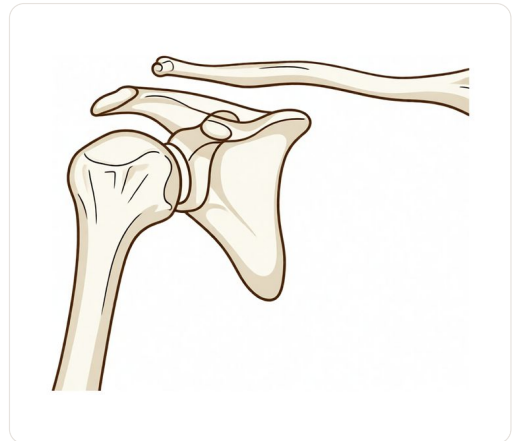


Acromioclavicular Joint Injury (Shoulder Separation)



An AC joint injury (shoulder separation): the outer end of the collarbone steps up away from the shoulder blade.

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What you're feeling

This injury almost always starts with a fall directly onto the point of the shoulder: coming off a bike, a tackle or heavy contact in sport, or a simple trip onto a hard surface. Straight away the top of the shoulder is sore, and over the next day or two a **tender lump or step** often appears right at the tip, where your collarbone meets the shoulder.

The area is painful to touch and to lift the arm, and reaching across your body or overhead can be especially uncomfortable. If you press on the lump, it can feel **springy**, as if pushing down on the end of the collarbone and feeling it bounce back up, a bit like a piano key. Many people instinctively cradle the arm, because letting it hang drags on the sore joint. This is what people mean by a “**shoulder separation**”, and it is not the same as a dislocated shoulder, where the ball of the shoulder pops out of its socket.

What's actually happening

At the very top of your shoulder there is a small joint where the outer end of the **collarbone (clavicle)** meets a bony tip of the shoulder blade called the **acromion**. This is the **acromioclavicular (AC) joint**. It is held together by ligaments, both the ones around the joint itself and a set of strong ligaments a little lower down (the **coracoclavicular**, or CC, ligaments) that act like guy-ropes anchoring the collarbone down.

A fall onto the point of the shoulder drives the shoulder blade downwards while the collarbone stays put, **straining or tearing those ligaments**. When only the joint's own ligaments are sprained, the collarbone stays more or less in place. When the stronger guy-rope ligaments tear as well, the collarbone is no longer held down and rides up, which is what creates the visible bump and step.

Surgeons grade these injuries by how much damage there is, using a scale called the **Rockwood classification, I to VI**. Grades **I and II are sprains** with little or no displacement; grade **III sits in between**, with a noticeable bump but the shoulder still working reasonably well; and grades **IV to VI are the high-grade injuries**, where the collarbone is badly out of position. It is worth knowing this is a different problem from a **worn-out, arthritic AC joint** (wear-and-tear over years) and from a **broken collarbone** (both of which we cover separately).

What we can do about it

In our clinic, Dr Kieran Hirpara manages this injury by first confirming the diagnosis through a thorough assessment and imaging. We typically begin with non-operative care for long-standing issues and consider surgery only if that approach does not provide enough relief.

The good news is that **most AC joint injuries do not need surgery**.

Low-grade injuries (grades I, II and most grade III) are treated simply. A **sling for comfort** for a couple of weeks takes the drag off the joint and lets the irritation settle. Once the early pain eases, **physiotherapy** restores movement and rebuilds the muscles around the shoulder blade and shoulder. People generally regain good, often full, function and get back to work and sport. The one honest caveat is cosmetic: even after everything heals, the bump at the top of the shoulder often stays for good. It looks different from the other side, but it usually does not stop the shoulder working.

Surgery is reserved for the injuries that need it. That means the **high-grade injuries (grades IV, V and VI)**, where the collarbone is badly displaced, and the smaller group of lower-grade injuries that stay painful, weak or unstable despite proper rehab, particularly in people who do heavy manual or overhead work, or in serious athletes. An operation reconstructs the torn ligaments to pull the collarbone back down into its proper position and hold it while it heals. We talk through that separately under the AC joint stabilisation procedure.

What to expect

For the great majority of people with a low-grade injury, the story is reassuring. The sharp pain settles within a few weeks, and with physiotherapy the shoulder steadily regains its strength and range. Most return to their normal activities and sport, accepting that the **bump may be a permanent reminder** of the injury without limiting what the shoulder can do. Even some grade III injuries that look dramatic at first do well without surgery.

