

EXERCISE RX

Rehabilitating a Pulled Hamstring

In general, the hamstrings are so well-trained that they can take a lot of stress. However, hamstring pulls can occur when people are unprepared for sports that involve a lot of stopping and starting, such as basketball or tennis, or during other instances of sudden motion, such as sprinting to catch a bus or cross a street.

In some cases, even casual activities, such as walking after sitting on an airplane or in a car for a long trip, or walking down stairs carrying a heavy load, can cause a strained hamstring.

The hamstring works in tandem with the quadriceps muscle; when one con-

tracts, the other relaxes. When the quadriceps muscle contracts so quickly that the hamstring can't relax in time, the result is a pulled hamstring.

It is important to rule out sciatica and osteoarthritis of the hip when examining a patient with hamstring pain. Patients with osteoarthritis of the hip are especially difficult to examine, because they may have pain throughout the hip area. Although an MRI will show a complete hamstring tear, a pull or strain will not be visible.

One noninvasive way to tell whether the hamstring has ruptured is to have the patient lie on his or her stomach and bend the knees to about 45 degrees.



BY WILLIBALD NAGLER, M.D.

Observe the appearance of the hamstrings as they contract. If the contours are significantly different, the hamstring may be ruptured, and the patient should be evaluated by an orthopedist before exercising.

Patients with a pulled hamstring can start the first two exercises immediately after the injury. (See illustrations and instructions below, which you can photocopy for your patients.) Exercises 3 and 4, which involve light ankle weights, can be added to the first two exercises after a few days, once swelling has subsided.

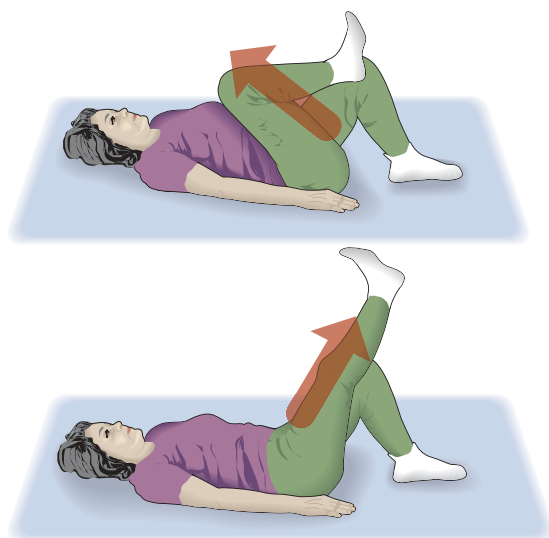
I recommend the use of crutches for about a week. Patients can apply ice to the hamstring for the first day or so after the injury; after that, they are better off using a heating pad. A helpful strategy is to apply a heating pad to the injured area for 20 minutes before doing the exercises.

The following exercises stretch and strengthen not only the injured hamstring, but the quadriceps muscle as well. Remind patients that the quadriceps muscle has been inactive if they have been protecting the hamstring and that it quickly loses both strength and flexibility when it is not used. Also remind them to be cautious when stretching and to avoid exerting excessive force. Patients should stretch until they feel a slight pull but should stop short of feeling strain or pain. ■

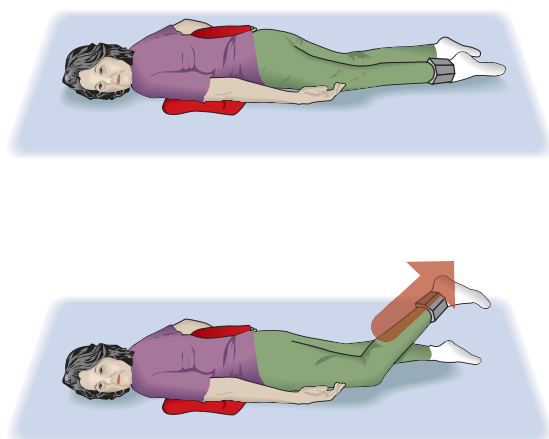
Next month: Exercises to rehabilitate a groin pull.

