physical activity where you push off forcefully from your toes. It may occur in running, jumping, or lunging.

What are the symptoms?

A calf muscle strain may cause immediate pain in the back of your lower leg. It will be hard to rise up on your toes. Your calf may be swollen and bruised.

How is it diagnosed?

Your doctor will examine your lower leg. Your calf muscles will be tender.

How is it treated?

Treatment may include:

- applying ice packs to your calf for 20 to 30 minutes every 3 to 4 hours for 2 or 3 days or until pain goes away
- elevating your leg on a pillow while you are lying down
- wrapping an elastic bandage around your calf to keep the swelling from getting worse
- using crutches, if it is too painful to walk
- taking anti-inflammatory medications
- getting physical therapy, which may include treatment of muscle tissue by a therapist using ultrasound or muscle stimulation
- having your doctor or therapist tape the injured muscles while they are healing to help you return to athletic activities
- doing rehabilitation exercises

While you are recovering from your injury, you will need to change your sport or activity to one that does not make your condition worse. For example, you may need to swim instead of run.

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 permanent damage. Everyone recovers from injury at a different rate. Return to your activity will be determined by how soon your calf 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 compared to the uninjured leg.
- You have full strength of the injured leg compared to the uninjured leg.
- 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.

How can calf strains be prevented?

Calf strains are best prevented by warming up properly and doing calf-stretching exercises before your activity. This is especially important if you doing jumping or sprinting sports.

Calf Strain Rehabilitation Exercises

You can begin gently stretching your calf muscle using the towel stretch right away. Make sure you only get a gently pull and not a sharp pain while you are doing this stretch. After you can do the towel stretch easily, you can start the standing calf stretch. After a couple of days of stretching, you can begin strengthening your calf and lower leg muscles by using a Thera-Band as in exercises 3 and 4. You may do exercises 5,6 and 7 when you can stand on your toes without pain.

1. Towel stretch: Sit on a hard surface with your injured leg stretched out in front of you. Loop a towel around the ball of your foot and pull the towel towards your body, keeping the knee straight and stretching the calf muscle. Hold this position for 3 seconds and then relax. Repeat 3 times you should get an uncomfortable feeling but it should not be a sharp pain.
2. Standing calf stretch: Stand facing a wall with your hands on the wall at about chest level. Your injured leg should be about 12 to 18 inches behind your uninjured leg. Keep your injured leg straight with your front knee until you feel a stretch in the back of the calf muscle of your injured leg. Hold this position for 30 to 60 seconds. Repeat 3 times.
3. Resisted dorsiflexion: sit with your injured leg out straight and your foot facing a doorway. Tie a loop in one end of the Thera-Band. Put your foot through the loop so that the tubing goes around the arch of your foot. Tie a knot in the other end of the Thera-Band and shut the knot in the door near the bottom. Move backward until there is tension in the tubing. Keeping your knee straight, pull your foot towards your face, stretching the tubing. Slowly return to the starting position. Repeat this 10 times. Do 3 sets of 10.
4. Resisted plantar flexion. Sitting with your leg outstretched, loop the middle section of the tubing around the ball of your foot. Hold the ends of the tubing in both hands. Gently press the ball of your foot down and point your toes, stretching the Thera-Band. Return to the starting position. Repeat this 10 times. Do 3 sets of 10.
5. Standing heel raise: Balance yourself while standing behind a chair or other stable object. Raise your body up onto your toes, lifting your heels off the floor. Hold this for about 2 seconds then slowly lower your heels back down to the floor. Repeat this 10 times. Do 3 sets of 10.

You can challenge yourself by standing only on your injured leg and lifting your heel off the ground

6. Single leg balance: Attempt to balance on your injured leg while not letting the arch of that foot flatten. Don't curl your toes. Try to hold this position for 30 seconds. After this becomes easy, do it with your eyes closed.

As your balance becomes better and you are able to balance for 30 seconds on your injured leg you can challenge yourself.

7. Wall jump: Face a wall and place a piece of masking tape about 2 feet above your head. Jump up with your arms above your head and try to touch the piece. Make sure you do a "spring" type of motion and do not land hard onto your feet. Bend your legs when you land. Progress to taking off and landing on one foot.

Another good exercise is hopping. You can start at one end of the room and try to hop as high as you can across the room on one foot. Jumping rope is also a good exercise