The injuries that take longer are the high-grade ones, and the low-grade ones that simply don't settle. Here the question is **whether reconstruction will give a more stable, stronger, less painful shoulder** for the demands you place on it, and the answer depends a lot on your work, your sport and how the shoulder is behaving over the first weeks. There is good evidence that this decision is best made unhurried, giving the shoulder a fair trial before committing to surgery, while not leaving a clearly unstable, high-grade injury indefinitely.

When to see someone

- **A fall onto the point of the shoulder** that leaves it painful, with a tender lump or step at the top, worth having assessed, both to grade the injury and to rule out a broken collarbone.
- **An obvious, prominent bump** with the arm feeling like it is dragging down: this suggests a higher-grade injury that needs proper assessment.
- **Pain or weakness that isn't settling** after a few weeks of a sling and physiotherapy, especially if you do heavy or overhead work or play sport.
- **Skin under tension** over the bump, a change in skin colour over it, or any sense the bone is pushing hard against the skin: get this looked at sooner.

In more depth

This section goes further than you need for your own treatment decisions. An AC joint injury is worth the extra reading because of a mismatch that sits at the centre of every decision about it: the operation reliably corrects what the X-ray shows, and reliably does not change how the shoulder ends up working.

SURGERY FIXES THE PICTURE, NOT THE OUTCOME

High-grade separations look alarming on a film – the collarbone sits visibly proud of the shoulder blade – and it is intuitive that putting it back must be better. Pooling **954** patients with acute high-grade dislocations, there was **no clinical difference in functional outcome scores** between operative and non-operative management. What did differ ran in both directions: the non-operative group **returned to work more rapidly** but accepted a poorer cosmetic result, while surgery achieved better radiographic reduction [1].

Narrowing to Rockwood type III – the grade where the argument is genuinely live – a 2025 review of **397** patients found no significant difference in patient-reported or objective function, with surgery improving joint reduction while adding the risk of surgical complications [2]. An earlier review of **646** shoulders reached the same place from a different angle: no significant difference in later arthritis or persistent pain, and a **14%** recurrence rate in the surgical group [3].

Three independent bodies of evidence, one conclusion. The deformity is real, it is permanent without surgery, and correcting it does not measurably change what the shoulder can do.

SO THE DECISION IS ABOUT THE BUMP, NOT THE FUNCTION

That reframing is the practical value of the evidence. If the question is “will surgery make my shoulder work better”, the honest answer is that it has not been shown to. If the question is “will surgery remove the step in my collarbone”, the answer is usually yes – and for some people, in some occupations and some sports, that matters enough on its own.

It is a legitimate reason to operate. It is simply a different reason from the one most people assume they are being offered.

NO TECHNIQUE HAS WON, AND ONE IS MEASURABLY WORSE

Once a decision to operate is made, the choice of construct attracts a great deal of attention and very little separation. Across **939** patients, subjective outcomes after surgical treatment were **comparable for all modalities** – but **hook plate and K-wire fixation carried the highest complication rates**, and the modified Weaver-Dunn the highest rate of unplanned reoperation [4]. Comparing the two techniques most often used today across **399** patients, suture button gave better functional scores and lower pain than hook plate, with no significant difference in operating time, complications or loss of reduction [5].

Reconstruction studies point the same way. In **4,473** patients, biological and synthetic reconstructions produced better functional scores than osteosynthesis [6], and in **1,020** patients anatomic reconstructions performed best, with arthroscopic approaches outperforming open ones [7].

The pattern is that the modern anatomic reconstructions cluster together and the older rigid implants trail. Within the modern group, the differences are small enough that surgeon familiarity is a reasonable basis for choosing.

ONE IN FIVE HAS SOMETHING ELSE GOING ON INSIDE THE JOINT

This finding is worth knowing because it is invisible on the films that drive the diagnosis. Pooling **860** patients with surgically treated acute AC joint dislocations, **approximately one in five had an associated intra-articular lesion requiring further intervention** – most commonly labral or rotator cuff pathology – which is why the authors argue for arthroscopic inspection of the joint even when the reconstruction itself is done open [8].

It also offers an explanation for a frustrating minority of cases: the shoulder that stays painful after a technically sound reconstruction may have had a second injury all along.

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CQ HAND + UPPER LIMB

Dr Kieran Hirpara – Specialist Orthopaedic Surgeon
Suite 2, Level 1, Mater Private Hospital Rockhampton, 31 Ward Street, The Range, QLD 4700
Phone 07 4863 6556 · office@cqupperlimb.com.au · cqupperlimb.com.au