

MEDIAL HEAD GASTROCNEMIUS TEAR (Tennis Leg)



■ ■ ■ Description

Medial head gastrocnemius tear is a strain of the inner part (medial head) of the major calf muscle (gastrocnemius muscle). Muscle attaches to bone via tendon. The injury occurs at this junction between the muscle and tendon. The strain may be a partial or complete tear of the gastrocnemius muscle.

■ ■ ■ Common Signs and Symptoms

- Sudden pop or crack in the calf at the time of injury, feeling like being kicked or hit sharply in the calf or shot in the calf
- Pain, tenderness, swelling, warmth, or redness over the middle inner calf
- Pain and weakness with ankle motion (especially flexing the ankle against resistance, such as with pushing off, pushing down with the front of the foot, or standing on the ball of the foot), as well as pain with lifting the foot up (extending the ankle)
- Bruising in the calf, heel, and, occasionally, foot 48 hours or more after the injury
- Muscle spasm in the calf

■ ■ ■ Causes

- Strain from sudden increase in amount or intensity of activity or overuse of the lower leg muscles
- Direct blow or injury to the calf
- Sudden forceful pushing off of the foot, such as with jumping, landing, serving a tennis ball, or lunging

■ ■ ■ Risk Increases With

- Sports that require sudden, explosive calf muscle contraction, such as those involving jumping (basketball), hill running, quick starts (running), or lunging (racquetball or tennis)
- Contact sports, such as football, soccer, or hockey
- Poor physical conditioning (strength and flexibility)
- Previous lower extremity injury

■ ■ ■ 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:
 - Ankle and leg flexibility
 - Muscle strength and endurance
 - Cardiovascular fitness
- Use proper technique.
- Complete rehabilitation after lower extremity injury before returning to competition or practice.

■ ■ ■ Expected Outcome

This condition is usually curable within 6 weeks if treated appropriately with conservative treatment and resting of the affected area.

■ ■ ■ Possible Complications

- Prolonged healing time if not appropriately treated or if not given adequate time to heal
- Recurrence of symptoms and injury if activity is resumed too soon, with overuse, with a direct blow, or with poor technique
- Untreated, may progress to a complete tear (rare) or other injury due to limping and favoring of the injured leg
- Persistent limping due to scarring and shortening of the calf muscles as a result of inadequate rehabilitation
- Prolonged disability

■ ■ ■ General Treatment Considerations

Initial treatment consists of medication and ice to relieve the pain, stretching and strengthening exercises, 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

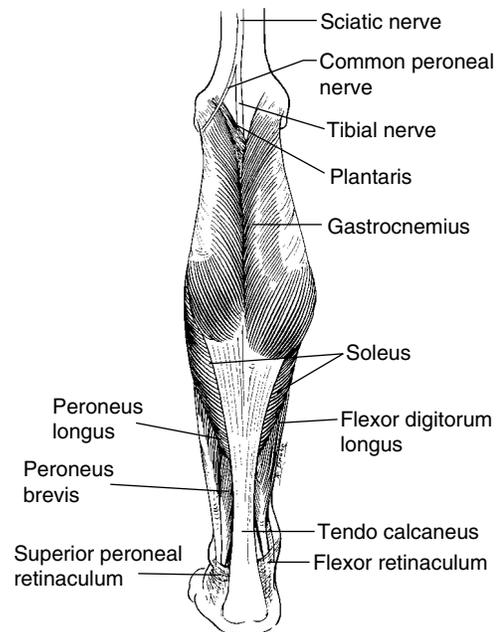


Figure 1

From Jenkins DB: Hollinshead's Functional Anatomy of the Limbs and Back, 6th ed. Philadelphia, WB Saunders, 1991, p. 289.

helpful. Occasionally a splint, cast, or walking boot may be recommended to 10 to 21 days to immobilize the tendon and allow the inflammation to settle down. Sometimes crutches are necessary for the first 24 to 72 hours. For less severe cases or after immobilization, a heel lift may be prescribed to reduce stress to the muscle. Surgery is rarely necessary. Suturing or sewing torn muscle is usually not successful.

