

AC Joint Osteoarthritis

Anterior view of the left shoulder showing the acromioclavicular (AC) joint where the collarbone meets the acromion of the shoulder blade, plus the surrounding ligaments and the deeper glenohumeral joint.

Kieran Hirpara © ⓘ 4.0



What you're feeling

You likely feel pain at the very top of your shoulder, where your collarbone meets your shoulder blade. This is called the acromioclavicular joint. The ache often starts after you lift your arm above your head. It may also flare up when you reach across your body to grab something from a shelf.

The pain can be sharp or dull. It tends to worsen with activity. You might notice it hurts more when you sleep on that side. Many patients find the discomfort is most noticeable when they first wake up in the morning. Resting your arm by your side usually helps calm the irritation.

Daily tasks can become difficult. Simple movements like buttoning a shirt or putting on a jacket may feel stiff or painful. Reaching for items in the back seat of a car can trigger a flare-up. Even carrying a heavy bag on that shoulder can strain the joint.

It is important to know that not everyone with wear-and-tear arthritis on an X-ray feels pain. In fact, ninety percent of people with asymptomatic AC-OA remained pain-free over a seven-year period. If you have no symptoms, your surgeon will likely not recommend surgery. Preventive removal of the bone end is not recommended for those without pain.

However, if you do have pain, it is real and valid. You do not need to distinguish between what an X-ray shows and what you feel. Patients with and without visible arthritis on scans reported equal satisfaction with preoperative injections. This means your symptoms matter more than the image alone.

Some people experience persistent pain after previous shoulder surgeries. If you have had a rotator cuff repair or a shoulder replacement, the arthritis in this joint can sometimes cause ongoing issues. In rare cases, severe arthritis here is linked to stress fractures in the shoulder blade after reverse shoulder replacement.

If conservative treatments do not help, your surgeon may discuss surgery. Both open and arthroscopic techniques can provide predictable pain relief. These procedures involve removing a small part of the collarbone to create more space. This reduces friction and allows your shoulder to move more freely.

What's actually happening

Your acromioclavicular joint sits at the very top of your shoulder. It is where the collarbone meets the shoulder blade. Think of this joint as a small shock absorber. It cushions the movement between these two bones.

Over time, the protective cartilage in this joint can wear down. This is called osteoarthritis, or wear-and-tear arthritis. When the cartilage thins, the bones may rub together. This causes pain and stiffness. You might feel this when reaching across your body or lifting your arm overhead.

In many cases, this wear-and-tear does not cause symptoms. Research shows that asymptomatic osteoarthritis remained symptom-free in 90% of patients over a 7-year period. If you have mild changes on an X-ray but no pain, you may not need treatment.

However, if the joint becomes painful, it can affect your daily life. The joint may become unstable. This means the bones shift out of their normal position. This shift can change how your shoulder moves. These kinematic changes can be a source of pain and dysfunction.

Sometimes, this joint issue is found during other shoulder surgeries, such as rotator cuff repair. In these cases, untreated osteoarthritis is associated with a low percentage of failure. It does not usually ruin the outcome of the main surgery.

If conservative treatments like rest or injections do not help, surgery may be considered. A common option is resection arthroplasty. This involves removing a small part of the collarbone. This creates more space for movement. Both open and arthroscopic techniques provide predictable pain relief for symptomatic cases.

Limited distal clavicle excision has been shown to reduce pain and improve shoulder function at midterm follow-up in patients resistant to conservative treatment. Your surgeon will decide if this is right for you based on your specific symptoms and anatomy.

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 start by changing how you use your shoulder. Avoid heavy lifting or movements that cause pain. Physiotherapy helps strengthen the muscles around the joint to support it better. This conservative therapy is a valid initial treatment option. Most patients find nonoperative treatment helpful for painful conditions of the acromioclavicular joint. You may need to modify your activities if you have osteolysis, which is bone loss in the area. Give this approach time to work before moving to the next step.

If pain persists, we discuss medical management. Pain medication and anti-inflammatories can reduce swelling and discomfort. Acromioclavicular injections offer a 1-year success rate of 47% in patients with acromioclavicular osteoarthritis. These injections use steroid medicine to calm inflammation. Research is still comparing intra-articular versus extra-articular steroid injections for isolated acromioclavicular osteoarthritis. We use these tools to manage symptoms while you continue with your daily life.

Surgery is considered when conservative care has reached its limit. Both open and arthroscopic resection arthroplasty techniques provide predictable pain relief for symptomatic acromioclavicular osteoarthritis. Limited distal clavicle excision reduces pain and improves shoulder function at midterm follow-up in patients with acromioclavicular joint osteoarthritis resistant to conservative treatment. This procedure removes a small part of the collarbone to stop bone-on-bone rubbing. We discuss this option only after non-operative methods have not given enough improvement.

What to expect

If you have wear-and-tear arthritis in the acromioclavicular joint but no pain, it is likely to stay that way. Research shows that 90% of people with this condition remain symptom-free over a 7-year period. You do not need to worry about it suddenly becoming painful if you are currently comfortable.

If you are experiencing pain, the outlook depends on how you manage it. Injections into the joint offer a 1-year success rate of 47%. This means nearly half of patients find lasting relief from this treatment. If injections do not help, your surgeon may discuss a limited removal of the end of the collarbone. This procedure reduces pain and improves shoulder function for those who do not respond to conservative care.

