Proliance SURGEONS
Edmonds Orthopedic Center

FOCUS ON ROTATOR CUFF REPAIR

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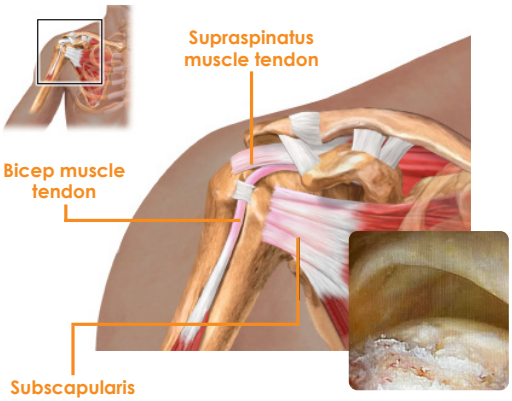
Arthroscopic Rotator Cuff Repair

WHAT IS THE ROTATOR CUFF?

Four muscles work together to effectively "drive" the shoulder. The subscapularis muscle is in the front of the shoulder; the supraspinatus muscle is the uppermost muscle, and the two muscles toward the back of the shoulder are the infraspinatus and teres minor. These muscles collectively are known as the rotator cuff muscles. The muscular attachments begin on the shoulder blade, and the tendon of each muscle attaches to the ball (the uppermost portion of the humerus bone in the arm).



WHAT IS A ROTATOR CUFF TEAR?

Normally, the rotator cuff tendons are firmly attached to the head of the humerus. We refer to delamination or detachment of the tendon from the humerus as a "tear" of the rotator cuff (see image above).

HOW IS IT DIAGNOSED?

Pain and weakness generally lead to a rapid diagnosis after traumatic tears. Atraumatic tears are less obvious, patients typically complain of a painful arc of motion and difficulty sleeping on the affected side. The pain often radiates along the course of the deltoid muscle into the upper arm. Mechanical symptoms of "clicking" and "catching" may also be present. Muscle testing may reveal variable degrees of weakness depending on the size of the tear. The Neer Impingement sign, Hawkins reinforcement test, and Jobe's test may assist in diagnosing rotator cuff pathology. My preferred imaging modality is Magnetic resonance imaging, (the addition of gadolinium is usually not necessary except in the post-surgical shoulder).

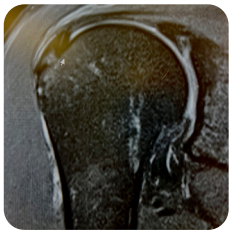


Image A

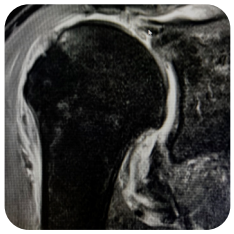
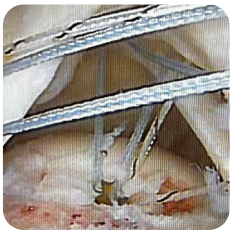


Image B

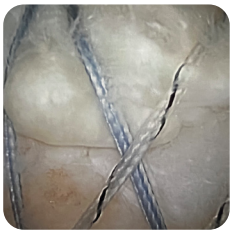
Image A depicts an intact rotator cuff (supraspinatus), showcasing the tendon securely attached to the humerus bone. In Image B, the rotator cuff tendon (supraspinatus) has detached from the humerus bone and retracted almost to the joint line level. The void is filled with fluid, which appears white in these sequences.

HOW IS IT TREATED?

Restoration of shoulder function is most predictable for patients with an intact (healed) rotator cuff. Therefore, surgery is often recommended in the setting of acute rotator cuff tear (Image B), as well as the active, symptomatic patient. I will perform a minimally-invasive, all-arthroscopic repair in nearly 100% of patients who choose to have surgery. (Images below) Sedentary and elderly patients will often benefit from conservative measures including subacromial steroid injections, physical therapy, NSAIDS, and activity modification.



Suture Placement During Repair



Final Repair

WHAT TO DO NEXT?

Because acute rotator cuff tears do better after timely repair, patients with traumatic shoulder pain and weakness require a more urgent diagnosis and possible referral to a shoulder specialist. Un-repaired rotator cuff tear size has been shown to increase over time. Smaller tears are easier to repair and have a higher chance of healing, and a lower re-tear rate. Conversely, larger tears are more difficult to repair and have a higher risk of re-tearing or incomplete healing. To put it simply, I prefer to repair small tears before they become big tears.

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***Brian Cameron, MD**, is a board-certified orthopedic surgeon specializing in minimally invasive shoulder surgery. For over twenty years, patients and physicians alike have been recommending Dr. Cameron to their family and friends for arthroscopic treatment of shoulder problems.*