■ ■ ■ 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.

■ ■ ■ 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

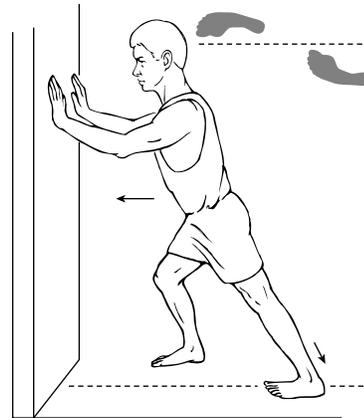
- Symptoms get worse or do not improve in 2 weeks despite treatment
- Numbness or tingling develop
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

EXERCISES

> RANGE OF MOTION AND STRETCHING EXERCISES • Medial Head Gastrocnemius Tear (Tennis Leg)

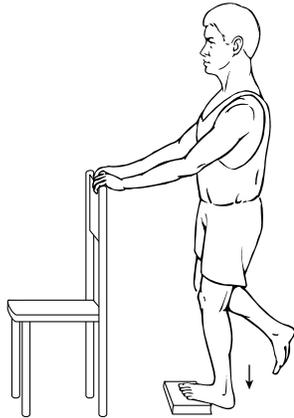
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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 • Gastrosoleus

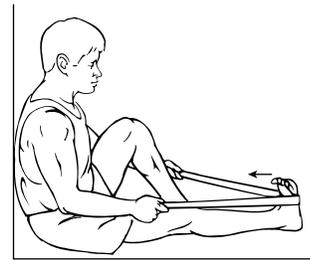
1. Stand *one* arm length from the wall as shown. Place calf muscle to be stretched behind you as shown.
2. Turn the *toes in* and *heel out* of the leg to be stretched.
3. Lean toward wall leading with your waist, allowing your arms to bend. **Keep your heel on the floor.**
4. First do this exercise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

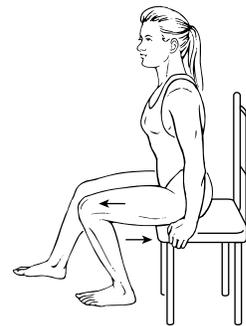
Note: This exercise can place a lot of stress on your foot and ankle and should only be done after specifically checking with your physician, physical therapist, or athletic trainer.

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.



STRETCH • Gastrocnemius

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.



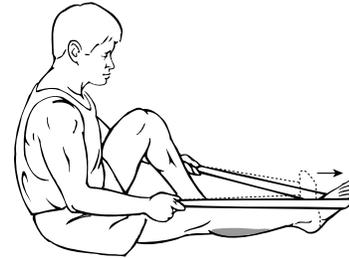
RANGE OF MOTION • Ankle Dorsiflexion

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.

> STRENGTHENING EXERCISES • Medial Head Gastrocnemius Tear (Tennis Leg)

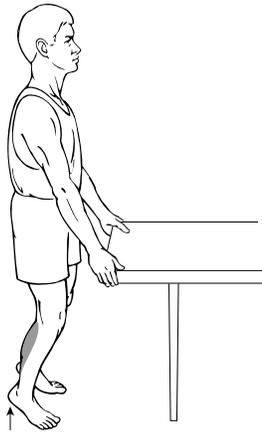
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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.



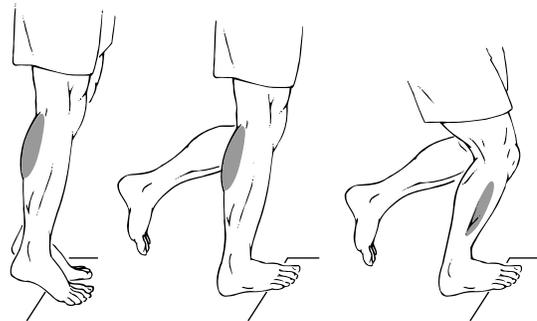
STRENGTH • Plantarflexors

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 • 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.



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