

Cuff Arthropathy

Rotator cuff arthropathy: arthritis following a long-standing rotator cuff tear.

Kieran Hirpara © ⓘ ⓘ 4.0



What you're feeling

You may notice a deep ache in your shoulder that settles at the base of your neck or along the shoulder blade. This pain often flares up at night, making it hard to find a comfortable sleeping position. You might also feel stiffness when you first wake up, which slowly eases as you move through your day.

Simple daily tasks can become surprisingly difficult. Reaching for a cup in a high cupboard may feel blocked or painful. Putting on a jacket or pulling up a zip on your trousers can be challenging because lifting your arm feels restricted. You might find that reaching into the back seat of a car or picking up a bag from the floor requires you to lean your whole body rather than just using your arm.

The pain tends to worsen with activity, especially if you try to lift anything overhead. You may feel a sudden loss of strength or a sharp increase in pain if you push too hard. This is because the wear-and-tear arthritis and damaged tendons mean your shoulder joint is not gliding smoothly. Instead of the ball and socket working together, the bones rub against each other or the damaged tendons strain against the joint.

Some people describe a catching sensation or a feeling that the shoulder might slip out of place. This instability can be worrying, but it is a common part of cuff tear arthropathy. You might also notice swelling or tenderness along the top of the shoulder blade, particularly if there has been any recent increase in activity.

It is important to listen to your body. If you experience a sudden, severe change in pain or a complete loss of function, this could signal a more serious issue like a fracture. However, for most people, the symptoms develop gradually. You may find that resting the arm helps reduce the ache, but prolonged inactivity can make the stiffness worse. Understanding these patterns helps you manage your day-to-day life while you prepare for treatment.

What's actually happening

In a healthy shoulder, the rotator cuff tendons act like a strong net, holding the ball of your upper arm bone firmly into the socket. In cuff arthropathy, this net is torn and worn out. Without that support, the ball rides too high and grinds against the roof of your shoulder blade. Over time, this friction wears away the cartilage and bone, changing the shape of your joint. This is why you feel pain and find it hard to lift your arm. The movement becomes stiff because the bones are rubbing where they should glide smoothly.

To fix this, your surgeon replaces the damaged joint with a reverse total shoulder replacement. This is not a standard joint replacement. It flips the ball and socket positions. The metal ball is attached to your shoulder blade, and the plastic cup is attached to your upper arm bone. This design does not rely on your torn rotator cuff. Instead, it uses your deltoid muscle—the large muscle on the side of your shoulder—to lift your arm. By moving the pivot point, the surgery gives your deltoid muscle a better mechanical advantage. This allows you to raise your arm again, even without the rotator cuff.

However, this new setup changes how forces travel through your shoulder. The deltoid works harder, which can increase stress on the shoulder blade bone. In some cases, this stress can lead to bone wear or, rarely, a fracture of the shoulder blade. This is why your surgeon carefully plans the implant size and position. The goal is to restore your ability to lift your arm while keeping the new joint stable. You will need to follow specific rehabilitation steps to protect the bone and muscle as they adapt to this new mechanics.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition. Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. A clinic assessment (history, examination, and imaging where needed) establishes the diagnosis. For degenerative or long-standing problems we usually try non-operative care – activity change, physiotherapy or hand therapy, splinting, and injections – and consider surgery when that has not given enough improvement. For structural or acute problems, surgery may be recommended straight away, without a preceding non-operative trial.

You can begin by adjusting your daily activities to avoid movements that cause pain. Physiotherapy aims to maintain your shoulder's range of motion and strengthen the surrounding muscles to support the joint. We may also discuss pain management options, such as anti-inflammatory medications or cortisone injections, to help reduce swelling and discomfort. These treatments can provide relief for a period of time, allowing you to stay active while you monitor your symptoms.

Surgery is considered when conservative care has reached its limit and pain or stiffness continues to affect your life. In these cases, we may recommend a reverse total shoulder arthroplasty. This procedure replaces the damaged joint surfaces to restore function and relieve pain. It is particularly effective for patients with rotator cuff deficiencies or complex fractures. The implant is designed to work with your shoulder muscles even if the rotator cuff is not fully functional. Revision procedures, where a previous replacement is updated, show an

implant survival rate of 85% at ten years. Patients typically achieve maximum medical improvement at 1 postoperative year. We will discuss whether this option is suitable for you based on your specific condition and goals.

What to expect

Your outlook depends largely on whether this is your first shoulder replacement or a revision after a previous surgery has failed. If you are having a primary reverse total shoulder replacement, you can expect significant long-term improvement. The implant survives in 85% of cases at ten years. Most patients reach their maximum medical improvement at one year after surgery. You will likely notice steady gains in pain relief and the ability to lift your arm.

If you are having a revision surgery because a previous anatomic replacement has failed, the picture is more complex. Your surgeon will explain that these procedures carry higher complication and revision rates than primary replacements. Clinical outcomes, including pain relief and satisfaction, tend to be worse compared to a first-time replacement. However, reverse shoulder replacement remains a versatile option to restore function even after other procedures have not worked.

For those managing the condition without surgery, conservative treatment offers less functional benefit than replacement for severe arthritis or cuff tear arthropathy. If you do not undergo surgery, symptoms of wear-and-tear arthritis and rotator cuff failure typically persist or worsen over time. You may experience ongoing pain and limited movement that affects daily activities.

