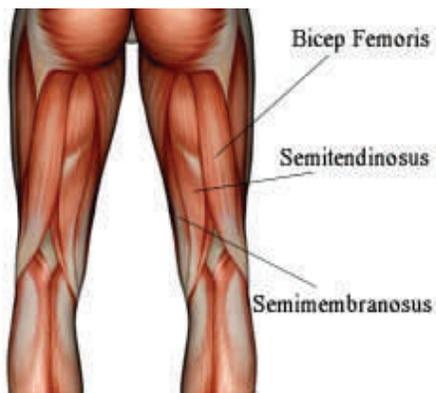


A Patient's Guide to Hamstring Injuries



What is a Hamstring Injury?

The big group of muscles and tendons in the back of the leg are commonly called the *hamstrings*. Injuries in this powerful muscle group are common, especially in athletes. Hamstring injuries happen to all types of athletes, from Olympic sprinters to slow-pitch softball players. Hamstrings can also be injured in everyday activities around the house that put stress on the legs and back. These injuries can be very painful. In order for an injured hamstring to return to full function, it needs special attention and a specially designed rehabilitation program.

What are the Hamstrings, and what do they do?

The hamstrings are the bulk of muscles in the back of the thigh. They are formed by three muscles and their tendons. The hamstrings connect to the *ischial tuberosity*, the small bony projection on the bottom of the pelvis, just below the buttocks. The hamstring muscles run down the back of the thigh. Their tendons cross the knee joint and connect on each side of the shinbone (*tibia*). The hamstrings function by pulling the lower leg backward and propelling the body forward while walking or running. The hamstrings also bend the knees. Most hamstring injuries occur in the *musculotendinous complex*. This is the area where the muscles and tendons join. (*Tendons* are bands of tissue that connect muscles to bones.) The hamstring has a large musculotendinous complex, which partly explains why hamstring injuries are so common.

How do Hamstring Injuries develop?

Hamstring injuries happen when the muscles are stretched too far too fast. Sprinting and other fast or twisting motions with the legs are the major cause of hamstring injuries. When the hamstring is injured, the fibers of the muscles or tendon are actually torn. The body responds to the damage by increasing blood flow and producing inflammatory chemicals at the site of the injury. Your body attempts to heal by rebuilding the injured muscle while forming scar tissue. Scar tissue restricts the translation or movement of adjacent tissues, causing friction, and leading to inflammation. Normally, the hamstrings can move through a full range of motion freely and slide by each other. However, as the scar tissue builds up and motion is reduced, the hamstrings become irritated and inflamed. With the reduction of motion and increase in inflammation of the tissue, more pain is produced.

What does a Hamstring Injury feel like?

Hamstring injuries usually occur during heavy exercise. In especially severe cases, a person may suddenly hear a pop and fall to the ground. In less severe cases, individuals may notice a tight feeling or a pulling in their hamstring that is painful or restrictive to motion. This type of hamstring injury often turns into a long-lasting problem. If left untreated, it can lead to more severe problems.

What is the treatment for Hamstring Injuries?

In our office, we use a combination of chiropractic treatments, Active Release Technique (ART) soft tissue manipulation and rehabilitation to allow restoration of proper biomechanics to the hamstrings, hip, pelvis, and knees.

Ways We Treat Your Hamstring Injury:

Chiropractic

- Chiropractic is a natural healing approach that promotes a healthy, pain-free lifestyle without the use of drugs or surgery. An adjustment is a hands-on therapy that delivers a controlled pressure that restores proper motion to a restricted joint.

Active Release Technique (ART)

- ART is a manual therapy that corrects muscular and soft-tissue problems caused by the formation of adhesive or scar tissues. Adhesions/scar tissue occur naturally in the body in response to overuse or cumulative trauma.

Flexibility

- Good flexibility enables muscles and joints to move through their full range of motion. Poor flexibility leads to a higher chance of injury to muscles, tendons and ligaments.

Strength

- Strength training is essential for the rehabilitation of any injury. When new tissue is laid down to repair an area, it is very thin and weak. If this tissue is not properly re-strengthened, it can lead to re-injury.

Proprioception

- Proprioception describes the body's ability to react appropriately to external forces. It also helps rebuild proper motor patterns of the body. Proprioceptive exercises form the basis for the agility, strength, and endurance for complete rehabilitation.



With our combination of different treatments, resolution can be seen in over 90 percent of hamstring cases. Effective treatment of the hamstrings, or any soft tissue injury, requires an alteration in tissue structure to break up the restrictive cross-fiber adhesions and restore normal function to the affected soft tissue areas. When executed properly, this process substantially decreases healing time, treats the root cause of the injury, and improves athletic performance. Active Chiropractic and Rehabilitation Clinic is very successful at treating this type of injury. Our therapies remove restrictive adhesions between both the superficial and deep tissue structures along the entire kinetic chain. This comprehensive approach creates a complete, time efficient healing process.



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