

ADDUCTOR MUSCLE STRAIN

DESCRIPTION

- Inflammation and pain along the inner thigh muscles (the adductors - longus, medius and magnus and the gracilis muscle) and groin. These muscles allow the hip and leg to move across the body. Muscle attaches to bone via tendon. The injury occurs at this junction between the muscle and tendon or at the tendon attachment into the pelvic bone. The strain may be a partial or complete tear of any or all of the adductor muscles. The adductor longus is the most commonly injured of the muscles.
- This is usually a grade 1 or 2 strain. A *Grade 1 strain* is a mild strain. There is a “slight pull” without obvious tearing (it is microscopic tearing). There is no loss of strength and the muscle and tendon are the correct length. A *Grade 2 strain* is a moderate strain. There is tearing of fibers within the substance of the tendon or at the bone-tendon junction or at the muscle-tendon junction. The length of the tendon or whole muscle-tendon-bone unit is increased and there is usually decreased strength. A *grade 3 strain* is a complete rupture of the tendon and occurs uncommonly.

FREQUENT SIGNS AND SYMPTOMS

- Occasionally, a sudden pop in the groin or inner thigh at the time of injury.
- Pain, tenderness, swelling, warmth and/or redness over the inner thigh and groin, often worsened by moving the hip and often weakness of the hip (especially spreading the legs/hips, pushing the legs against each other or kicking with the affected leg).
- Bruising in the groin and inner thigh 48 hours following the injury
- Uncommonly, loss of fullness of the muscle with complete rupture
- Muscle spasm in the groin and inner thigh

CAUSES

Usually the strain is from prolonged overuse or with a sudden increase in amount or intensity of activity or overuse of the inner thigh muscles with kicking. Also muscle imbalance or weakness may predispose to this injury. It may also be due to a sudden single episode of stressful over-activity such as during kicking. Less commonly may be due to single violent blow or force to the inner thigh.

RISK INCREASES WITH

- Sports that require repeated kicking, such as with soccer, martial arts, and football kickers, as well as sports that require the legs to be brought together such as gymnastics and horseback riding
- Sports that require rapid acceleration such as ice hockey, and track and field.
- Poor physical conditioning (strength/flexibility)
- Previous thigh injury

PREVENTIVE MEASURES

- Appropriate warm up and stretching before practice or competition
- Appropriate conditioning:
 - Hip/thigh flexibility
 - Muscle strength & endurance
 - Cardiovascular fitness
- Proper sports technique
- Complete rehabilitation after lower extremity injury before returning to competition or practice.

EXPECTED OUTCOME

Usually curable within 2-6 weeks if treated appropriately with conservative treatment and resting the affected area.

POSSIBLE COMPLICATIONS

- Healing time will be prolonged if not appropriately treated or if not given adequate time to heal
- Recurrence of symptoms and injury if return to activity is too soon.
- Untreated the strain may progress to a complete tear (rare) or other injury due to limping and favoring the injured leg.
- Prolonged disability

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication and ice to relieve the pain, stretching and strengthening exercises and modifying the activity which initially cause the problem to occur. These all can be carried out at home, though referral to a physical therapist or athletic trainer for further evaluation and treatment may be helpful. Occasionally, crutches may be recommended if the strain is severe and the athlete is limping until the pain and inflammation settle down for the first 24 to 72 hours. Surgery is rarely necessary to reattach tendon if it pulls off the pelvic bone. Surgery may uncommonly be recommended if chronic, persistent pain exists at the groin for more than 3 months despite appropriate conservative treatment for strains. Suturing or sewing torn muscle is usually not successful.

MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take for the first 3 days after injury or if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Topical Ointments or liniments may be of benefit.
- Pain relievers may be prescribed as necessary by your physician. Do not take prescription pain medication for longer than 4 to 7 days. Use only as directed and only as much as you need.
- Injections of corticosteroids may be given to reduce inflammation, though not usually for acute injuries.

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 - 15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used prior to performing stretching and strengthening activities prescribed by your physician, physical therapist or athletic trainer. Use heat pack or a warm soak.

NOTIFY OUR OFFICE IF

- Symptoms get worse or do not improve in 2 weeks despite treatment
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.