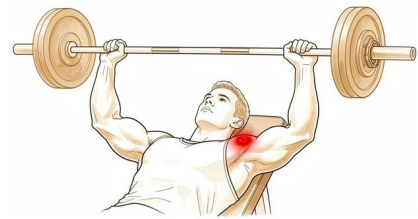


Distal Clavicle Osteolysis

Distal clavicle osteolysis (weightlifter's shoulder) causes pain at the top of the shoulder, classically with pressing exercises.

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What you're feeling

You likely feel a sharp or aching pain at the very top of your shoulder, right where your collarbone meets your shoulder blade. This area is called the acromioclavicular joint. The discomfort often starts after you lift heavy objects, do push-ups, or perform overhead activities like painting a ceiling. You may notice the pain flares up during these movements and lingers for hours afterward.

The pain can be intense enough to wake you up at night, especially if you roll onto that side. You might also feel stiffness when you first wake up in the morning. Simple daily tasks become difficult. Reaching across your body to grab a seatbelt or placing a bag on a high shelf can trigger a sharp pinch. You may find yourself avoiding using that arm for lifting or carrying groceries.

In some cases, the bone itself begins to break down, a process known as osteolysis. This can happen slowly over time or as a complication after previous shoulder surgery. You might notice swelling or a visible bump at the top of your shoulder. If the joint is unstable, you may feel a sense of looseness or grinding when you move your arm. This instability can make even light activities feel uncomfortable or painful.

If you have had a previous dislocation, the joint may not sit correctly anymore. You might experience persistent pain even when you are resting. This is common in cases of post-traumatic arthritis, where the wear-and-tear on the joint continues despite the initial injury healing. The pain can radiate slightly down your arm or up into your neck, but it is centered at the top of the shoulder.

You may also feel tenderness when you press directly on the joint. This tenderness can make wearing a backpack or a tight jacket uncomfortable. The pain often worsens with repetitive motion. If you work with your hands above your head, you may notice the symptoms intensify by the end of the day. Resting the arm usually helps reduce the ache, but the discomfort often returns when you resume your normal activities.

What's actually happening

The end of your collarbone meets your shoulder blade at a small joint. Think of this joint as a shock absorber. It cushions the movement between your arm and your torso. Over time, wear and tear can damage the cartilage in this area. This condition is known as osteoarthritis. The bone may also develop small cysts or lose density. We call this osteolysis.

This damage changes how your shoulder moves. Your shoulder girdle relies on a complex balance of muscles and ligaments. When the joint surface is rough or unstable, the surrounding structures work harder to stabilize your arm. This extra strain can cause pain. You might feel discomfort when lifting your arm across your body or overhead. The pain often worsens with repetitive activity.

In some cases, bacteria can contribute to this bone loss. A specific type of bacteria may trigger an inflammatory response. This reaction breaks down the bone tissue at the end of the collarbone. If left untreated, the bone loss can progress. This leads to persistent pain and limited function.

Your surgeon evaluates the extent of this damage. They look at how the injury affects your shoulder mechanics. Understanding these mechanical consequences helps determine the best treatment path. For many patients, conservative care is not enough to stop the pain.

When symptoms persist, removing the damaged end of the collarbone can help. This procedure is called a distal clavicle excision. By removing the problematic bone, we reduce friction and pressure on the joint. This allows the surrounding tissues to heal and function more smoothly. The goal is to relieve your pain and restore your ability to move freely.

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 activities that cause pain. Avoid heavy lifting or overhead movements. Physiotherapy aims to strengthen the muscles around your shoulder. This support helps take pressure off the joint. We recommend giving this approach a fair trial for several weeks. Many patients find that rest and targeted exercises reduce their symptoms significantly.

If pain persists, we discuss medical management. This includes pain medication and anti-inflammatories to calm the swelling. We may also offer injections. Cortisone injections reduce inflammation and can provide relief

for a few months. Hyaluronic acid injections lubricate the joint to ease movement. Platelet-rich plasma (PRP) injections use your own blood cells to encourage healing. The duration of benefit varies for each person.

Surgery is considered when conservative care has reached its limit and you still have significant pain. The surgical option involves removing a small part of the collarbone end. This creates more space in the joint. It is a reliable way to relieve symptoms in appropriately selected patients. We review the evidence together to ensure this is the right step for you.

