



## ***Rotator Cuff Tears***

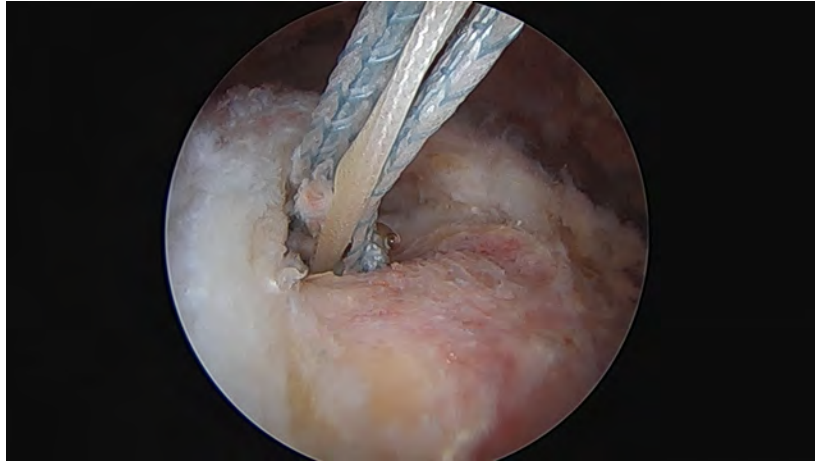
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Rotator cuff tears come in a variety of shapes and sizes. No two are exactly the same, and as such, they are not all treated the same. It is important for the surgeon to understand the exact specifications of the tear in the shoulder (type of tear, size of the tear, quality of remaining tendon) but also other pathology in the shoulder and additional medical problems the patient may have. It is important to know and understand the expectations the patient has for their shoulder including any physical activities they enjoy and the type of work they do. All of these factors come into play when deciding to the best treatment for each patient.

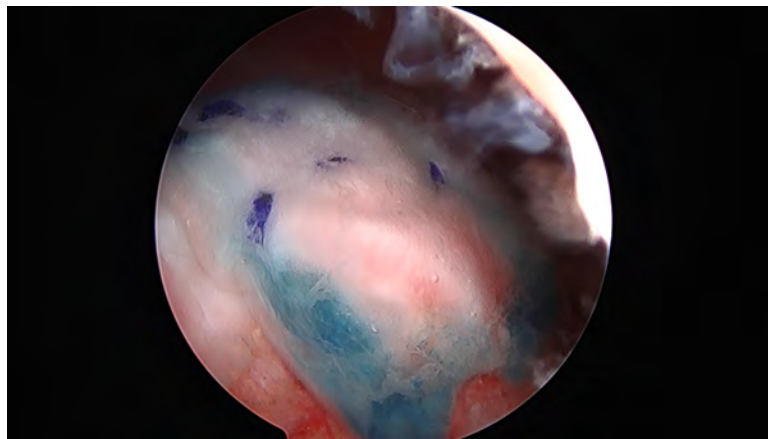
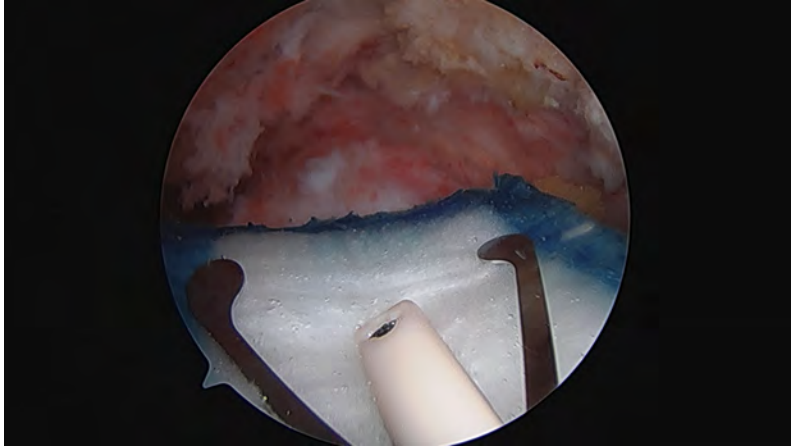
Some tears are best treated conservatively meaning without surgical intervention. Conservative treatment options generally include some type of therapy either at home or formally with a licensed therapist. A patient may be prescribed an anti-inflammatory medication or advised to take an over the counter non-steroidal anti-inflammatory medication (NSAID). Sometimes a cortisone injection is administered to help decrease inflammation. Other tears are treated with surgery to help return the patient to their previous quality of life.

For patients who are candidates for rotator cuff repair surgery, the specific procedure is individually based. A small partial thickness tear may be treated with an arthroscopic debridement of the unstable tissue. A larger tear may require a repair with anchors and sutures. Even with larger tears, healing of the repair and patient's return to activity can be highly successful if the tissue quality is good. What about patients with poor tissue quality? With relatively new technology, we have the ability to augment rotator cuff repairs providing structural support, biological support, or both. Structural support is often by means of a graft applied over the repaired rotator cuff. Biologic support is by means of platelet rich plasma injection or bone marrow aspirate injection. Historically, rotator cuff repairs were performed open causing significant trauma to the soft tissue, which caused a great amount of pain and slowed recovery. An open procedure does not allow the same visualization as arthroscopic. Even with the use of grafts, a skilled surgeon can perform the procedure arthroscopically.