Recovery is a process, not an event. Six distinct recovery paths exist, with 83.7% of patients experiencing very low pain scores after just two weeks. This is known as the 'Faster group'. However, full functional recovery takes longer. You might return to walking and swimming within months, but maximum strength and elevation continue to improve up to a year. Driving is usually possible between six and twelve weeks post-surgery, depending on your progress.

It is important to note that reverse shoulder replacement is not suitable for everyone. If you have primary osteoarthritis with an intact rotator cuff, this specific procedure may not offer functional benefits over other options. Your surgeon will assess your specific anatomy to determine if this approach is right for you.

When to see someone

Ask for a specialist review if you experience persistent pain that does not improve with rest, or if your shoulder feels weak or unstable. Sudden worsening of symptoms, locking, or the joint giving way are also key signs. You should seek urgent care if you notice a sudden loss of function or a sharp increase in pain, especially if this occurs within two years of surgery. New pain at the base of the shoulder blade or visible deformity may indicate a fracture. If your symptoms interfere with sleep or daily work, do not wait. Early assessment helps your surgeon identify the cause and plan the right treatment for your recovery.

In more depth

This section goes further than you need for your own treatment decisions. Cuff tear arthropathy and massive irreparable tears are worth the extra reading because the number of operations described for them is itself the most informative fact – when many procedures compete, none is clearly best.

EVERYTHING WORKS A BIT, AND NOTHING WORKS CLEARLY BETTER

Across **2,000** patients, **clinically important treatment effects were seen for all eleven different treatment modalities** studied for irreparable posterosuperior cuff tears – with variation in patient characteristics, co-interventions, outcome reporting and follow-up length complicating any sound comparison [1]. A separate review of **3,363** patients found **all six non-arthroplasty options** produced statistically significant improvements in range of motion and patient-reported outcomes at a year or more, with low revision rates [2].

Eleven modalities, six options, all producing improvement, none demonstrably superior. That pattern usually indicates two things: the natural history includes some improvement regardless, and the studies are too heterogeneous to separate the treatments.

IMPROVEMENT EARLY, DECLINE LATER

One finding deserves emphasis because it is easily missed in short-term reports. Across **2,790** patients undergoing superior capsule reconstruction, partial repair, graft interposition and related procedures, there were **large initial improvements in shoulder scores for all techniques despite high retear rates** – and **shoulder scores may decline at mid- to long-term follow-up** [3].

So the same operation can look successful at one year and less so at five. When you read that a technique has good results, the follow-up interval matters as much as the number.

A **2026** analysis of **4,963** patients attempted to resolve this by ranking treatments on failure rate rather than outcome scores, and while it did not identify a single best treatment, it produced a hierarchy of reliability [4]. Ranking by failure is arguably the more honest measure when early scores converge.

WHY THE JOINT WEARS OUT ONCE THE CUFF IS GONE

The mechanism explains why this is a distinct condition rather than simply a large tear. The rotator cuff holds the humeral head centred in the socket while the deltoid lifts. Without it, the deltoid's pull drives the head upwards against the underside of the acromion.

That produces a characteristic pattern: the head rides up on X-ray, the acromion and head wear against each other where they were never meant to contact, and the joint surfaces degenerate secondarily. It is arthritis caused by mechanics rather than by primary joint disease, which is why treating the arthritis without addressing the mechanics does not work.

It is also why reverse shoulder replacement solved the problem – it makes the deltoid sufficient without needing a cuff. Where the arthropathy is established, that operation is covered on its own page.

READING THE OUTCOME FIGURES WITH THE RIGHT EXPECTATION

One caution for interpreting results: outcomes following reverse replacement in this setting are **decreased compared with other indications** across **6,698** patients [5]. The operation works, but a shoulder replaced for cuff arthropathy should not be expected to match one replaced for straightforward arthritis with an intact cuff – the starting point is worse.

REFERENCES

1. Kooistra B, Gurnani N, Weening A, van den Bekerom M, van Deurzen D. Low level of evidence for all treatment modalities for irreparable posterosuperior rotator cuff tears. *Knee Surg Sports Traumatol Arthrosc.* 2019;27(12):4038-48.
2. Hughes JD, Davis B, Whicker E, Sprowls GR, Barrera L, Baradaran A, et al. Nonarthroplasty options for massive, irreparable rotator cuff tears have improved patient-reported outcomes. *Knee Surg Sports Traumatol Arthrosc.* 2022;31(5):1883-902.
3. Davies A, Singh P, Reilly P, Sabharwal S, Malhas A. Superior capsule reconstruction, partial cuff repair, graft interposition, subacromial balloon spacers or tuberopectoplasty: a systematic review. *J Orthop Surg Res.* 2022;17(1).
4. Cooke SP, Koh JL, Amirouche F. An analysis of failure rates for treatment options for large to massive irreparable rotator cuff tears. *J Shoulder Elbow Arthroplasty.* 2026;10(1-2):100019.
5. Yazdanpanah S, Soth BT, Eskew JR, Dancy M, Fu MC, Taylor SA, et al. Decreased clinical and functional outcomes following reverse total shoulder arthroplasty for cuff tear arthropathy: a systematic review. *JSES Rev Rep Tech.* 2026;6(2):100691.