HAMSTRING SYNDROME

Description

Hamstring syndrome is a rare nerve condition in the hip that causes pain and occasionally loss of feeling in the back of the thigh, often to the bottom of the foot. It involves compression of the sciatic nerve at the hip by a band of ligament-like (fibrous) tissue between two of the three hamstring muscles or between the muscle and bone of the pelvis. The hamstrings are three muscles that go from the pelvis or upper thigh across the back of the knee to the leg. This muscle group is important for bending the knee, straightening the hip, and stabilizing the knee. It is also important for running and jumping. The sciatic nerve usually passes near these muscles, and the pelvis then runs under these muscles in the thigh.

Common Signs and Symptoms

- Tingling, numbness, or burning in the back of the thigh to the back of the knee and occasionally to the bottom of the foot
- Tenderness in the buttock
- Pain and discomfort (burning or dull ache) in the hip or groin, mid-buttock area, the back of the thigh, and sometimes to the knee
- Heaviness or fatigue in the leg
- Pain that is worse with sitting, running fast, kicking, or trying to stretch the hamstring muscles
- Pain that is lessened by laying flat on the back

Causes

- Pressure on the sciatic nerve at the hip by a fibrous band from the hamstring to bone in the pelvis or other hamstring muscles

Risk Increases With

- Sports that require jumping, sprinting, hurdling, or sitting; also, more commonly seen in soccer players and football kickers
- Recurrent hamstring muscle strains
- Poor physical conditioning (strength and flexibility)

Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
  - Hip flexibility
  - Muscle strength and endurance
  - Cardiovascular fitness

Expected Outcome

This condition is usually curable with appropriate treatment or sometimes spontaneously within 2 to 6 weeks. Uncommonly, surgery is necessary.

Possible Complications

- Permanent numbness in the affected knee, leg, and foot
- Persistent pain in the knee, leg, and foot
- Increasing weakness of the extremity
- Disability and inability to compete

General Treatment Considerations

Initial treatment consists of rest from the offending activity and nonsteroidal anti-inflammatory medications to help reduce inflammation and pain. Stretching exercises of the hamstring muscles are useful. Referral to physical therapy or an athletic trainer may be recommended for further treatment, including ultrasound and other therapies. Injections with cortisone, often with numbing medicine, to the area where the nerve is being pinched may be recommended to help reduce the nerve inflammation and pinching. If this conservative treatment is not successful, surgery may be necessary to free the pinched nerve by cutting the fibrous band where the nerve is being pinched. Surgery is uncommonly necessary but does provide almost complete relief in most patients who undergo this operation.

Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before

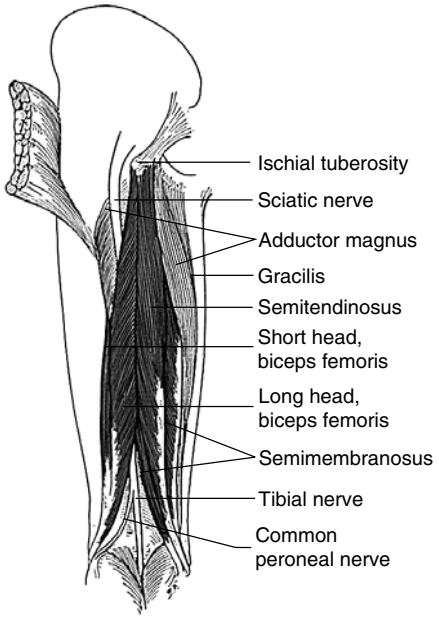


Figure 1
From Jenkins DB: Hollinshead's Functional Anatomy of the Limbs and Back, 6th ed. Philadelphia, WB Saunders, 1991, p. 263.

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, usually only after surgery. Use only as directed and only as much as you need.
- Injections of corticosteroids may be given to reduce inflammation.

Heat and Cold
- Cold is used to relieve pain and reduce inflammation for acute and chronic cases.
- 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.