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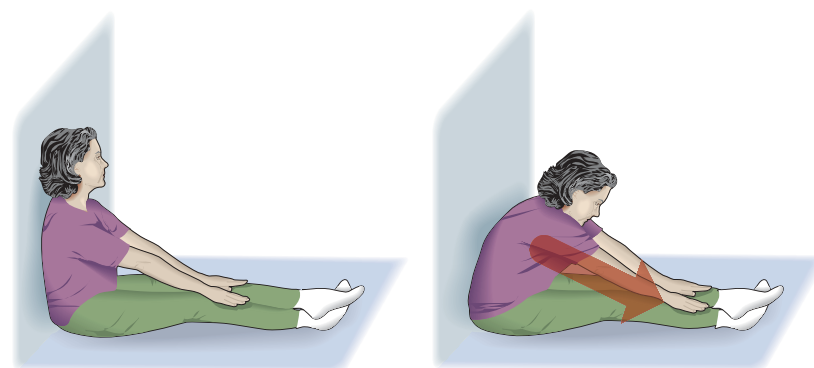
Exercises for a Pulled Hamstring



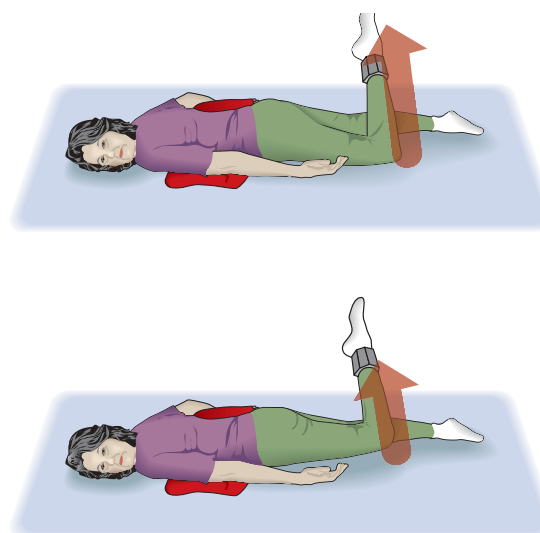
- ▲ **Quadriceps extension.** Lie on your back with your knees bent, feet flat on the floor and hip distance apart, and your arms relaxed at your sides. Slowly bring the knee of the injured leg toward your chest while pushing the small of your back into the floor. Keep the foot flexed, and slowly straighten the injured leg. You may need to lower the leg slightly to fully extend it. Hold for 15 seconds, then lower your leg and relax for 10 seconds. Repeat six times.



- ▲ **Front-lying leg raise, part 1.** Lie on your stomach with a pillow under your abdomen and a 2-pound weight wrapped around your ankle, starting with the injured leg. Slowly bend the knee, raising the lower leg to a 45-degree angle with the floor. Hold the position for 5 seconds, and then relax. Start with 8 repetitions, and work up to 12. Do this exercise for both legs once daily.



- ▲ **Seated forward bend.** Avoid this exercise if you have back problems. Sit on the floor with your back against a wall and your legs straight out in front of you. Cross the left ankle over the right, and bend forward slowly from the waist, reaching toward the ankles. Hold the forward bend for 15 seconds, then relax and sit up for 5 seconds. Repeat six times, then cross the right ankle over the left, and repeat six times.



- ▲ **Front-lying leg raise, part 2.** Lie on your stomach with a pillow under your abdomen and a 2-pound weight wrapped around your ankle; begin with the injured leg. Slowly bend the knee, raising the lower leg to a 90-degree angle with the floor, raise the thigh off the floor and hold the position for 5 seconds, and then relax. Start with 8 repetitions, and work up to 12. Do this exercise for both legs once daily.