

# Pain or Weakness After Rotator Cuff Repair

Sometimes patients don't get the expected results after arthroscopic rotator cuff repair. Instead of pain relief, increased shoulder motion, and restored function, they experience persistent pain and/or weakness. Why does this happen and what can be done about it? These are the two questions surgeons from the New York University Hospital for Joint Diseases attempt to answer in this article.

Arthroscopic repair of the rotator cuff is actually a very reliable technique. Most patients (more than 90 per cent) swear by it and would do it again if they had to make the decision over. But in the remaining few (six to eight per cent), the repaired tendon fails to heal. Or in some cases, the patient reinjures the arm before healing takes place. These cases are called failed rotator cuff syndrome.

Some of the reasons patients fail to heal include age (65 years old and older), the tear was very large in size, significant muscle atrophy (wasting), and tendon retraction (tendon pulls way back from the bone). A few other factors that hinder healing after rotator cuff tear repair include smoking, diabetes, unwillingness to engage in the rehab program, and failure to follow the physician's or Physical Therapist's guidelines during recovery.

Treatment for failed rotator cuff syndrome varies depending on the reason(s) why the surgery wasn't successful in the first place. A three-month trial of Physical Therapy aided by a home exercise program may be all that's needed. But if this measure fails to restore motion and strength, then revision surgery is one possibility.

Revision surgery begins with release of any soft tissue restrictions (scarring, adhesions). If possible, the retracted tendon is brought back to the bone where it was originally attached (a place on the bone called the footprint).

If there isn't enough "give" in the tendon, then it is pulled as close as possible and sutured (stitched) to nearby soft tissue. The surgeon must maintain a balance between tendon tension and tendon mobility. Creating a balanced shoulder is important (meaning the muscles all around the joint pull equally, evenly, and in a coordinated fashion to create movement).

Sometimes patients have a re-tear of the repaired rotator cuff and don't know it. They either don't have any pain or the loss of motion and function is mild. That's when the surgeon has to evaluate and decide if surgery is even needed. The surgeon may decide to follow the patient closely with more of a wait-and-see approach than a surgical one.

In young, active patients with massive tears, it may not be possible to repair the rotator cuff. In those cases, a tendon transfer can be used to restore motion and function. The tendon harvested for use depends on the location and severity of the rotator cuff tear. For example, with damage to the supraspinatus and subscapularis (front of the shoulder), the tendon to the pectoralis major muscle is used. If the cuff is damaged more toward the back of the shoulder, then the latissimus dorsi tendon is harvested.

Very large tears with poor tendon healing in older adults may just require a shoulder replacement instead of a revision procedure. There are several options to choose from: a hemiarthroplasty, reverse total shoulder arthroplasty, or traditional total shoulder replacement. The hemiarthroplasty is a partial replacement (only half of the shoulder is replaced). A reverse replacement places the round head needed for motion where the shoulder socket used to be and the shoulder socket where the round head of the humerus (upper arm) is normally located.

For those who are interested in more details, the authors of this article provide MRI and intraoperative photos of patients with failed rotator cuff syndrome. A separate flow chart for decision-making in treating younger versus older patients is also provided. They also offer their opinions on examination and surgical techniques, factors to consider, and what to expect.

Reference: Eric J. Strauss, MD, et al. Management of Failed Arthroscopic Rotator Cuff Repair. In Journal of the American Academy of Orthopaedic Surgeons. May 2012. Vol. 20. No. 5. Pp. 301-309.

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