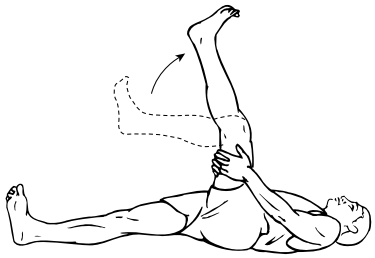
Notify Our Office If
- Symptoms get worse or do not improve in 2 weeks despite treatment
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

EXERCISES

➢ **RANGE OF MOTION AND STRETCHING EXERCISES** · Hamstring Syndrome

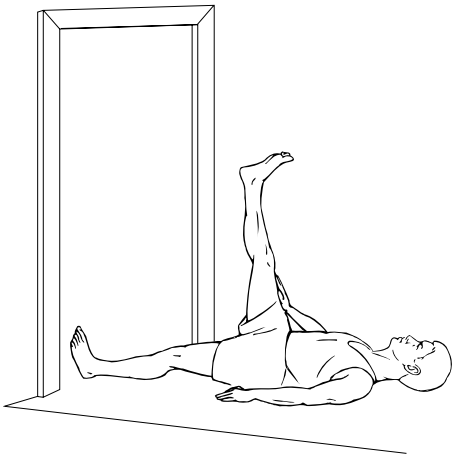
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. *These exercises must be done cautiously! If they increase your symptoms, consult your physician, physical therapist, or athletic trainer.* 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.



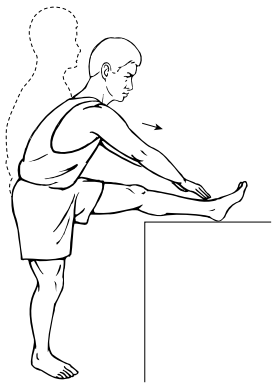
FLEXIBILITY · Hamstrings

1. Lie on your back with your leg bent and both hands holding on to it behind the thigh as shown.
2. Your hip should be bent to ***90 degrees*** and the thigh pointing straight at the ceiling.
3. Straighten out your knee as far as you can. Keep your thigh pointing straight toward the ceiling.
4. Keep the other leg flat on the floor.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



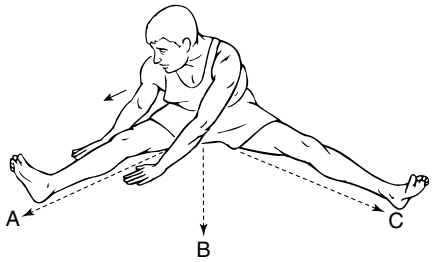
FLEXIBILITY · Hamstrings, Doorway

1. Lie on your back near the edge of a doorway as shown.
2. Place the leg you are stretching up the wall, keeping your knee straight.
3. Your buttock should be as close to the wall as possible and the other leg should be kept flat on the floor.
4. You should feel a stretch in the back of your thigh.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



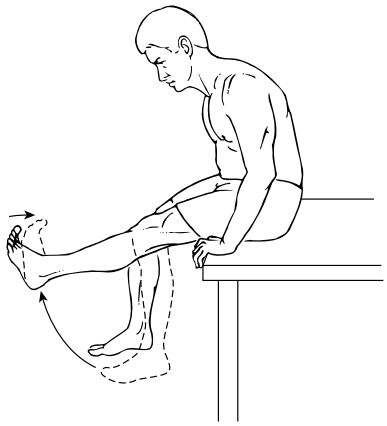
FLEXIBILITY · Hamstrings, Ballet

1. Stand and prop the leg you are stretching on a chair, table, or other stable object.
2. Place both hands on the outside of the leg you are stretching.
3. Make sure that your hips/pelvis are also facing the leg you are stretching.
4. Slide your hands down the outside of your leg.
5. Lead with your chest/breast bone. Keep your chest upright and back straight. Do not hunch over at the shoulders. Keep your toes pointing up.
6. You should feel a stretch in the back of your thigh.
7. Hold this position for _____ seconds.
8. Repeat exercise _____ times, _____ times per day.



FLEXIBILITY · Hamstrings/Adductors, V-Sit

1. Sit on the floor with your legs spread as wide as possible in front of you. Your knees must be straight.
2. Lean over one leg with both hands. Keep your chest upright and reach for your toes. (Position A)
3. Hold this position for _____ seconds. Relax and return to your starting position.
4. Now reach forward between your legs. (Position B)
5. Repeat for Position C.
6. Repeat exercise _____ times, _____ times per day.



MOBILIZATION · Nerve Root

1. Sit on a chair, bench, table, or counter that is high enough so that your feet are off the floor.
2. Slump/slouch when you sit, rounding your back and allowing your head to bend forward as shown.
3. ***With your foot relaxed, slowly*** straighten your _____ knee until it is straight or you feel a mild pull in the back of your knee or calf. Hold for a count of 10. Relax and let your knee bend.
4. If you can straighten your knee fully without feeling a pull, ***slowly*** pull your toes up toward you. Hold for a count of 10. Relax, and let your toes point.
5. Repeat exercise _____ times, _____ times per day.

Notes: (Up to 4400 characters only)

Notes and suggestions