



Hamstring Strain

Definition: A hamstring strain is an excessive stretch or tearing of muscle fibers and related tissues. These are typically graded according to their severity and length of time required to heal, using terms such as Grade I (mild) Grade II (moderate), and Grade III (severe).

Common Terms: Strains of a muscle are also referred to as muscle tears and pulled muscle.

Typical Mechanism of Injury: A strain can occur during an isolated athletic activity (acute) or result from persistent repetitive stress (chronic). Often an acute strain occurs as a result of a chronic condition that causes the muscle to be weak and vulnerable. Athletes doing a lot of starting and stopping with activities are at a higher risk for an acute strain. In particular, starting an explosive movement from a complete resting position, such as in running a sprint-like race, is a common way of encountering a muscle strain. Eccentric exercise activity, or what many refer to as “negatives”, also can lead to muscle strains since a muscle is contracting (shortening) at the same time it is being lengthened (pulled apart).

Common Signs and Symptoms: A person with a Grade 1 hamstring strain will have muscle soreness, and point tenderness. Grade 2 is partial tearing of muscle fibers with severe pain and loss of knee flexion (bending your knee). Grade 3 is the rupturing of tendons and tissue (usually will feel a “pop”). The athlete will have major hemorrhaging (bruising) and disability with a Grade 3 hamstring strain.

Common Treatment: Rest, ice, compression, and elevation are common treatments for acute muscle strains. Therapeutic modalities, such as ultrasound, electrical stimulation, massage, and others, are also used to promote healing. Static stretching and exercise should be started once soreness has alleviated. In some cases, compression wrapping of the area may be helpful.

Prevention: To help prevent future strains in the hamstring, taking part in a sport specific conditioning program that includes stretching and strengthening can be beneficial. Properly warming up before an activity can also help prevent strains.

Expectations: Strains tend to always be a problem to the athlete. Some heal with inelastic fibrous scar tissue and/or the fear of another strain becomes an obsession in the athlete’s mind and may handicap his/her performance.

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