What to expect

Distal clavicle osteolysis is a condition where the outer end of your collarbone wears away, often causing persistent pain. If you have untreated acute injuries, a majority of patients do well without any formal treatment. However, a small percentage may require delayed surgical intervention if symptoms persist. For chronic symptomatic injuries, the condition tends to linger without relief.

When managed well with surgery, such as partial removal of the affected bone end, most patients experience significant improvement in pain and function. Arthroscopic removal via a direct approach allows for a faster return to activities compared with open procedures, while providing similar long-term outcomes. Both arthroscopic and open methods provide significant pain reduction at 1 year. A well-performed excision is key to success, regardless of the surgical approach chosen.

If left alone or if surgery is incomplete, symptoms may continue. Incomplete excision and regrowth of the distal clavicle are the most common causes for needing revision surgery. Additionally, removing more than 10 mm of the bone can lead to horizontal instability, which may affect your shoulder's stability. While full range of motion is often regained, some patients with chronic posttraumatic pain may find the results unsatisfying despite improved movement.

Your outlook depends on the severity of the wear and tear and how completely the problematic bone is addressed. With appropriate selection and careful surgical technique, you can expect a reliable reduction in pain and a return to daily activities. It is important to discuss your specific case with your surgeon to understand what realistic outcomes look like for you.

When to see someone

Ask for a specialist review if you have persistent shoulder pain that does not improve with rest. Seek care if you notice weakness, instability, or a feeling of locking or giving way. Contact your doctor if symptoms interfere with your sleep or work duties. Sudden worsening of pain is also a reason to seek help. Your surgeon will check for issues like bone loss or instability. For example, removing more than 10 mm of bone can cause horizontal instability. In some cases, tunnel widening occurs in 70% of patients after stabilisation surgery. Early assessment helps manage these risks effectively.

In more depth

This section goes further than you need for your own treatment decisions. Distal clavicle osteolysis is worth the extra reading because it is one of the few shoulder conditions where the cause is usually known, the patient usually knows it too, and the difficulty is entirely about whether they are willing to stop doing it.

THE BONE IS BEING RESORBED, NOT WORN AWAY

Despite appearing on imaging as loss of bone at the outer end of the collarbone, this is not arthritis and not a fracture. It is an active biological process – repetitive microtrauma to the subchondral bone triggers resorption faster than it can be rebuilt, so the bone end progressively demineralises and develops cysts.

The mechanism explains the population. It is classically a weightlifter's condition, arising from repeated heavy loading across the joint – bench press, dips, overhead press – and it is one of the few upper-limb conditions where the causative activity is nearly always identifiable from the history alone.

The osteolytic process has been described as **a feasible explanation for the condition, likely caused by repetitive microtrauma** [1], which fits both the imaging appearance and its behaviour.

STOPPING WORKS, BUT ONLY IF YOU ACTUALLY STOP

The original series is old and still instructive. Among male athletes, **resection of the distal end of the clavicle relieved symptoms in the nineteen patients followed, with all but five able to continue sport and weight training** – and, critically, **patients treated non-operatively also improved, but only after cessation** of the provoking activity [2].

That last clause is the crux, and it explains why this condition is frustrating in practice. Non-operative treatment is effective and requires stopping the exact activity most of these patients value most. Modifying it is often not enough, because the loading that caused it is intrinsic to the movements.

So the choice is less “surgery versus physiotherapy” and more “stop the loading, or remove the bone that is reacting to it”.

WHY RESECTION RESOLVES IT

Excising the outer centimetre or so of the collarbone removes the bone that is undergoing resorption and eliminates contact at the joint. Because the ligaments suspending the collarbone from the shoulder blade sit further inwards, a limited resection removes the painful contact without destabilising the collarbone.

That mechanical fact is why the operation works reliably here, and why athletes return to the same training that caused the problem: there is no longer a joint surface to load. It is the same procedure discussed on the distal clavicle excision page, applied to a different underlying diagnosis.

THE POINT ABOUT IMAGING

Early on, plain X-rays can look normal or show only subtle loss of definition, and the diagnosis is frequently missed on that basis. MRI shows bone marrow oedema at the distal clavicle before structural change is visible, and in a weightlifter with well-localised tenderness directly over the joint, that pattern is close to diagnostic.

CQ HAND + UPPER LIMB

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It also distinguishes this from the commoner AC joint arthritis, which affects both sides of the joint and occurs in an older population – a distinction that matters because arthritis is not reversible by stopping training, and this is.

REFERENCES

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