

STRAINS

DESCRIPTION

A strain is a stretched or torn muscle. Muscles that cross 2 joints, such as the hamstrings, calves, and quadriceps are more susceptible to strains. Injury to muscles usually occur at the junction where the muscle becomes tendon. Tendons serve as the insertion of the muscles into bone. There are 4 grades or degrees of strains:

- A *first degree strain* is small tearing of the muscle where it is not lengthened, but there is painful with contraction. There may be mild bleeding or bruising.
- A *second degree strain* is a partial tear of the muscle. The muscle is stretched but still functions. Usually there is pain with contraction and possibly weakness. Frequently the joint it crosses will not fully move due to the pain of stretching the injured muscle. There usually is bleeding and bruising.
- A *third degree strain* is a complete tear of the muscle. The muscle is torn and does not function to move a joint and the function is weak. There is bleeding and bruising with this degree of injury.
- Another degree of strain is “*Delayed Onset Muscular Soreness*” which begins the day after exercise. These are microscopic tears of the muscle, not associated with bleeding.

FREQUENT SIGNS AND SYMPTOMS

- Pain, tenderness, redness or bruising, and swelling in the area of injury. The severity varies with the extent of injury.
- Loss of normal mobility of the injured joint.

CAUSES

Strains may occur due to sudden overload of a contracted muscle, overuse, or sudden increase or change in activity.

RISK INCREASES WITH

- Trauma
- Poor physical conditioning (strength/flexibility)
- Inadequate warm-up before practice or play
- Return to activity before healing and rehabilitation and conditioning are complete.

EXPECTED OUTCOME

With appropriate treatment full recovery is expected. It may take 2 to 8 weeks is for recovery. May take longer depending on the severity of injury.

POSSIBLE COMPLICATIONS

- Reinjury/recurrence of symptoms, permanent weakness and/or joint stiffness if the strain is severe and rehabilitation is incomplete. Appropriately addressing the problem the first time decreases the frequency of recurrence.
- Delayed healing or resolution of symptoms if return to sports is attempted before rehabilitation is complete.
- Excessive bleeding into muscle, especially if taking anti-inflammatory medications. This can lead to delayed recovery, injury to nerves, muscle, and blood vessels...this is an emergency.

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of ice and medications to relieve pain, stretching the affected joint to prevent stiffness and modification of activity to rest the injured muscle. A brace, elastic bandage wrapping, splint, cast or sling may be prescribed to protect affected joint for a short period of time. Strengthening exercises are prescribed as the muscle inflammation and pain subsides. Physical or occupational therapy may be recommended to regain strength and normal use of the joint. Surgery may be necessary if tendon is torn. It usually is not possible to surgically repair a torn muscle.

MEDICATION

- Avoid aspirin or ibuprofen in the first 48 hours after the injury as it may increase the tendency to bleed. During that time, you may use non-prescription pain relievers such as acetaminophen. After 48 hours, non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take 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 him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Topical ointments may be of benefit.
- If the strain is severe, stronger pain relievers may be prescribed as necessary by your physician. Use only as directed and only as much as you need.

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 despite treatment.
- Pain becomes intolerable, numbness, tingling, or toes/ fingernails become cold, blue, gray or dusky color.
- New, unexplained symptoms develop. Drugs used in treatment may produce side effects.