

# SHOULDER ROTATOR CUFF INJURY

## What is the rotator cuff?

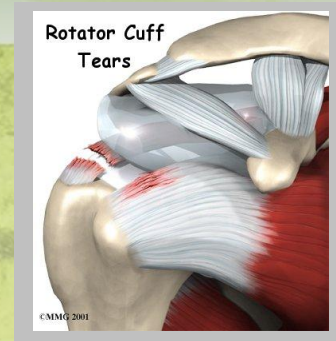
The rotator cuff is the group of four muscle/tendons that stabilize the shoulder joint. The tendons attach the four muscles to the arm bone that move the shoulder in various directions.

There are four muscles whose tendons form the rotator cuff: the subscapularis muscle, the supraspinatus muscle; the infraspinatus muscle, and the teres minor muscle, They work together in concert each pulling from a different direction to balance the shoulder ball in the socket during shoulder movement.

***Injury to the rotator cuff is one of the most common causes of shoulder pain.***

## How is the rotator cuff injured?

The rotator cuff can be injured because of impingement (pinching of the tendon between shoulder bones) or degeneration with aging or inflammation due to tendinitis, bursitis, or arthritis of the shoulder. The rotator cuff is commonly injured by trauma (such as from falling, heavy lifting or overuse in sports). Rotator cuff injury is particularly common in people who perform repetitive overhead motions because these increase the impingement. Poor shoulder posture and poor patterns of shoulder movement cause increased impingement and overload of the rotator cuff tendons.



*Rotator cuff tears*



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## What are the symptoms of rotator cuff injury?

The most common symptom of rotator cuff injury is shoulder pain. The pain is often noticed gradually and may be first noticed even a day after the actual event which may have caused the injury. Sometimes, a sudden pain occurs during a sport activity or heavy lift. The pain is usually located to the front and side of the shoulder and is increased when the shoulder is moved away from the body. The pain is usually noted to be more intense at night time and sometimes increases when lying on the affected shoulder. People with rotator cuff injury usually find it difficult to lift the arm away from the body fully. If the rotator cuff injury involves severe tears of the rotator cuff tendons, it can be impossible for the patient to hold the arm up at all.

## What is the outlook for rotator cuff injury?

*Without treatment, including exercise, the shoulder frequently permanently loses full function from rotator cuff injury yet others can function near normally. Sometimes, scarring around the shoulder (adhesive capsulitis) leads to a marked restriction of the range of shoulder motion. This condition is referred to as a frozen shoulder.*

*6 to 12 Weeks of rehabilitation is the norm with significant rotator cuff injury. Many will recover fully but some patients never recover full function of the shoulder joint although can be helped with physiotherapy.*

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## How is rotator cuff injury diagnosed?

Rotator cuff injury is suggested by the patient's history of activities and symptoms of pain in the shoulder described above. In making a diagnosis, the physio can observe increased pain/weakness with certain tests. The pain is due to local inflammation and swelling in the injured tendons of the rotator cuff. Additionally, with severe tendon tears of the rotator cuff, there may be complete loss of strength on some tests.

The diagnosis of rotator cuff injury can be objectively confirmed by radiology testing. Sometimes plain x-rays can show bony injuries which suggest long-standing severe rotator cuff injury. Ultrasound scan can show cuff tears. The MRI is a non-invasive imaging test which uses a giant magnet and computer to produce fine images of the tissues of the shoulder. An MRI has the added advantage of providing more information than either X-ray or an ultrasound, especially if a condition other than rotator cuff injury is present or the ultrasound is inconclusive.

## How is rotator cuff injury treated?

The treatment of rotator cuff injury depends on the severity of the injury and the underlying condition and age of the patient.

Mild rotator cuff injury is treated with ice, rest, and antiinflammatory medications and physiotherapy. Typically physiotherapy involves strapping to support the injured rotator cuff then gradual exercise rehabilitation. Exercises are used that are specifically designed for rotator-cuff strength and shoulder blade posture. There is shoulder anatomy education so patients know how to remain as active as possible but avoid impingement or overload of the injured rotator cuff.

Patients with persistent pain and stiffness can often benefit by a cortisone injection. More severe rotator cuff injury can require surgical repair.

Subacromial decompression is the removal of a small portion of the bone (acromion) that overlies the rotator cuff. This removal can relieve pressure (impingement or pinching) on the rotator cuff and promote healing and recovery. This procedure can be done by arthroscopic or open surgical techniques. Both physiotherapy and surgical methods have been reported to be equally successful.

The most severe rotator cuff injury, large full-thickness rotator cuff tears, usually requires surgical procedures for the best results. These procedures involve mending the torn rotator cuff by suturing the tissues back together.