

Arthroscopic Management of Rotator Cuff Disease

By Ron Romanelli, M.D.
Orthopedic Center of Illinois

Sometimes we take for granted how wonderful the human body is. Only when we stop and reflect on this do we realize how amazing our musculoskeletal system really is. Specifically, our shoulders enable us to perform varying jobs and tasks, which we usually do not appreciate until an injury occurs.

The shoulder joint has a wider range of motion than any other joint in the body. This joint consists of an O-ring around the shoulder socket as well as a capsule and surrounding rotator cuff muscles. The anatomy consists of a rotator cuff, which is a group of four muscles and their tendons that wrap around the front, back, and top of the shoulder joint. This moveable portion of the tendon may rub against the undersurface of the stationary portion of the shoulder and cause an impingement process to occur. If this process of rubbing becomes problematic, it may result in pain and aching in the shoulder.

Like many orthopedic conditions, common mechanisms of rotator cuff problems can be separated into repetitive use injuries and traumatic injuries. Over time repetitive use of the shoulder may wear out the tendon and a rotator cuff tear can develop. Traumatic injuries, such as a fall on an outstretched arm, can also cause rotator cuff tears. When we are younger, overuse tendonitis may occur to the shoulder. As we get older, impingement and rubbing on the rotator cuff can develop causing an impingement syndrome. Then the next stage of problem is what is called a rotator cuff tear. The last problem that can occur is rotator cuff arthropathy, which is wearing of the smooth cartilage of the shoulder joint secondary to the large rotator cuff tear.

The most common symptom of rotator cuff problems is pain. It is usually described as generalized discomfort, and can be exacerbated with certain movements of the shoulder. When there is a complete rotator cuff tear, it can be associated with weakness. The diagnosis is made by history and physical exam, as well as x-rays and MRI. Initially shoulder problems are treated with conservative management, using anti-inflammatory medications, exercises, physical therapy, and occasionally cortisone to reduce inflammation.

If conservative management fails, there are surgical procedures for treatment of these problems. Shoulder arthroscopy involves the use of button-hole sized incisions and small instruments placed into the shoulder, utilizing a small camera connected to a video monitor. This allows us to visualize the problems inside the joint as well as on top of the rotator cuff. Arthroscopic management allows us to treat patients on an outpatient basis using a light general anesthetic and local anesthesia for patient comfort.

The present management of impingement syndrome, or bone spurs causing rubbing on the rotator cuff, is removal of the impingement with the use of a dental burr and making more room on the undersurface of the acromion (the outermost tip of the shoulder) so it does not rub on the rotator cuff.

The most recent cutting-edge technology is arthroscopic rotator cuff repair. This utilizes special instruments to pass sutures through the torn rotator cuff tissue. Special suture anchors are passed



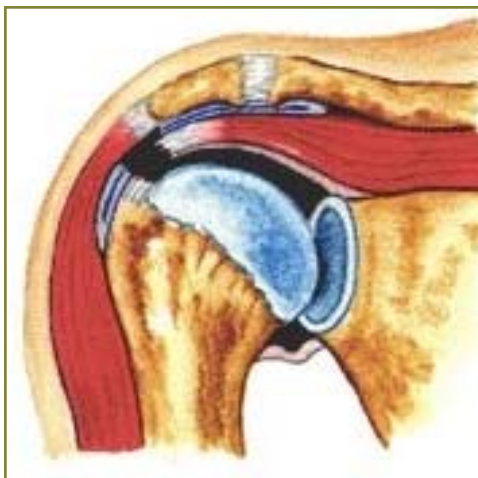


**Rotator Cuff
Tears**



through the tendon back into the bone using arthroscopic knot tying techniques. This arthroscopic technique does not require any muscle to be cut and, therefore, causes less pain and smaller cosmetic scars.

If we are unable to perform an arthroscopic repair, there is a mini-open repair using the arthroscope and a small incision to repair the tendon, or the classical traditional approach where the deltoid muscle is split and an open repair of the rotator cuff is performed. All of these techniques work well, and the technique utilized is dependent on your physician.



After surgery, we rely on rehabilitation and shoulder exercises to help our patients return to normal activities of daily living. Typically we work on gently passive range of motion for six weeks to allow for tendon healing. Next, a strengthening program is implemented. It generally takes up to one year postoperatively to reach maximum medical improvement. Working together as a team with the doctor/patient/therapist, we can achieve excellent results and eliminate pain and suffering related to rotator cuff problems. Unfortunately, not everyone can be helped with this arthroscopic technique, but we at the Orthopedic Center of Illinois have been very pleased with the excellent results that we are achieving with this new cutting edge state-of-the-art technique.