Arthroscopic Rotator Cuff Repair

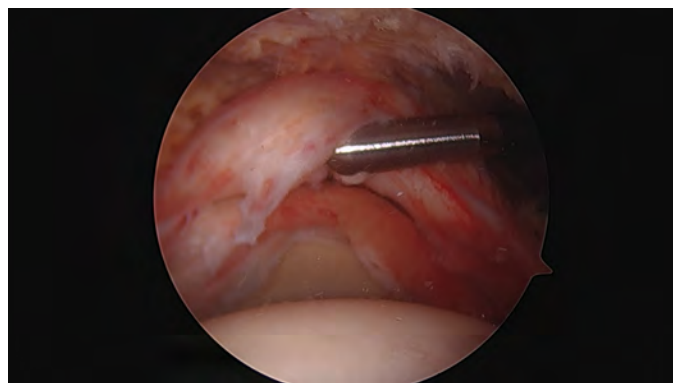


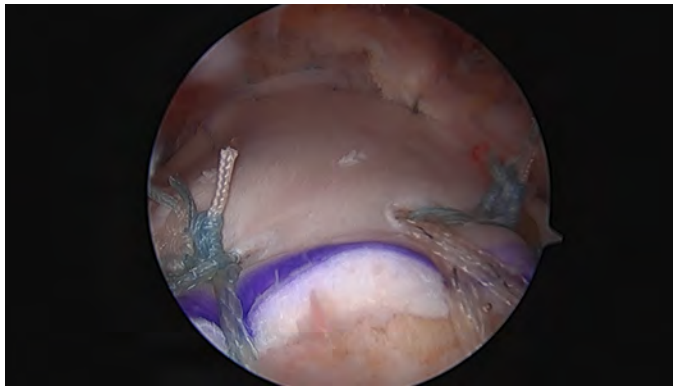
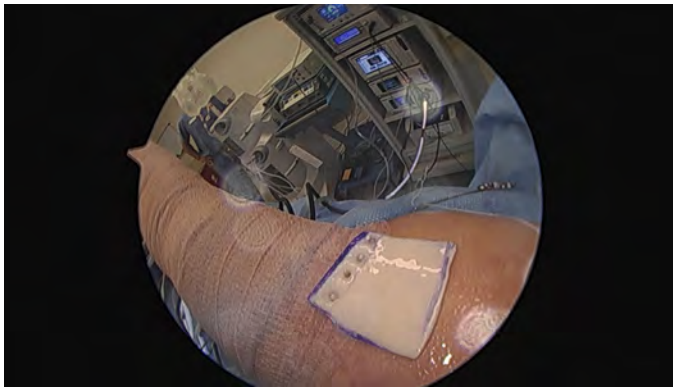
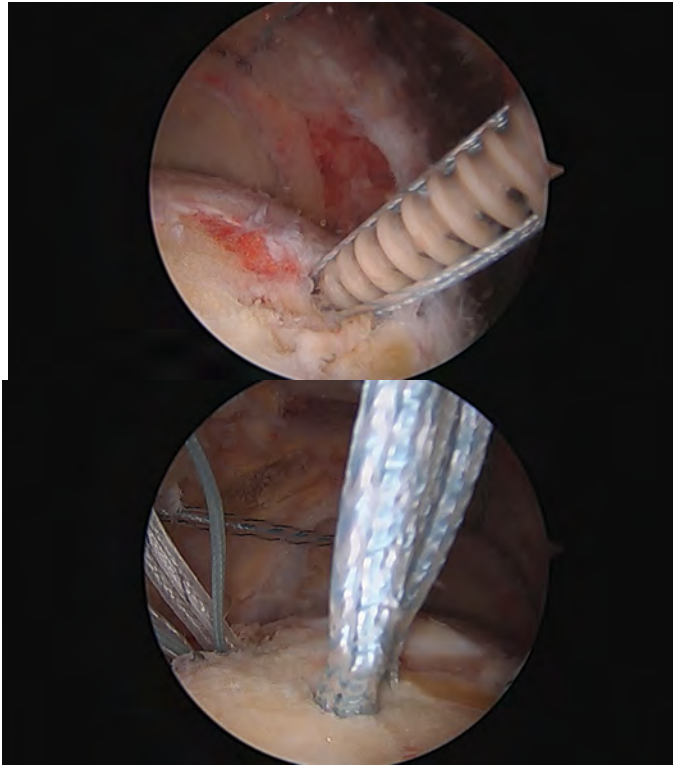
Arthroscopic Biologic Graft Augmentation



What about the patients with a rotator cuff tear that is not repairable even with graft augmentation? They may be candidates for a procedure called superior capsular reconstruction. In place of augmenting a rotator cuff repair with a graft, a different type of graft is used arthroscopically to stabilize the humeral head in its proper position to allow other muscles in the shoulder to function appropriately. This can allow some patients to return to activities even if their rotator cuff is not functioning.

### Superior Capsule Reconstruction





Treatment does not end with surgery. Post-operative physical therapy is a very important part of the recovery process. Each patient will have an individualized therapy program, which they will complete with a licensed therapist. In addition to formal therapy 2-3 times per week, patients are also expected to complete home therapy daily. Activities are advanced as healing continues until they can return to full activity. Because no two rotator cuff tears are the same, the time to return to full activity is different. This can range from 4-8 months.

#### What is BMAC or PRP?

At the time of the surgery, we can obtain blood marrow from the patient's humerus, or pelvis. The bone marrow aspirate (BMA) is spun in a centrifuge where a high concentration of fluid with healing factors is separated from the remaining blood product. This concentrate (BMAC) can be injected into the rotator cuff repair site at the end of the procedure to facilitate healing and possibly speed up recovery. BMAC contains stem cells, which can potentially play a regenerative role in tissue repair and tendon healing. The recent literature is promising. This can also be done in the office as a non-surgical procedure with a standard blood draw and injection into a joint or tendon. This in office procedure is commonly known as a platelet rich plasma (PRP) injection. The PRP contains a high concentration of platelets (cells with growth/healing factors), which have the potential to promote bone and soft tissue healing when activated.