

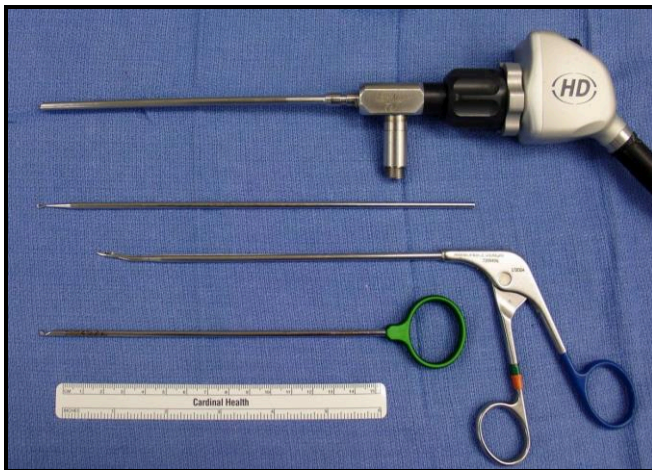
All Arthroscopic Treatment of Rotator Cuff Tears

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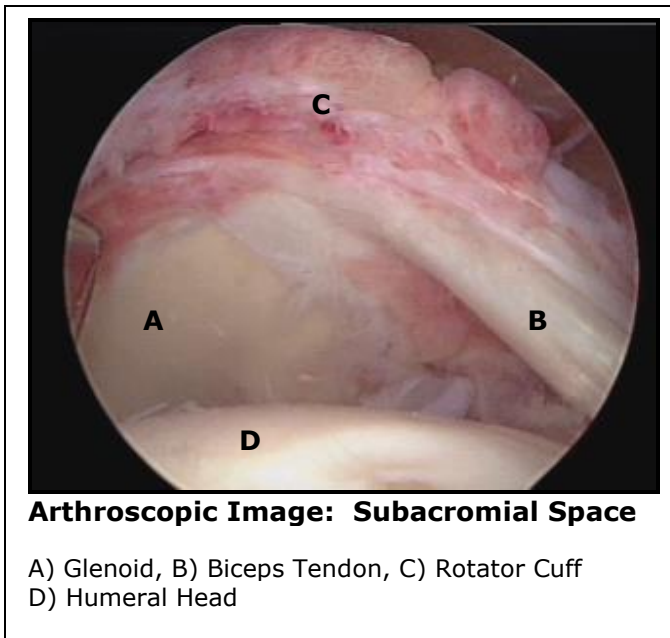
Orthopaedic Surgeon: Specializing in Sports Medicine and Arthroscopic Surgery of the Shoulder and Knee

Summit Center Sports Medicine

The rotator cuff of the shoulder consists of four individual muscle tendon units that blend together to form a musculo-tendonous cap over the top of the arm bone, known as the humeral head. Injury resulting in a rotator cuff tear can be very debilitating, with symptoms ranging from mild, dull, aching pain and an inability to sleep at night, to sharp pain and an inability to move the arm. Historically treatment was preformed via large open incisions and limited to full thickness tears that were small in size. With the advent of the Arthroscope and specialized surgical teams, history has been rewritten. Cuff tears ranging from massive full thickness tears to small and partial intrasubstance defects are now being more readily diagnosed with powerful MRI magnets and treated minimally invasively with arthroscopic techniques alone. Never has this been more apparent than with patients that have failed open rotator cuff surgery that then undergo a revision repair done all arthroscopically.



The normal shoulder joint consists of the rotator cuff interposed between the boney roof, or acromion above and the humeral head below. The cuff serves to seal off the joint from the subacromial space, an area below the boney roof. In the arthroscopic picture below there is complete absence of the cuff over the humeral head with cuff retraction due to a chronic, untreated tear of massive proportions. When rotator cuff tears are ignored for an extended period of time other structures within the shoulder may become damaged and arthritic, such as the biceps tendon, humeral head and the glenoid surface.



Arthroscopic Image: Subacromial Space

- A) Glenoid, B) Biceps Tendon, C) Rotator Cuff
- D) Humeral Head

The immediate goals of rotator cuff surgery are to relieve pain, restore movement and improve overall shoulder function, with the ultimate goal being a full return to activities. The benefits of an all arthroscopic technique include better visualization and identification of tear patterns, delineation of tissue quality and quantity, decreased postoperative recovery time and better operative outcomes for the patient in regards to pain and function.

Arthroscopic rotator cuff surgery consists of several parts, beginning with the surgical team. In order for the procedure to run smoothly a highly skilled, technically savvy team consisting of the surgeon, assistant, ortho-technician, anesthesiologist and nursing staff are required. The procedure begins with the initial intra-operative diagnosis and treatment of other shoulder pathology (biceps tendon injury, cartilage injury, labral injury, debridement of inflamed bursa) concomitantly with cuff tissue definition, evaluation and ultimately mobilization and tack down, or repair, of damaged cuff tissue. The repair of the tendon back to the bony greater tuberosity of the shoulder's humeral head is achieved with arthroscopic instruments, suture and suture anchors. An all arthroscopic procedure allows the physician to directly view the tear as the repair is performed and make adjustments appropriately if cuff coverage of the humeral head is inadequate or malpositioned. At the completion of the case a small portion of the shoulder roof, or acromion may be removed to eliminate any mechanical impingement that can lead to recurrent cuff tearing.

It is important to understand that even the best surgical repair is too weak to allow the rotator cuff muscles to raise the arm from the side until complete healing of the tendon has occurred. Healing of the repaired tendon is slow, and the loads applied to the tendon are large, therefore patient compliance with the postoperative recovery regimen is mandatory. Through hard work by both physician and patient, the shoulder frequently can recover to a pre-injury state.