

COMMON SHOULDER AILMENTS: SUBACROMIAL BURSTITIS AND ROTATOR CUFF TEARS

~ BY SHAWN HOCKER, M.D. ~

From acute trauma to degenerative wear, the shoulder joint is a challenging structure, and a significant amount of clinical expertise is required to isolate the often overlapping symptoms of shoulder injuries. The two most common shoulder ailments are subacromial bursitis (or rotator cuff irritation) and rotator cuff tears. This article will explore the causes and symptoms as well as current conservative and operative treatments.

What is the rotator cuff and what does it do?

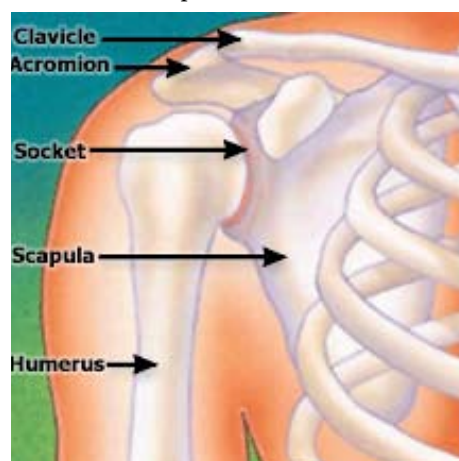
The rotator cuff is made up of a group of four muscles and their tendons that form a covering around the top of the upper arm bone (humerus). These muscles form a cover around the head of the humerus. The rotator cuff holds the humerus in the shoulder joint and enables the arm to lift and rotate. The overlying bony roof above the rotator cuff is called the acromion. Between the acromion and the head of the humerus is a fluid-filled sac called the bursa. The bursa acts as a cushion allowing the rotator cuff tendons to glide smoothly over the bones of the shoulder joint.

What is subacromial bursitis (or rotator cuff irritation)? The most common shoulder injury seen in orthopedic clinic is subacromial bursitis (or rotator cuff irritation). Subacromial bursitis is an inflammation of the bursa in the shoulder. The overwhelming majority of shoulder complaints are pain after overuse or the “weekend warrior” phenomenon, wherein the patient has participated in a new activity that requires repetitive shoulder motion such as aggressive paddling, overhead throwing or just painting a room.

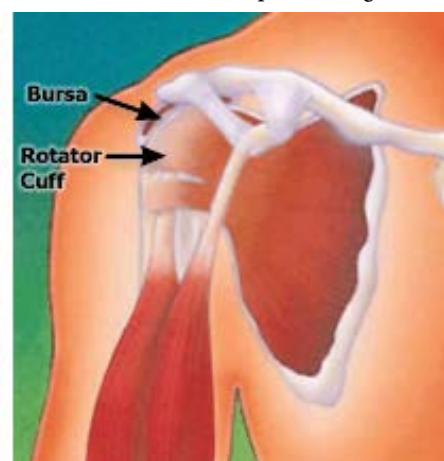
What are the signs and symptoms of subacromial bursitis? The onset of pain from repetitive motion or overuse is usually delayed by hours to days and can be quite debilitating. The pain can be constant but usually increases when the patient tries to reach overhead or behind. Patients complain of pain in the front of the shoulder with possible symptoms down the arm to above the elbow.

Diagnosis of subacromial bursitis: Diagnosis is based on the symptoms and physical examination of the patient. During the examination, the orthopedist will examine the shoulder looking for physical abnormalities such as swelling, tenderness, muscle weakness, and test for range of motion. On exam, the patient will usually have full symmetric range of motion but have pain at the maximum limits of forward flexion (reaching towards the ceiling)

and pain with internal rotation (placing their thumbs as high on their back as possible). If a significant symptom is present in the forearm or hand, the orthopedist will be careful that the



rotator cuff tears that will continue to be weak after the injection. The symptoms can be insidious with a progressive presentation over months. Patients often experience significant



Images are courtesy of AAOS

shoulder pain is not referred from the cervical neck. Radiculopathies of the cervical spine can present as shoulder pain and weakness.

Conservative treatment for subacromial bursitis: In many cases, conservative management of subacromial bursitis is all that is required to provide pain relief and improve function of the shoulder. Non-surgical treatment options include:

- Rest
- Activity modification
- Anti-inflammatory medications
- Steroid injection
- Strengthening exercise & physical therapy

A therapeutic injection combined with a home rotator cuff strengthening program may also help prevent future recurrences. The majority of the patients respond positively to such conservative management and will be armed (no pun intended) with exercises to start at home if symptoms recur in the future. If treatments of injection and physical therapy fail to alleviate the pain, then an orthopedist may order magnetic resonance imaging (MRI) to rule out significant rotator cuff disease or tears that could make conservative treatment ineffective.

What are the signs and symptoms of a rotator cuff tear? An important distinction between rotator cuff irritation and rotator cuff tear is objective weakness. Diagnostic (and hopefully therapeutic) injection into the subacromial space can help delineate between cuff irritation and

pain during the nighttime and may be unable to find comfortable sleeping positions. Large tears also will produce significant weaknesses that can cause daily dysfunction. “I can’t lift a jug of milk” is a common expression with someone with a sizeable rotator cuff tear.

Rotator cuff tear patients are typically older, with the majority being over 60. Patients often have off-and-on shoulder pain for years that has progressed to constant pain with possible new onset of weakness. The exam is almost identical to an exam for subacromial bursitis but may demonstrate more pain and, more importantly, objective weakness. In this scenario, ordering an MRI after the initial exam might help facilitate earlier treatment.

Most people over the age of 60 with normally functioning shoulders have some level of partial rotator cuff tear present on MRI, but full thickness tears that present as described are more difficult to treat conservatively. Small tears that do not have a significant weakness component may be treated conservatively with injection and rehabilitation. Large, retracted tears that have significant weakness are probably better served with surgical intervention.

The goals of rotator cuff repairs:

The primary goal of rotator cuff repair is pain relief, which is quite successful when looking at the clinical outcomes. The secondary goal of strength restoration, though, is more successful with an earlier intervention. This is due, in part, to the permanent atrophy that develops only

weeks after an acute tear in the muscles of the rotator cuff that serve the area of the tear. Atrophy is progressive, and it can be seen on MRI, helping the treating orthopedist determine the age of the tear and the likelihood of returning strength to the patient.

Surgical Treatment for rotator cuff tears:

While varying techniques exist, all surgical treatments for rotator cuff tears are, in principle, the same. The tendon is mobilized and secured with suture back to its point of insertion laterally on the humerus. Recent advances in arthroscopy have allowed for better visualization of the rotator cuff, without the need for open surgical dissection. Arthroscopic repairs are performed all under visual magnification, which aids the quality of the repair. Advancements in arthroscopic surgery including instrumentation and technique serve to aid patients in their recovery and the physical therapy that is essential for a successful outcome.

Dr. Hocker received his MD at the University of North Carolina Medical School and completed his orthopedic residency at Duke University. He spent a year of arthroscopic fellowship training at The University of Utah. Dr. Hocker is part of the Shoulder and Sports Medicine Team at Atlantic Orthopedics. For further information, call (910) 795-1734.

Atlantic Orthopedics is headquartered in Wilmington and offers the complete range of orthopedic diagnostics and treatments, including sports medicine, spine and back surgery, joint replacement and revision, hand surgery, knee and shoulder surgery, pain medicine, physical therapy and a High Field MRI Imaging Center. There are satellite offices in Porters Neck, Southport, Burgaw and Jacksonville.