You might wonder if you need surgery right away. A distinction between symptomatic and asymptomatic radiographic acromioclavicular osteoarthritis is unnecessary, as all patients were equally satisfied with the outcome of preoperative acromioclavicular injection. Both open and arthroscopic resection arthroplasty techniques provide predictable pain relief for symptomatic AC osteoarthritis. Each approach has a unique set of potential complications that may be minimised with improved understanding of anatomy, biomechanics, and meticulous surgical technique.

If you leave the condition untreated, it generally does not cause major problems during other shoulder surgeries. Untreated acromioclavicular joint osteoarthritis, whether symptomatic or not, encountered during arthroscopic rotator cuff repair is associated with a low percentage of failure. However, osteoarthritis is associated with poorer final clinical outcomes after rotator cuff repair. An unhealed or re-torn rotator cuff increases the risk of developing osteoarthritis.

In some cases, severe acromioclavicular joint osteoarthritis is associated with acromial stress fractures after reverse shoulder arthroplasty. Radiographic ACJ osteoarthritis is common in patients undergoing reverse shoulder arthroplasty. Some persistent pain and osteoarthritis progression remain concerns in the arthroscopic revision of failed open anterior stabilisation of the shoulder.

Your surgeon will help you navigate these options. We aim to provide clear, honest guidance on what to expect. Our goal is to ensure you feel confident in your care plan.

When to see someone

See your GP if you have persistent pain at the top of your shoulder that does not improve with rest. Ask for a specialist review if you notice weakness, instability, or a feeling of locking or giving way. Symptoms that interfere with your sleep or work also warrant attention. Sudden worsening of pain is another reason to seek care. While many cases of wear-and-tear arthritis remain painless for years, ongoing discomfort affects your quality of life. Your surgeon can help distinguish between mild changes that need no treatment and those requiring intervention. Do not ignore signs that limit your daily activities or cause significant distress. Early assessment helps determine the best path forward for your specific situation.

In more depth

This section goes further than you need for your own treatment decisions. Arthritis of the AC joint is worth the extra reading for an uncomfortable reason: it is extremely common on imaging, it is frequently blamed for shoulder pain, and the evidence that treating it helps is weaker than almost anything else on this site.

THE EVIDENCE DOES NOT ESTABLISH THAT ANYTHING WORKS

A systematic review of the treatment of primary AC joint osteoarthritis pooled **1,902** patients and reached a conclusion that is rarely stated so plainly: the studies varied in indication, intervention and quality, and **did not provide evidence that either non-operative or operative interventions are effective** [1].

That is not the same as saying nothing helps. It means the trials that would demonstrate it have not been done to a standard that allows the claim. Distal clavicle excision is a long-established operation performed on the reasonable mechanical logic that removing the worn joint surface removes the pain – but “long-established and mechanically sensible” is not evidence, and it is worth knowing the difference when a decision is being made.

ADDING IT TO ANOTHER OPERATION DOES NOT IMPROVE THAT OPERATION

The most direct test comes from patients having something else done at the same time. Among **208** patients with rotator cuff tears, adding distal clavicle resection **did not** produce better clinical outcome scores or better range of motion [2].

This matters because that is exactly the circumstance in which the joint is most often resected – the surgeon is already inside the shoulder, the AC joint looks degenerate on imaging, and removing a few millimetres of bone is quick. The evidence says the patient does not measurably benefit. If it is proposed as an add-on to your cuff repair, that is a fair thing to ask about.

TECHNIQUE IS NOT THE INTERESTING QUESTION

Open versus arthroscopic resection has been compared repeatedly and the answer is consistent: **similar functional and clinical outcomes** with either approach across **319** patients [3], with an earlier comparison of **429** patients also favouring neither decisively [4].

When two quite different technical approaches produce the same result, the honest inference is that the technique is not what determines the outcome – patient selection is.

WHY SELECTION IS SO DIFFICULT HERE

The AC joint degenerates in almost everyone with age. It is a small, highly loaded joint with a thin disc that wears early, so a report describing AC joint degeneration on your scan is close to an expected finding after middle age rather than a diagnosis.

There is a measurable structural correlate: in symptomatic degenerative AC joints, **both the distal clavicle and the acromion are enlarged**, whereas in asymptomatic people the relationship between the two is unchanged [5]. That is a useful hint that symptomatic and incidental degeneration differ structurally – but it is a group-level observation, not a test that can be applied to your shoulder.

Practically, this is why a diagnostic injection into the joint carries real weight here. If local anaesthetic placed accurately into the AC joint abolishes the pain, the joint is likely the source. If it does not, degeneration on the scan is probably a bystander, and resecting it is unlikely to help – which is the situation the evidence above is warning about.

REFERENCES

1. Welch M, Rankin S, How Saw Keng M, Woods D. A systematic review of the treatment of primary acromioclavicular joint osteoarthritis. *Shoulder Elbow*. 2023;16(2):129-44.
2. Wang J, Ma J, Zhu S, Jia H, Ma X. Does distal clavicle resection decrease pain or improve shoulder function in patients with rotator cuff tears? A meta-analysis. *Clin Orthop Relat Res*. 2018;476(12):2402-14.
3. Hohmann E, Tetsworth K, Glatt V. Open versus arthroscopic acromioclavicular joint resection: a systematic review and meta-analysis. *Arch Orthop Trauma Surg*. 2019;139(5):685-94.
4. Pensak M, Grumet RC, Slabaugh MA, Bach BR. Open versus arthroscopic distal clavicle resection. *Arthroscopy*. 2010;26(5):697-704.
5. Bulkamans K, Peeters I, De Wilde L, Van Tongel A. The relationship of the acromion to the distal clavicle in normal and symptomatic degenerative acromioclavicular joints. *Arch Orthop Trauma Surg*. 2019;140(4):465-72.