



# Advance Rehab

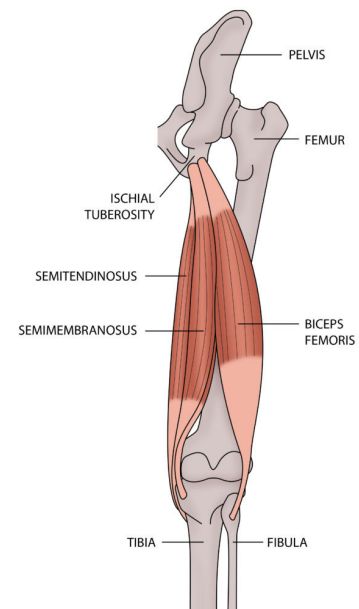
## Hamstring Injury Chris Arrigo, MS, ATC, PT, Cert-DN Advanced Rehabilitation

Those long Saturday training runs are getting longer. That goal race is getting closer. But there is a nagging pull in the back of your thigh. If this sounds familiar, it is not something to overlook. Your hamstring muscles may be trying to warn you that a problem is developing. One that should never be ignored.

The hamstrings are an important muscle group when running. The main function of the hamstrings is to bend the knee and extend the hip. In running, the hamstrings act as a propeller to move your body forward. When the hamstrings are unable to fully do their job, they can be susceptible to injury. But, before we talk about hamstring injuries, it is important to first understand their anatomy.

### Anatomy

The hamstrings are a group of three muscles located on the back of your thigh. All three of the muscles originate at one spot, the ischial tuberosity which is also known as your “sit bones,” because these are the bony prominences that you feel when you are sitting. The semitendinosus and semimembranosus muscles insert on the medial condyle of the tibia on the inside of the knee, while the biceps femoris inserts on the outside of the knee at the head of fibula.



### Injury

There are a wide variety of hamstring injuries that differ by severity, location, and symptoms. Symptoms of a hamstring injury may include pain on the back of the thigh, lower buttock, or behind the knee; tightness in the back of the thigh; a sudden “pop” while running; and bruising or tenderness.

The most common hamstring injury among distance runners is a proximal hamstring strain, which is located on or near the origin of the hamstrings at the ischial tuberosity.

Unfortunately, proximal hamstring strains can take a long time to heal. However, modalities,

strengthening, stretching and dry needling can help improve symptoms and keep you on the road, trail, or treadmill.

## Prevention

Hamstring tightness is one of the main factors contributing to hamstring injuries, either as a primary cause or as the result of an injury. One way to prevent hamstring injuries is to stretch your hamstrings after your dynamic warm-up, but prior to running. This will allow the muscle to warm and loosen up before being stressed.

One effective hamstring stretch, involved lying on your back, placing your hands behind your thigh and bringing your leg towards your chest, as pictured to the right. Then, slowly straighten your knee until you feel a stretch in the back of your thigh. When you feel the stretch, hold the position for 15-30 seconds. Relax, by bending the knee, then perform that same stretch 3-7 more times. Make sure you repeat this on the other leg.



Hamstring weakness is another factor contributing to hamstring injuries. When there are strength imbalances in the body, the body will not be able to mechanically work the way it should. When muscles are strengthened and balanced, the body will be able to run more efficiently.



One example of a hamstring strengthening exercise is an RDL or “grab-a-pens.” To perform, place a target, such as a pen, on the floor. Stand a couple feet behind the pen, as pictured on the left. Then, balance on one leg and place the opposite arm straight up in the air. Slowly bend forward on the standing leg while keeping the knee straight. Bend towards your target, trying to grab the pen, until you can’t go any further, or until you are about to lose your balance. Then slowly come back up. It is important to take your time

going in both directions, as this exercise strengthens the hamstrings concentrically and eccentrically. Work up to performing 2-3 sets of 20-25 of these on each leg.

If you have any questions regarding hamstring injuries or any other physical therapy techniques, please feel free to contact me! I can be reached at Advanced Rehabilitation. Phone (813)250-120, via our website [www.advancedrehab.us](http://www.advancedrehab.us) or by email at [carrigo@advancedrehab.us](mailto:carrigo@advancedrehab.us).

At Advanced Rehabilitation we work to keep you moving – no matter what you do.



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