

Rotator Cuff Injury



Rotator cuff injuries are very common—by age 60, half of us will have a partial tear. Still, this group of muscles and tendons might seem mysterious because no two injuries are quite alike.

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The rotator cuff is made up of four muscles and their tendons that come from the shoulder blade and attach to the upper part of the arm bone.

They stabilize the shoulder joint and perform specific movements of the shoulder and arm. They are:

- » Supraspinatus (helps lift the arm out to the side)
- » Infraspinatus (externally rotates the shoulder)
- » Teres minor (externally rotates the shoulder)
- » Subscapularis (internally rotates the shoulder)

Together, these muscles and their tendons form a “cuff” over the head of the humerus (upper arm bone) and each muscle is attached to the bone via a tendon. Any of these tendons can tear partially or completely from the bone, although the most commonly torn tendon is the supraspinatus.

Symptoms

There are a number of different symptoms that might indicate a rotator cuff tear:

- » Pain at night when lying in bed—especially when sleeping on the injured shoulder
- » Pain when moving the arm through specific angles or with lifting and lowering
- » A sense of weakness when lifting or rotating the arm
- » A crackling sensation (crepitus) when moving the shoulder
- » A feeling of looseness or instability

Causes

Vigorous physical activity or an injury can cause a tear, but some rotator cuff tears happen without

a clear cause. Rotator cuff tears can happen from normal wear and tear or because of athletic overuse or accidental overextension. For older adults or individuals with weakened tendons, even simple things like lifting an object or a routine movement can cause rotator cuff injuries. Bone spurs (a small area of bony overgrowth) around the tendons can also contribute to a rotator cuff injury. Usually though, tendons are damaged through overuse or by an immense amount of force—like a sports injury or a fall.

Tendon injuries can also happen due to a lack of blood supply to the rotator cuff. Blood supply is essential for repairing routine wear and tear and other types of mild damage.

You can help maintain a good blood supply to your rotator cuff through:

- » Regular exercise
- » Good nutrition
- » A healthy lifestyle
- » Managing co-existing medical conditions, such as diabetes
- » Avoiding all nicotine products

Rotator cuff tears happen whether a person is active or sedentary, in construction or accounting. Many people with tears have no symptoms and can live with the condition without discomfort or inconvenience. Others have troubling symptoms that need medical attention.

Diagnosis

In order to diagnose a rotator cuff tear, your doctor will first take a history of your injury and perform a physical examination, testing the strength of the muscles in your shoulder and arm. Doctors will order an x-ray to look at the shoulder bones and rule out any other potential causes of pain. Afterward, an MRI may be performed to confirm that the rotator cuff has been injured.

Nonsurgical treatment options

Up to 75% of people with tears that happened slowly can be treated conservatively and will get better and return to their activities without surgery.

In general, tears that have occurred slowly over time are best treated with:

- » Rest
- » Ice
- » Anti-inflammatory medication
- » Avoidance of aggravating activities
- » Physical therapy

Additional advanced non-surgical treatments may include:

- » Steroid injections
- » Orthobiologics

If a rotator cuff tear does not respond to nonsurgical treatments after three to six months, Dr. Romeo may suggest an outpatient surgical procedure that is performed using the latest arthroscopic, minimally-invasive techniques.

Tears that occur suddenly in active people are usually best treated with surgical repair. Surgery is the most reliable method to ensure the torn tendon heals down to the bone, which provides the best opportunity for a pain-free shoulder that performs similarly to its pre-injury level.

How surgery is performed

Dr. Romeo performs all of his rotator cuff surgeries arthroscopically. The minimally-invasive repair procedure is done using a tiny camera and tools inserted through small cuts in the skin. This allows the surgeon to repair the tear without making a large cut, which can injure the surrounding healthy tissues and takes longer to heal.

The details of the surgery will depend on the location and size of the rotator cuff tear. The most common rotator cuff surgery involves reattaching the torn supraspinatus tendon to the top of the upper arm (humerus) bone.



