CONDITION

# Rotator cuff disorders

Rotator cuff disorders affect the shoulder tendons that help lift and rotate your arm.

**WHAT IT IS**
Damage or irritation of the shoulder's rotator cuff tendons

**BODY SYSTEM**
Muscles, bones, and joints

**MAIN SYMPTOMS**
Shoulder pain, night pain, weakness, limited movement

**WHAT CAUSES IT**
Overuse, age-related tendon wear, or injury

**HOW IT IS DIAGNOSED**
Clinical examination, ultrasound or MRI when needed

**MAIN TREATMENT**
Activity changes, pain relief, and exercise-based rehabilitation

**CAN IT BE CURED?**
Sometimes - symptoms improve, but some tears remain

**IS IT AN EMERGENCY?**
Sometimes - major injury with deformity or numb, cold arm

**LONG-TERM OUTLOOK**
Most improve; larger tears can cause lasting weakness

## Overview

The rotator cuff is a group of four muscles and their tendons around your shoulder. Tendons are strong bands that connect muscle to bone. The rotator cuff keeps the shoulder joint steady and helps you lift and rotate your arm.

"Rotator cuff disorders" is a broad term. It includes:

These problems can develop gradually or follow an injury. They matter because shoulder pain and weakness may affect sleep, dressing, driving, sport, and work. However, an abnormal tendon scan does not always mean severe disease. Tendon changes and small tears are common as people get older, and some cause no symptoms.

Many rotator cuff problems improve with changes to activity and a structured exercise programme. Some tears remain visible on a scan even when pain and function improve.

Surgery is needed only in selected situations.

- Rotator cuff tendinopathy , where a tendon becomes painful and less able to handle normal loads
- Bursitis , which is irritation of the small fluid-filled cushion above the tendons
- Partial-thickness tears , where part of a tendon is torn
- Full-thickness tears , where a tear passes through the tendon
- Calcific tendinopathy , where calcium deposits form within a tendon

## Symptoms

Pain is often felt over the outer shoulder or upper arm rather than directly on top of the joint. It may be worse when you reach overhead, reach behind your back, lift something away from your body, or lower your arm.

Night pain is common, especially when lying on the affected side. The pain may disturb sleep or make it difficult to find a comfortable position.

Other possible symptoms include:

A sudden tear after an injury may cause immediate pain, a popping feeling, bruising, or a new inability to lift the arm. Gradual tears may cause less obvious pain but increasing weakness over time.

Similar symptoms can come from frozen shoulder, arthritis, a neck problem, or another shoulder injury. Pain travelling below the elbow with tingling or numbness is more suggestive of nerve irritation than an isolated rotator cuff problem.

- Weakness when lifting or rotating the arm
- Pain during a particular part of an overhead movement
- Reduced shoulder movement
- Difficulty dressing, washing your hair, or fastening a seat belt
- Clicking or catching in the shoulder

## Causes and risk factors

Rotator cuff tendons change with age. Their structure and blood supply can become less robust, making them less able to tolerate repeated load. This does not mean that everyone

develops pain or loses shoulder function.

Repeated overhead activity can contribute. Examples include painting, lifting, swimming, tennis, construction work, and jobs involving frequent reaching. Problems may develop when the amount or intensity of activity increases faster than the tendon can adapt.

A tear can also happen during a fall, while lifting a heavy object, or when the shoulder is dislocated. An injury may tear a previously healthy tendon or worsen an existing age-related tear.

Factors linked with a higher risk include:

Shoulder shape and movement may affect how load passes through the tendons, but there is rarely one simple cause. Pain is not always due to a tendon being "pinched," even when the term shoulder impingement is used.

- Increasing age
- Previous shoulder injury
- Repeated overhead work or sport
- Smoking
- Diabetes
- High cholesterol
- A tear in the opposite shoulder

## Diagnosis

A healthcare professional will ask when the pain began, which movements affect it, and whether there was an injury. They may also ask about your work, sport, sleep, neck symptoms, and health conditions.

During an examination, they will compare both shoulders. They may check how far you can move the arm yourself and how far it can be moved with assistance. Strength, tenderness, joint stability, and neck movement may also be assessed.

Scans are not always needed at first. Many rotator cuff disorders can be managed based on the symptoms and examination, particularly when there has not been a major injury.

When imaging is needed:

Imaging results must be matched with your symptoms. A scan may show tendon wear or a tear that is not responsible for the pain. Blood tests are not normally used to confirm a rotator cuff disorder, although they may be ordered if infection or an inflammatory condition is suspected.

- X-rays show bones and arthritis but do not show a rotator cuff tear directly
- Ultrasound can identify many partial or full-thickness tears and show tendon movement
- MRI gives detailed images of the tendons, muscles, bursa, and other shoulder structures

## Treatment and management

Treatment depends on how the problem began, the degree of weakness, your usual activities, and whether a significant tear is present.

Most gradual-onset problems are treated without surgery at first. Complete rest is usually unhelpful because the shoulder can become weaker and stiffer. Instead, you may need to reduce or temporarily change movements that repeatedly worsen the pain while continuing comfortable daily activity.

A physiotherapist or other qualified professional may guide exercises to improve shoulder movement, rotator cuff strength, and control of the shoulder blade. The exercises are usually increased gradually. Some discomfort can occur during rehabilitation, but severe or steadily worsening pain should be reviewed.

