

Rotator Cuff Tears

The rotator cuff is composed of four tendons that surround the shoulder and upper arm bone (humerus). The shoulder joint has less bone structure and therefore is less stable than other joints. The tendons of the rotator cuff serve to stabilize the shoulder by holding the top of the humerus in a central location within the shoulder joint. This allows powerful shoulder muscles, such as the deltoid, to move the shoulder through a large range of motion while the head of the humerus remains balanced and centered in the joint.

Rotator cuff injuries are common. They may occur suddenly as a single traumatic event, but most develop gradually due to repetitive overhead movement (an overuse injury). In the case of an overuse injury, the tendons of the rotator cuff are weakened due to a rubbing of ligaments or bone spurs against the humerus. The weakening and degeneration of the tendon may result in a tear.

Tears of the rotator cuff may be partial or full. A full tear means that the tendon has pulled away from the bone. While most patients with large tears have more weakness and more loss of motion at the shoulder, the size and depth of the tear do not always predict the symptoms and limitations that the patient experiences. Patients may have good motion despite the presence of a full tear.

The symptoms of rotator cuff tears include pain with overhead activities, night pain especially when lying on the shoulder, inability to lift the arm, and grinding of the shoulder with motion. Orthopedic surgeons use a variety of means to diagnose rotator cuff injuries, including patient history, physical examination, x-rays (which help rule out other conditions or detect co-existing injuries), and MRI which can provide detailed images of the rotator cuff. Highly sophisticated MRI techniques and experienced staff are able to detect even very small tears.

Treatment for rotator cuff tears depends largely on the patient's pain, function, and response to prior treatments. In many cases (particularly with partial tears), the initial treatment includes rest, anti-inflammatory medications, and physical therapy to stretch and strengthen the shoulder muscles and the intact portions of the rotator cuff. Corticosteroid injections are used in moderation due to a concern that the steroid may weaken the tendon.

There may be several surgical options for rotator cuff tears. In some cases removal of small portions of ligaments and bone where rubbing occurs may alleviate symptoms. In cases when the rotator cuff tendon has torn away from the bone, procedures are used to repair the rotator cuff back to its insertion on the humerus. At NKSC, these operations are performed by an arthroscopic procedure (a scope). In addition the surgery can be done by numbing the shoulder using "twilight anesthesia" without the need for the patient to go completely under. NKSC surgeons have pioneered arthroscopic and minimally invasive procedures to decrease post-operative pain and disability.

Rehabilitation after rotator cuff surgery is directed first toward minimizing pain and inflammation, protecting the repair (if tendon repair was performed), and maintaining shoulder motion. After this initial four to six week period, physical therapy focuses on restoring muscle strength and flexibility. Structured rehabilitation is essential to optimizing surgical results and characteristically takes six months.