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# THE NATIONAL ATHLETIC

## Treatment of Thigh Sprains and Strains

**CHUCK MEDLAR**  
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**Chuck Cramer**  
Executive Secretary

First, let us differentiate between sprains and strains. The dictionary defines a sprain as "a violent stretching of tendinous or ligamentous parts with or without rupture of some of their fibres," while a strain is, more vaguely, "an injury afflicted by straining, especially a wrenching of the muscles." However, today in our common language, sprains and strains have fallen into the category of pulled muscles.

As we all know, a pulled muscle or tendon occurs when a muscle is forced beyond its normal limitation. According to P. E. McMaster, "When a normal muscle-tendon system is subjected to severe strain, the tendon does not rupture. However, rupture may occur at the insertion of tendon to bone, at the musculotendinous junction through the belly of the muscle, or at its origin from the bone. Either muscle or tendon may pull away a small fragment of bone causing a sprain fracture or sometimes the strain results in fracture or dislocation.

This goes hand in hand with one of the areas of muscles that are susceptible to a pull, namely the attachments. The other two areas are the attachment of the muscle and tendon, and the "belly of the muscle itself."

When a muscle is pulled, the muscle is strained against its will as nature tries to hold the belly of the muscle in a state of spasm. The whole muscle will not stretch and it becomes tight. The severity of the injury depends on how much the muscle is forced. In the more severe type of pull, we have a complete rupture. Certain symptoms are common to most ruptures of muscles such as the history of a sudden sharp pain or snapping sensation which occurs during violent muscular effort. This is followed by the appearance of a defect in the belly of the muscle. A complete rupture generally requires operative repair and should be placed in the team physician's hands immediately.

In the less severe type of injury in the muscle, blood vessels are ruptured which means a condition of hemorrhage. A broken blood vessel means that fluid quickly infiltrates into the surrounding tissue, causing swelling. This separates torn muscle fibres and ragged ends float in the free blood and lymph. If this mass is not disturbed it becomes organized in a short time into fibrous tissue which as it contracts draws the torn parts together, but leaves a mass of scar tissue that is a detriment to the original elastic muscle. It is the scar tissue that is tough and inelastic.

### Washington, D. C., Jan. 8th.

I have just returned from the National Football Coaches Association. I was invited by Carl Snively, president, to sit in on the Rules Committee, representing the N.A.T.A. I was given opportunity to explain the injury report which is being developed for N.A.T.A. by the Committee on Injury Statistics headed by Ken Hawk, Michigan School of Mines.

The Rules Committee was so favorably impressed that they have invited the N.A.T.A. to have a representative on their committee next year to report on our complete findings.

Following this, Dr. Floyd Eastwood and Lynn Waldorf of the N.C.A.A. urged the N.A.T.A. to pursue their work on injury statistics and make this material available to them.

The future of our ability to place a representative permanently on the Rules Committee depends upon the thoroughness with which we prepare these statistics. Every trainer who has been solicited by Ken Hawk for his report will be doing himself and the N.A.T.A. a valuable piece of work by answering questionnaires honestly and promptly.

**Chuck Cramer**  
Secretary





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# RAINERS ASSOCIATION

Our treatment then should be to try to help nature to lay down a minimal amount of scar tissue. Healing in cases of this type means the union of torn muscle fibres with the minimum amount of repair tissue. Muscle tissue does not regenerate after injury. New muscle fibres do not grow into repair. They are replaced with scar tissue and if we can reduce the amount of scar tissue necessary in the repair, we have reduced the proportion of inelastic tissue in the muscle.

Our experience is that we have suffered more of these injuries in the early part of practice or the season. Some of the causative factors are that the boy is not sufficiently "warmed up," sprinting too early and too vigorously, and occasionally a boy reporting for practice over-weight which necessitates the added weight and strain being put upon the legs. Much care must also be taken by the "kickers"

in early season practice that they do not start off too vigorously. This also should follow through the entire season, that all punters should definitely "loosen up" their legs before kicking and that they should begin with short punts before attempting distances.