Pain-relieving medicines may make movement and sleep easier. Anti-inflammatory medicines are not suitable for everyone, especially people with certain stomach, kidney, heart, bleeding, or medication-related risks. A pharmacist or clinician can help you understand appropriate options.

A corticosteroid injection around the painful tendon and bursa may provide short-term relief for some people. It does not repair a tear, and repeated injections can have disadvantages. The possible benefits and risks should be considered before an injection.

Surgery may be discussed when there is:

Rotator cuff repair usually involves reattaching the tendon to the upper arm bone using keyhole surgery. Other procedures may be performed if there are additional problems. Recovery includes a period of protection followed by several months of rehabilitation. Surgery cannot guarantee complete healing or a pain-free shoulder.

- A recent traumatic full-thickness tear
- Marked weakness or loss of function
- A larger tear that could worsen
- Persistent pain and disability despite an adequate rehabilitation period

## Complications

Persistent pain can reduce sleep, activity, work capacity, and general fitness. Avoiding movement for a long time may contribute to stiffness or frozen shoulder.

Some tears enlarge over time. Larger or long-standing tears can lead to shrinking of the muscle and replacement of muscle tissue with fat. These changes may make later repair less successful. Severe, long-term tears can occasionally contribute to a particular form of shoulder arthritis.

Surgery has risks, including infection, stiffness, blood clots, nerve injury, and failure of the tendon to heal fully. A repaired tendon can tear again, especially if the original tear was large or the tendon quality was poor.

## Prevention

Not every rotator cuff disorder can be prevented. Age-related tendon changes and unexpected injuries may occur despite sensible precautions.

You may reduce avoidable strain by increasing new work or exercise gradually. Regular shoulder and upper-back strengthening can help the tendons cope with load. Technique, equipment, rest periods, and task rotation may matter when work or sport involves repeated overhead movement.

Avoiding smoking supports tendon and general health. Managing conditions such as diabetes may also support healing, although it cannot guarantee that a tendon problem will not occur.

If symptoms begin, early adjustment of the activity that triggered them may prevent repeated aggravation. This does not usually require stopping all shoulder movement.

## Living with it and what to expect

Improvement is often gradual rather than immediate. Exercise-based rehabilitation commonly takes weeks to months. Pain may settle before full strength returns, and progress may include temporary flare-ups after unusual activity.

A tendon tear does not always close by itself. Even so, many people regain useful movement and have less pain without an operation because the remaining muscles become stronger and the shoulder adapts. The size, location, and cause of a tear influence the outlook.

Larger traumatic tears and tears causing clear weakness may have a different course from

gradual tendinopathy. Follow-up is important if strength is declining, movement is becoming more limited, or rehabilitation is not helping.

After surgical repair, the tendon needs time to attach securely to the bone. The arm may be supported in a sling at first, followed by a staged rehabilitation programme. Returning to heavy work or overhead sport often takes several months.

Long-term activity is usually possible, but you may need to manage training load, strengthen the shoulder regularly, or change how you perform repeated overhead tasks. Some people continue to have symptoms despite treatment, particularly with large or long-standing tears.

## When to get medical help

Arrange a routine appointment if shoulder pain lasts more than a few weeks, repeatedly affects sleep, or makes normal activities difficult. You should also seek assessment for ongoing weakness, increasing stiffness, or symptoms that are not improving with reasonable activity changes.

Seek prompt medical assessment after an injury if you suddenly cannot lift your arm, develop major weakness, or notice significant bruising. An acute tear, fracture, or dislocation may need early investigation.

Get urgent or emergency help if:

These signs may indicate a fracture, dislocation, circulation problem, infection, or heart problem rather than a routine rotator cuff disorder.

- The shoulder looks deformed after an injury
- The arm or hand becomes cold, pale, blue, numb, or unusually weak
- The shoulder is red, hot, very swollen, and you have a fever
- Shoulder or arm pain occurs with chest pressure, sweating, breathlessness, or nausea

## Common questions

Is a rotator cuff disorder the same as a tear?

No. The term includes painful tendon changes, bursitis, calcium deposits, and both partial and full-thickness tears. Symptoms alone cannot reliably show whether a tear is present.

Can a rotator cuff tear heal without surgery?

A full-thickness tear often does not reattach to the bone without surgery. However, pain and

function can still improve through rehabilitation. Small partial tears may become less painful and sometimes heal, although this is not guaranteed.

How long does recovery take?

Milder problems may improve within several weeks, while long-standing symptoms often take several months. Recovery after tendon repair is longer because the tendon must heal before heavier activity is restarted.

Should I exercise with rotator cuff pain?

Gentle movement and appropriately graded strengthening are usually part of management. Exercises should match your condition and current ability. Stop and seek advice if exercise causes severe pain, new weakness, or a lasting major flare-up.

Do I need an MRI?

Not always. An examination may provide enough information to begin treatment. Ultrasound or MRI may be useful after a significant injury, when marked weakness is present, when symptoms do not improve, or when surgery is being considered.

How should I sleep with shoulder pain?

Try sleeping on your back or the unaffected side. Supporting the painful arm on a pillow may reduce strain. If night pain remains severe or repeatedly disrupts sleep, arrange an assessment rather than relying only on sleep-position changes.

## Sources

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