

Using the Three R's to Solve Muscle Strains

Most of you have probably suffered a muscular injury of some type in your life. These injuries are very common among athletes, but also affect many adults undertaking any physical tasks or manual labor. What starts as a minor ache in some cases, often becomes a real pain and limiting factor in your life.

Obviously, muscle strains have crippled some of the best athletes in the world. We have all seen the Olympic sprinter pull up lame with a hamstring injury on TV. Or, perhaps one of the better soccer players in the world has been sidelined by chronic groin pain. Tennis players often experience calf strains. Golfers deal with low back strains. The list could go on and on.

Before I move into the three R's, I want to first clarify what a muscle strain or "pull" really is. You see, a muscle strain refers to an injury to the muscle itself or the junction where the muscle attached to the bone. You sprain ligaments and strain muscles. There are three grades of muscle strains:

Grade 1 - Microscopic tearing/stretching of fibers but no disruption or true tear

Grade 2 - Partial tear of the muscle with obvious disruption of the muscle

Grade 3 - Complete tear of the muscle

Most of the athletes and patients I deal with have grade 1 or 2 injuries. Grade 3 injuries may require surgical intervention, although this is rare. Unfortunately, muscle strains are difficult injuries to overcome for athletes because the muscle is most susceptible to re-injury with a stretching movement and this type of movement/stretch is essential for powerful and productive movement/performance.

Adding insult to injury is the psychological fear and anticipation of re-injury that many athletes feel. I have personally dealt with calf and hamstring tears, and these injuries may take several months to resolve. Coaches, peers and even parents may find it hard to believe this since there is no outward sign of injury, but internally, the body relies upon scar tissue (known as collagen) to heal the tear, stiffen and then perform as the old tissue did. This scar tissue is never as strong as the original muscle, but over time it generally performs adequately provided it is pliable and aligned properly.

Typical healing time frames for healing may range from 7-10 days up to 6-9 months. My hamstring tear (from the bone) took about 7 months to completely heal to the point where I could sprint, cut and jump normally again. In many ways, it is easier to recover from a broken bone than a muscle tear. Now let's take time to review the three R's and how to use them to overcome your muscle strains.

Recognition - First, it is important to recognize the signs and symptoms of a muscle strain or fatigue to prevent further injury. If you have an acute strain while sprinting, cutting or landing awkwardly, you will know this and will not be able to prevent this.

Signs of an acute injury may include pain, limping, decreased stride length, inability to start or stop quickly without pain, and swelling, bruising and obvious loss of power. With an acute, painful injury, it is wise to stop the activity/sport immediately and get medical attention.

Signs of muscle fatigue (hinting at a more serious injury to come) are an increased sense of tightness in the muscle, mild twinges of pain, or a consistent ache in the muscle. This should stand out because you will not feel it on the other side. I generally recommend reducing intensity/volume at this point if in practice, or considering subbing out if in a game, especially if the soreness is increasing.

Rehabilitation - Proper rehab is critical to speed recovery. I split the recovery process into 3 phases:

Acute - this encompasses the first 24-72 hours after injury. This period is marked by inflammation. Treatment should focus on ice, rest, compression, elevation (as indicated), and minimizing stress and stretch to the tissue.

Sub acute - in this phase the healing process changes as the body begins to resolve the inflammation and lay down new collagen fibers to repair the damaged tissue. The muscle is still very weak in this phase. Treatment focuses on gentle stretching, strengthening, and appropriate functional progression based on the extent of the injury. Some athletes may be able to return to sport in this phase, while others will be continuing to focus on resolving pain, swelling and inflammation.

Chronic - this is considered the functional rehab plan. During this part of the rehab, the focus shifts to more aggressive activity simulation including running, cutting, agilities, jumping and sport specific activities to begin to prepare the athlete for return to their desired activity again.

Return to Play - This process may last weeks or months. This phase is the most important one in that it restores the athlete's confidence in their affected muscle and allows them to work at 100% again without fear. The successful completion of this phase allows them to step back onto the playing field without concern for the muscle giving way during competition. Training now focuses specifically on movement patterns and energy systems vital to the specific sport or activity.

Combining the right amount of stress and recovery is the key to mastering this part of the recovery. Pushing too fast may reagravate the injury and moving too slow may delay healing and hurt the athlete's confidence. Proper warm-up becomes even more critical as well. I generally tell my clients they will need to manage these issues through proper conditioning for as long as they compete. This is not to say they need to worry about re-injury; but, they definitely require a heightened awareness of their own body and its response to high levels of physical stress moving forward.

By monitoring their body's response to training, practice and competition, they will ultimately become more efficient in their execution of exercises and drills and reduce excess motion/energy expenditure. In addition, they are better able to detect future problems with their muscles in the future.

In conclusion, remember that all muscle injuries/tears are different. However, with that said, you must go through all of the healing phases mentioned above to recover 100%. Be patient, seek out a qualified therapist and trainer, and listen to your body as it will ultimately tell you when you are ready to return to action again.

For more information on performance training and injury prevention/return to play tips, visit www.BrianSchiff.com.

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