



SPOTLIGHT

Rotator cuff injuries not limited to athletes



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To refer a patient to Orthopedics & Sports Medicine, call (574) 534-2548 or fax a referral form to (574) 534-3622.

Dr. Christopher Owens, Medical Director and Orthopedic Surgeon

Patients who are avid readers of the sports pages may assume that rotator cuff injuries are most prevalent among athletes. In actuality, however, shoulder pain is quite common among individuals in their fifties, sixties and seventies and rotator cuff issues are the most frequent cause.

Sometimes rotator cuff pain is attributable to an acute injury, but, more often than not, the cause simply mirrors the aging process. That's because as patients age, their tendons deteriorate. The rotator cuff is particularly susceptible to wear and tear over time. While a patient's profession or active lifestyle can hasten the deterioration to some degree, most shoulder pain is, again, a natural part of the aging process. The first manifestation of shoulder pain can involve a simple everyday task like reaching for an object.

First step: determining strength and range of motion

When confronted with a patient suffering from shoulder pain, it is essential not only to assess range of motion, but also gauge rotator cuff strength. One of the primary clinical techniques for this purpose is called the empty can test. This technique is used to determine the integrity of the supraspinatus tendon. It involves the patient raising his or her arm at 90° elevation in the scapular plane and full internal rotation. The examiner then applies downward pressure at the elbow or wrist and observes the patient's ability to resist the pressure.

Again, there are many causes for shoulder pain. More often than not, the presence of tendonitis or tendinopathy results from mild wear and tear of the tendons in the shoulder. Sometimes this can involve a partial thickness tear. The analogy I use with patients is that the tendon is like a rope with some fraying on it, but still remains connected. Other scenarios are small, full thickness tears and the analogy I use to describe this circumstance is a sock with a hole in it. Then there are situations involving very large tears where a portion of the tendon is detached from the bone and retracted.

However, it is not uncommon for patients to suffer shoulder pain that does not involve tears per se. If they have tendonitis or even a small tear, chances are their pain can be successfully treated and alleviated with nonoperative treatment.



Partial thickness tear



Full thickness tear



Large retracted tear

Treatment options vary based on severity

Treatment of non-severe cases often involves non-surgical approaches at the start. This usually comes in the form of formal physical therapy or a guided home exercise program. We often couple this with anti-inflammatory options that can help manage the pain while the patient works through a physical regimen. These options can be medications taken orally or applied topically, or potentially a cortisone injection.

If pain persists despite the initial non-surgical treatment options, an MRI is usually ordered to further evaluate the rotator cuff. This will help determine where the patient resides on the spectrum of rotator cuff problems and help inform the next treatment protocols. If the MRI shows minimal or mild pathology, we'll counsel the patient on the importance of additional non-surgical options and greater diligence in the performance of those treatments. If, on the other hand, the images indicate a full thickness tear or a larger retracted tear, we are more likely to recommend surgical treatment.



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What healthcare providers need to know



Rotator cuff repair

Good news, bad news

The good news about rotator cuff surgery is that it is typically performed on an outpatient basis – either arthroscopically or through a small incision – and there is a good prognosis for a full recovery. Suture anchors are inserted into the proximal humerus and sutures are passed through the torn tendon to repair it back to bone and allow it to heal fully. In addition, the repair is protected by immobilizing the arm in a sling for the first several weeks after surgery. Ultimately, the patient is then provided with a detailed and guided physical therapy program to gradually restore range of motion and strength.

The bad news for the patient is, of course, that full functional recovery can take some time – it takes at least three months for the repair to fully heal. Patients need to be advised of this, so they do not harbor unrealistic expectations for recovery.

Advanced options for extreme rotator cuff cases

There's another, more extreme scenario relative to rotator cuff problems. That is when patients are diagnosed with a long-standing tear that is massive in scope. The MRI may also demonstrate significant atrophy of the muscle to which the tendon is attached. Unfortunately, traditional rotator cuff repair surgery is no longer a viable option. However, there are more advanced and emerging surgical alternatives in this scenario.

The first is called superior capsular reconstruction (SCR). This is an arthroscopic procedure that uses an allograft. The allograft tissue is anchored into the region where the rotator cuff should be between the glenoid and greater tuberosity. This procedure has been demonstrated to reduce pain and improve function. It is indicated in younger and more active patients.

The second is reverse total shoulder replacement. The use of the adjective "reverse" is particularly interesting, but it simply reflects a procedural process in which the ball and socket orientation of the implants is reversed. The benefit of that reversal is that it changes the biomechanics of the shoulder joint slightly. This in turn helps the patient better utilize the other intact muscles around the shoulder after surgery which improves pain and function.

Years ago, when patients presented with irreparable rotator cuff tears, there was little we could do to help them other than managing their symptoms with medications and injections. Thankfully, medical science has come a long way and our patients with shoulder pain and rotator cuff impairments are reaping the benefits.

Dr. Christopher Owens is a board certified and fellowship trained orthopedic surgeon. As medical director at Goshen Physicians Orthopedics & Sports Medicine, Dr. Owens applies his extensive experience in orthopedic care to the general patient population as well as local high student athletes.



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Call for an appointment at (574) 534-2548.

If you would like more information or to meet any of our doctors, please contact **Jenny Rupp, Physician Liaison**, at jrupp2@goshenhealth.com or (574) 364-2978.

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