Then, too, perhaps by changing the method of the sprints we could eliminate a percentage of these respective injuries. The standard method is to start the sprints from a stationary stance and then at the given signal sprint the required distance. Occasionally, this start from the stationary stance has caused the respective injury. Perhaps, if the group started in a ten or fifteen yard jog to the starting line and then began the sprint, some success might be had in eliminating some of these "pulls."

First, let us discuss the injury to the anterior group. With this injury, if at all possible, we like to use the compression bandage immediately until we get the boy to the training room. We do this to combat the hemorrhage in the area. Upon arrival at the training room, we immediately elevate the leg and apply our ice packs for twenty-five to thirty minutes. The boy then showers and another compression bandage is applied over-night covering the entire area above and below the injury. With this injury, a very simple functional test may be made. Place the boy on a table and while holding the injured leg at the ankle, slowly flex the knee and move the heel towards the buttock. By this test, it is possible to determine just how tight the muscles are by palpation and by elevation of the buttock for compensating purposes.

The boy reports back the next day, and upon examination if we feel that there is further danger of more hemorrhage we again apply ice packs. If we feel that this danger is eliminated, we

start heat treatments consisting of infra-red or radiant heat for the next twenty-four hours. Combined with this, we use the analgesic or hot pack and very light exercise, mainly walking. The second day, we start our diathermy treatments at least twice during the course of the day. With this, we increase the degree of exercise by slow jogging and walking and use of the stationary bicycle. Light stretching ex-

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PETE

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The presentations took place at the Tuesday (Dec. 9) meeting of the Los Angeles Advertising Club at the Statler Hotel.

Voit was honored for the fight his company waged to have the rubber-covered football recognized officially by such organizations as the National Collegiate Athletic Association, National Junior College Athletic Association and the National Federation of High School Athletic Associations.

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Did you know . . . Following the basketball game against Manhattan College in Madison Square Garden, New York City, Furman University's basketball team was entertained at New York Athletic Club by Gregg T. Ward, general sales manager of United States Rubber Company's footwear and general products division. Here Harry L. Lindquist, president of New York Athletic Club, (center) greets Coach Lyles Alley of Furman University, with Neild Gordon, captain of the team, at left, and Gregg Ward of U. S. Rubber, at right.

Did you know . . . that The Athletic Institute has a free list showing where you can obtain the official rules for over 50 sports? Send a stamped, self-addressed envelope, if possible.



Did you know . . . The Rawling Manufacturing Co. of St. Louis again calls your attention to the "finest in the field" . . . The Stan Musial glove.

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Did you know . . . Pete Buckley, manufacturing agent, of Atlanta, Georgia is now handling the Butwin Sportswear line. Pete is a "Young-Old Timer" in the sporting goods field in the Southeast and is covering such states as Florida, Georgia, North and South Carolina, Tennessee and Alabama. Pete . . . Ray Butwin is a good-Joe and has a fine line. You will enjoy working with this concern and all of us know that you will do the usual good job the way Pete Buckley does it.



Did you know that Bill Bronson has been appointed Assistant District Manager of Spalding Los Angeles territory. Bill has been a member of the Los Angeles Sales Staff for several years. He will now be assistant to Charles Houck handling the L. A. territory.

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### MEDLAR

Continued from page 25

ercises may also be included with mild massage of the area surrounding the injury. The analgesic or hot pack is used over-night.

We continue with these treatments daily, increasing the amount of exercise or work for the boy until we feel that he is again ready for full duty.

In discussion of the taping or strapping of this injury, we feel that the application of an Ace compression bandage re-inforced with tape serves the purpose. Trying to successfully tape this injury is impossible as the whole muscle must be strapped.

This, naturally, is the treatment for an acute injury of the anterior group. A minor injury of this type may disappear rapidly with treatment in a day or two.