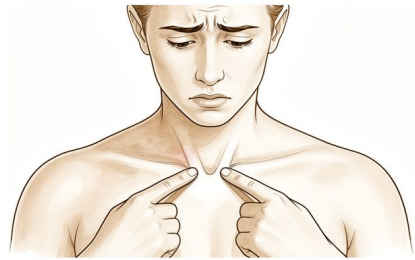


Sternoclavicular Joint Disorders

The sternoclavicular joint — where the collarbone meets the breastbone — can be affected by arthritis, instability or, rarely, a serious posterior dislocation.

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What you're feeling

The sternoclavicular joint is the small joint at the front of your chest where the inner end of your collarbone (clavicle) meets your breastbone (sternum). You can feel it as the little bump just below the base of your neck, a couple of centimetres out from the midline. It is easy to overlook until something goes wrong with it.

Problems here tend to show up in one of a few ways. Some people notice a deep **ache or tenderness** right over that bump, often with a bit of swelling, that gets worse when they reach overhead, lift, push, or lie on that side. Others feel the joint **click, slip or shift** with certain movements, sometimes with a visible lump that comes and goes. And occasionally the trouble starts with a sudden injury (a fall onto the shoulder, a tackle, or a car accident), followed by pain, swelling and a change in the shape of the joint. How it feels depends a lot on which of these is going on, and we sort that out below.

What's actually happening

The sternoclavicular joint is the **only true bony joint** connecting your whole arm and shoulder to the rest of your skeleton. Everything your arm does is anchored back to your chest through this one small joint, which is why it is built tough, wrapped in strong ligaments. A few different things can affect it.

Arthritis (wear of the joint surfaces) is the most common problem. The smooth cartilage thins over time, the joint can swell, and it aches with use. This is seen most often in **middle-aged women**, frequently without any injury at all, and on its own it is a nuisance rather than a danger.

Atraumatic instability means the joint slips or partly pops out of place without a real injury, usually because the ligaments are naturally loose. It is most common in **young, flexible (hypermobile) people**, and the clavicle most often shifts forwards (an *anterior* slip), which you may see as a lump that appears when you move a certain way.

Traumatic dislocation happens when a strong force pushes the collarbone fully out of the joint. If it pops **forwards** (anterior), it is painful and looks abnormal but is rarely dangerous. The one that matters most is the **posterior dislocation**, where the collarbone is driven backwards, behind the breastbone, into the space holding the windpipe, the swallowing tube and the large blood vessels of the chest. This is rare, but it can be serious. More on that in the last section.

What we can do about it

Our approach is guided by Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton. 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. We then begin with a thorough assessment to confirm the diagnosis. For long-standing issues, we usually start with non-operative care and only consider surgery if this does not provide enough relief.

The good news is that **most sternoclavicular problems settle without surgery**.

For **arthritis** and for **anterior (forward) instability**, the first-line plan is non-operative and usually works well: modifying the activities that aggravate it, simple pain relief and anti-inflammatory medication, and physiotherapy to settle the joint and build supporting muscle. If a painful arthritic joint is still troublesome after a fair trial of this, a **steroid injection** into the joint can calm it down and also help confirm the joint is the source of the pain.

Surgery is the exception, not the rule. It is reserved for selected people whose pain or instability does not settle despite proper non-operative treatment. Depending on the problem, that might mean **stabilising** the joint (rebuilding the ligaments to hold the collarbone in place) or, for stubborn arthritis, **trimming away the worn end of the collarbone** to take the painful surface out of the equation. These are considered carefully, because the joint sits right next to important structures in the chest.

A **posterior dislocation** is the situation that can't wait. It usually needs an **urgent reduction** (putting the joint back into place), and because of what lies behind the joint this is often done in an operating theatre with a **chest or vascular surgeon on standby**, just in case.

What to expect

For arthritis and for the common forward instability, the outlook is reassuring. With activity changes, physio and time, the great majority of people get comfortable enough to get on with normal life, and many never need anything more than that. Flexible joints often quieten down as the surrounding muscles get stronger and you learn which movements to avoid.

