

Is Your Rotator Cuff a Sore Subject???

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What exactly is the rotator cuff? It is a term that is widely used on television and radio but can sometimes be a little confusing and not completely understood. The rotator cuff is a group of four muscles that form to hold parts of the shoulder together. More specifically, it is comprised of the muscles and tendons that link your upper arm (or humerus) to your shoulder blade (scapula).

The shoulder joint is structurally similar to a golf ball resting on a tee. The head of the humerus is the ball while the scapula serves as the tee. The rotator cuff must keep the ball on the tee while assisting in moving the shoulder. This dual function for these muscles puts them under great stress during any overhead motion. The muscles that make up the rotator cuff are the supraspinatus, infraspinatus, subscapularis, and teres minor. They attach on the scapula on one end and on the head of the humerus on the other. The rotator cuff is very active, not only in the throwing motion, but also in skills used in tennis, volleyball, swimming, wrestling, and other overhead activities.

Dislocations occur when the humerus is forced “off the tee” or otherwise out of its socket. Dislocations are serious injuries and require immediate medical attention. Dislocations can also cause rotator cuff tears. A tear can come from a traumatic force or from repetitive and chronic overuse, however these injuries are not usually seen in younger athletes until they reach skeletal maturity (stop growing). Symptoms can include immediate pain and weakness or a constant ache in the shoulder with activity. Inflammation of the rotator cuff is called tendonitis. If the inflammation is severe enough it can limit shoulder motion and create a condition called impingement syndrome that is also common in the type of athletes listed above. All of these injuries affect the functioning of the rotator cuff and cause poor mechanics at the shoulder. Therefore, when one experiences pain in the shoulder of any nature, it can cause the body to compensate and change the entire mechanics of the shoulder motion. Often times shoulder soreness is common in sports and athletes assume that pain is part of the game. Shoulder pain that does not resolve quickly may lead to altered mechanics and create abnormal forces across the joint. This cascade of events can lead to further damage and injury in the shoulder.

The final diagnosis of any shoulder injury will be determined by a physician and is based on the overall symptoms and functional testing. The nature and severity of the injury will

ultimately determine the treatment options. Rehabilitation for rotator cuff injuries can be the most important phase of the healing process. Rehabilitation will begin with exercises designed to strengthen the rotator cuff and increase total shoulder stability. Treatment may include rest or activity modification, ice or heat, and therapeutic exercise.

Therapeutic exercise usually consists of stretching and strengthening of the rotator cuff. Stretching is performed to reduce the “tightness” of the shoulder and improve motion. Strengthening exercises for the rotator cuff and other supportive muscles must be progressive and should match the physical and functional demands for that individual.

Shoulder injuries should be taken seriously because of the complex anatomy and the heavy demands some functional movements place on the shoulder. Seeking immediate treatment for rotator cuff injuries and performing correct rehabilitation exercises is extremely important for proper healing. Most rotator cuff injuries will not heal on their own without some form of medical intervention and treatment. Continuing activity with a rotator cuff injury can increase the severity of the injury and lead to abnormal stresses being placed on other joints. Traditional weight room exercises may also add to the severity of the injury if done incorrectly or too soon in the healing process. Contrary to some beliefs, performing extra exercises such as bench presses will not address rotator cuff injuries and weakness.

Currently there are injury prevention programs available that are specifically designed to improve rotator cuff strength for activities that place heavy demands on the shoulder. These are often used in conjunction with traditional exercises. A certified athletic trainer can provide you with additional information on these injury prevention programs. Sometimes it takes a little preparation to be able to stay in the game longer.

Consult your primary care physician for more serious injuries that do not respond to basic first aid. As an added resource, the staff at Children's Sports Medicine is available to diagnose and treat sports-related injuries for youth or adolescent athletes. Services are now available in four locations, to make an appointment, call 614-355-6000.