“Ignoring a large tear can have significant consequences. Unfortunately, larger tears get worse over time.”

Rotator cuff surgery is done as an outpatient in an ambulatory surgery center (ASC), unless the patient is not qualified to have the procedure in an ASC due to severe medical conditions.

Recovery time

Recovery from an arthroscopic procedure is quicker than recovery from major surgery because it does not require a large open incision. After surgery, you will be sent home wearing a sling and immobilizer that wraps around your waist to support and hold your surgical arm in a comfortable position. Some swelling and bruising are normal during the recovery process. Ice packs applied to the shoulder several times a day can help ease swelling and discomfort.

Before surgery, Dr. Romeo’s office can help arrange for a cold therapy device that delivers continuous cold treatment to the surgical site during recovery. Dr. Romeo has heard many people say how helpful these devices are for comfort, therefore reducing the need for pain medications. Unfortunately, this treatment may not be covered by your insurance.

The next stage of recovery is a guided exercise program and physical therapy (PT). This will help you rebuild muscle, broaden your range of motion, and restore flexibility and function to your shoulder. Therapeutic exercise also minimizes scar tissue from forming at the site of the repair. Scar tissue limits movement and affects shoulder function.

Results

After recovering from rotator cuff surgery, most patients will have a significant or complete resolution of their pain and will not need to take pain medications. Most patients will maintain or even improve their pre-operative range of motion.

Returning to the same level of strength depends on the size of the tear. Patients with smaller tears are expected to regain a similar level of activity. But when two or more tendons are repaired, patients are unlikely to regain their full strength. They may also have less ability to perform overhead activities, such as reaching or throwing.

People who work at light to medium-demand physical activities (e.g., carrying less than 50 lbs) are

often able to return back to the same level of work after recovering from rotator cuff surgery. However, patients who have to lift more than 50 lbs regularly are often unable to return back to work without some restrictions, especially overhead lifting movements.

FAQs

What risk factors are associated with rotator cuff injuries?

Risk factors for rotator cuff injuries include:

- » Age (i.e., being over 60 years old)
- » A traumatic injury (e.g., fall from a height, vehicle accident, crash during a sport such as tackle football)
- » Repetitive activities (e.g., sports, painting, carpentry, etc.)
- » Previous shoulder surgery
- » Cigarette smoking
- » Poorly-controlled diabetes

Rotator cuff problems increase with age. Even for folks as young as 40, it's not unusual to have a partial tear. It's common for people over the age of 60 to have some degree of tearing in their rotator cuff tendons. In fact, by age 60, 10% or more of the population will have a full-thickness tear in their rotator cuff.

By age 70, more than 33% of people will have a full-thickness tear. Furthermore, by age 70, the ability of the rotator cuff tendon to heal to bone with surgical treatment significantly diminishes. By age 80, that number rises to greater than 50%.

What if I ignore the pain?

It depends on the severity of the rotator cuff tear. If a small tear (i.e., a single tendon tear) is left untreated, you may experience discomfort and a reduction in your range of motion. However, some small tears will become less painful over time and allow people to return to some of their daily activities without causing symptoms.

Ignoring a large tear (i.e., when two or more tendons are torn) can have big consequences. Unfortunately, larger tears have the potential to get worse over time.

Five years after an initial tear, more than 50% of tears are larger than when the problem first occurred. When the tear extends into a second tendon, or even worse, a third tendon, the shoulder function is likely to be irreversibly decreased even if surgery is performed. In the worst cases, the rotator cuff can no longer stabilize the shoulder, and over time this triggers the development of shoulder arthritis, which may later require joint replacement surgery.

Want to learn more? Find relevant videos, animations, and research material related to this procedure at romeoorthopaedics.com. →



For more information about effective solutions for rotator cuff injuries, please request an appointment with experienced Chicago orthopaedic surgeon Dr. Anthony Romeo.

Please visit our website to find out how to schedule your appointment.