When surgery is needed, it can be very effective for the right person, but recovery takes patience: a period of protecting the joint followed by a staged return to activity over several months. Your surgeon will talk you through the specific plan for your situation.

A posterior dislocation treated promptly usually does well once the joint is safely back in place. The thing that matters is speed: get it assessed and reduced early.

When to see someone

See your doctor if you have:

- **Ongoing pain, swelling or tenderness** over the joint at the front of the chest that isn't settling, or a lump that keeps slipping in and out.
- **A joint that feels unstable** or repeatedly pops out with certain movements and is limiting what you can do.
- **Pain after an injury** to the front of the shoulder or chest, especially if the joint looks or feels out of shape.

Treat this as an emergency: call an ambulance or go straight to your nearest emergency department if, after a heavy blow or high-energy injury to the shoulder or chest, you have:

- **Difficulty breathing**, a feeling of pressure or choking, or a change in your voice.
- **Trouble or pain on swallowing.**
- **Swelling, colour change, coldness or pins-and-needles in the arm**, or a weak pulse on that side.

These can be signs of a **posterior dislocation** pressing on the windpipe, the swallowing tube or the major blood vessels behind the breastbone. It is uncommon, but it needs urgent hospital assessment. Do not wait to see if it settles.

In more depth

This section goes further than you need for your own treatment decisions. Sternoclavicular joint problems are worth the extra reading because one variant of them is a genuine emergency that can look unremarkable from the outside – and because the window in which the simplest treatment works is measured in hours.

POSTERIOR DISLOCATION IS THE ONE THAT MATTERS

The sternoclavicular joint sits at the base of the neck where the collarbone meets the breastbone. Directly behind it lie the great vessels, the trachea and the oesophagus.

An **anterior** dislocation pushes the collarbone forwards, producing a visible lump. It looks dramatic and is usually benign. A **posterior** dislocation pushes it backwards, towards those structures – and produces little to see externally, sometimes only a subtle hollow. The appearances are the inverse of the seriousness.

Symptoms pointing to a posterior dislocation are difficulty swallowing, shortness of breath, a change in voice, or congestion of the veins in the arm or neck. Any of these after an injury to the front of the shoulder warrants immediate assessment. Plain X-rays are unreliable at this joint and CT is generally required.

THE 48-HOUR WINDOW

Where a posterior dislocation is identified, the collarbone can often be pulled back into place without opening the joint. Across **140** adolescent patients, closed and open methods have both proven **highly effective**, and **closed reduction is most effective when attempted less than 48 hours after the initial injury** [1].

That is a specific, actionable number. Beyond about two days the soft tissues begin to organise around the displaced bone and closed reduction becomes progressively less likely to succeed, turning a brief manoeuvre into an open operation next to the great vessels. This is the strongest argument for early imaging rather than watchful waiting when the mechanism fits.

Because of that proximity, reduction of a posterior dislocation is customarily performed with a cardiothoracic team available – not because it usually goes wrong, but because the consequences if it does are immediate.

RECONSTRUCTION FOR INSTABILITY WORKS, AND THE TECHNIQUE DOES NOT DECIDE IT

For recurrent or chronic instability, the joint is reconstructed with a tendon graft. Across **164** patients, reconstruction led to significant improvements in patient-reported outcomes and return to activity with a **low complication rate**, and – usefully – this held **regardless of technique**, including unicortical versus bicortical drilling and allograft versus autograft [2].

Where several technical variants perform alike, the sensible reading is that achieving a stable construct matters more than how it is achieved.

ARTHRITIS HERE IS TREATABLE AND UNDER-RECOGNISED

Degenerative change at this joint is a genuine and often overlooked cause of pain at the base of the neck, particularly in middle-aged women, and it is frequently attributed to the neck itself. Surgical treatment across **107** patients is a **safe procedure offering good pain reduction and a high rate of satisfaction**, though the literature does not establish whether open or arthroscopic surgery is preferable [3].

The practical point is that a persistent, well-localised tenderness exactly over this joint is worth pointing out specifically, since it is a small target that is easy to overlook when the complaint is described as shoulder or neck pain.

REFERENCES

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CQ HAND + UPPER LIMB

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