

ROTATOR CUFF INJURIES

One of the most frequent sources of pain and dysfunction in the shoulder is the "Rotator Cuff." The rotator cuff is a collection of four muscles and tendons originating from the shoulder blade (scapula) and attaching to the upper arm bone (humerus). Collectively, these muscles support the ball-and-socket (glenohumeral) joint as larger muscles of the shoulder complex, such as the deltoid, produce motion. When injured, the normal harmonious balance of shoulder muscular forces is shaken and conflict results.

Injuries to the rotator cuff may vary considerably in severity and occur in many ways. Occasionally, a rotator cuff injury may occur as the result of a sudden injury or trauma. A shoulder dislocation, as an athletic example, may cause enough sudden and severe stretch on the rotator cuff muscles and tendons to cause injury. However, most injuries of the rotator cuff do not stem from one single incident or event but from "microtrauma," the accumulation of small stresses over a long period of time. This repetitive strain, combined with other factors, causes the vast majority of rotator cuff injury.

Inflammation of the rotator cuff tendon(s), known as tendonitis, generally occurs due to repetitive overhead motion of the shoulder joint. A rotator cuff tendon or biceps tendon may become inflamed due to overuse and/or pinched between bone and soft tissue in the shoulder. Throwing athletes, such as baseball pitchers, and assembly line workers are at high risk of developing this condition. Generally, pain is located in the front or side of the shoulder and is initially present only after activity in low to moderate amounts. As the tendonitis becomes more advanced, the pain may become more severe and more frequent until symptoms are constant. Shoulder joint instability, poor posture, faulty throwing mechanics, anatomical variations, weak trunk musculature, and excessive cycles (repetitions) may accelerate the disorder.

Ruptures or tears of the rotator cuff occur in primarily middle-aged and older adults. Torn rotator cuffs are very rare amongst younger individuals. Again, the repetitive use of the shoulder over many years combined with bone spurring and other degenerative changes create a predisposition. Like a shoelace tied hundreds of times in succession, the rotator cuff may wear and fray over its years of use. Suddenly, during either a routine activity or traumatic incident, the proverbial "straw breaks the camel's back" causing the tendon to tear. A magnetic resonance image (MRI) or CT arthrogram may be needed to confirm the diagnosis of rotator cuff tear.

Treatment of rotator cuff disorder depends upon the nature and severity of the injury. Most cases of tendonitis resolve with any combination of relative rest, anti-inflammatory medication, physical therapy, strengthening exercise, and/or steroid injections. Surgery may be required in more advanced cases or those involving an unstable shoulder. Rotator cuff tears may be treated similarly to tendonitis, however are more likely to require surgery to correct the structural damage before rehabilitation succeeds.