

How to Treat a Muscle Strain or Tear in the Quad, Hamstring, or Thigh Adductors?

A knee muscle strain occurs when one of the muscles supporting the knee becomes stretched beyond its limit. This excessive stretching may cause a muscle strain, a muscle tear, or a muscle pull. All three descriptions refer to damage to a muscle or its attaching tendon.

In general, if we are referring to muscles of the knee, we are referring to the quadriceps, hamstring, or thigh adductor muscles. There are more but treatment would be the same no matter the muscle.

The injury to these muscles or muscle tendons may be graded according to the severity:

1st degree

- The muscle may be sore but there was only mild over-stretching of a muscle

2nd degree

- Mild swelling and bruising but possible severe muscle pain and tenderness. Moderate over-stretching of a muscle with some tearing of the fibers.

3rd degree

- Severe pain and swelling. Muscle or tendon is torn all the way through. Muscle is either ripped into two separate pieces or sheared away from tendon. This can cause a complete loss of function and may require surgery.

Anyone can strain their “knee” muscles from just daily tasks, but more often they occur during a sports event. A knee strain can occur suddenly during a sports event, or with sudden lifting. The strain can also occur gradually over time due to a repetitive motion (such as stair climbing or hiking).

You have a higher chance of experiencing a knee strain if:

- A. You have had a prior knee strain or tear.
- B. You have muscle tightness

- C. You fail to warm up before an athletic or work event.
- D. You attempt to do too much too soon with exercise or work.

Signs and Symptoms of a Knee Muscle Strain or Tear:

1. Swelling and bruising (discoloration)
2. Muscle spasms
3. Previous knee strain or tear
4. You can feel point tenderness
5. Might feel an indentation or bump in the muscle
6. Pain when that muscle is used
7. Weakness when that muscle is used
8. Hearing a “pop” sound when the muscle or tendon was injured

X-rays may be ordered to make certain a bone fracture did not occur with a strain or tear.

These tests are not to be used to help you self-diagnose or assess yourself. We highly recommend you see your physician for a professional diagnosis.

1. Test your quadriceps:

- a. Sit in a chair, best done with help. Extend your right knee and hold the right foot. Push down on your shin bone and try to continue to hold the right foot in the air. Pain and/or weakness may be noted with a strain or tear. Compare to the left side.



2. Test your hamstrings

- a. Sit in a chair and extend your right knee. Have a second party grab the underside of the foot and ankle on the same side. Try to pull the foot to the floor while they resist. Pain and/or weakness may be noted in the leg with a hamstring strain or tear.



3. Test your thigh adductors

- a. Sit in a chair. Squeeze both knees together. Attempt to pull your knees apart while resisting with the hip and thigh muscles. Pain and/or weakness may be noted on the leg with a strain or tear.



4. Use your fingers to feel for point tenderness in the muscles surrounding your knee muscles.



To treat a strain or tear in the hamstrings, quadriceps, or thigh adductors, we first suggest starting with massage. We recommend that you begin by massaging around the painful area. Eventually work the massage into the strained area or tear. You can massage for a total of 15 minutes or 5 minutes 3x per day. You can perform the massage manually with your hands, but you will likely fatigue quickly. Here are some tips for using a massage gun.