

Rotator Cuff Tears

Shoulder pain is a leading musculoskeletal complaint seen in primary care provider offices, with rotator cuff



injuries accounting for 64% of shoulder-related visits.

Before we get into the details of rotator cuff injuries, let's take a closer look at the anatomy of the shoulder. The shoulder joint is a ball-and-socket joint that consists of three bones: the humerus (upper arm bone), scapula (shoulder blade), and the clavicle (collarbone). Your upper arm is held in place in your shoulder socket by a cartilage ring called the labrum and by your rotator cuff, which consists of four muscles including the supraspinatus, infraspinatus, subscapularis, and teres minor.

The rotator cuff attaches your upper arm to your shoulder blade, and helps to keep the ball of the humerus sitting nicely in the middle of the socket as you to lift and rotate your arm. In between the rotator cuff and the acromion, which is the bone on top of your shoulder, is a bursa. The bursa allows for smooth gliding of the rotator cuff tendons during arm movements. If the rotator cuff tendons are damaged or injured, inflammation of the bursa can also occur, leading to pain.

Of rotator cuff injuries, rotator cuff tear is extremely common. According to estimates, the prevalence of rotator cuff tear in the general population is 20% in individuals over the age of 20 years, and 25% in individuals over the age of 50 years. When one of the rotator cuff tendons is torn, it no longer attaches fully to the head of the humerus. Any rotator cuff tendon may be involved, however, most tears occur in the supraspinatus tendon. Often, the tear begins as fraying of the tendon and as it progresses, the tendon completely tears. The good news is that lots of people have rotator cuff tears and have no symptoms and many tears are small and don't progress further.

Rotator cuff tears are classified as either partial or complete tears:

- Partial tear (incomplete tear) – this type of tear damages the tendon, but does not result in complete severing of the tendon.
- Full-thickness tear (complete tear) – this type of tear involves separation of the tendon from the bone.

Rotator cuff tears can be either acute or degenerative in nature. Acute tears typically occur when you fall on an outstretched arm, or with improper and heavy lifting. Acute tears can happen in combination with other injuries such as a dislocated shoulder or broken collarbone. Degenerative tears are more common than acute tears, and are the result of wearing down of the tendon that occurs over time, as you age. These tears often occur with repetitive use of the arms with poor shoulder and head posture. Rounding forward of the shoulders put the rotator cuff in a less optimal position and can lead to excess friction, load or wear. Degenerative tears tend to happen in your dominant arm, and if you have a degenerative tear in one arm, you're more likely to have a rotator cuff tear in the opposite arm as well. Degenerative tears occur due to repetitive stress on the shoulder, decreased blood supply in the rotator cuff tendons as you age, and due to the development of bone spurs.

Symptoms of a rotator cuff tear

Common symptoms of rotator cuff tear include:

- Pain at rest, especially when lying on the affected shoulder.
- Pain when lowering or lifting your arm.
- Weakness when rotating or lifting your arm.
- Crackling sensation with shoulder movement.

Diagnosis and treatment

It's important to keep in mind that not all rotator cuff tears result in pain; however, these tears will often still lead to weakness and other symptoms.

Diagnosis of rotator cuff injury is often accomplished with a thorough history and physical examination of the area. However, in some cases imaging modalities such as X-ray and magnetic resonance imaging (MRI) may be used to confirm diagnosis.

Treatment for a rotator cuff injury depends on your age, your activity level, and the extent of your tear. Early treatment can prevent your tear from worsening and help you to return to your normal activities. There are non-surgical and surgical treatment options to consider. In both cases, the goals of treatment are to reduce pain, and improve function of the shoulder. 80% of patients respond to non-surgical treatment including rest, activity modification, over-the-counter medications, physiotherapy, and as a last resort, steroid injection.

If your symptoms do not improve with non-surgical treatment options, you are an athlete or manual labourer, you have a large tear (greater than 3 cm), you have significant loss of function, or if your tear was caused by a recent acute injury, your doctor may recommend surgery, which often involves re-attaching the torn tendon to the head of the humerus.

Whether treatment for your rotator cuff injury involves non-surgical options or surgical options, physiotherapy plays a crucial role in getting you back to your pre-injury activities.

If you have suffered a rotator cuff injury you may benefit from physiotherapy. Undergoing a comprehensive evaluation by a physiotherapist at Advantage Physiotherapy is one of the best ways to properly rehabilitate your shoulder after a rotator cuff injury. After the assessment, our physiotherapists will create a program that is specific to your needs, and set you on the right path toward optimal functioning of your shoulder joint.

References

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