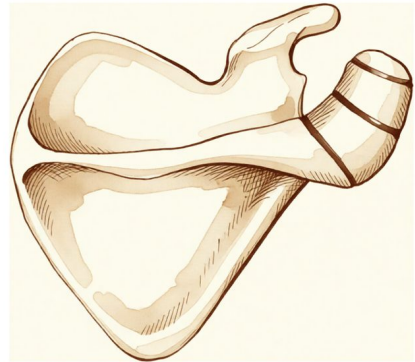


Os Acromiale

Os acromiale: the front portion of the acromion has not fused with the rest of the acromion during skeletal maturation.

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What you're feeling

You may feel a deep ache in the top of your shoulder. This pain often sits right above the joint, where the shoulder blade meets the arm bone. For many people, this condition is linked to wear-and-tear of the rotator cuff tendons. These are the muscles that help you lift and rotate your arm. Because of this connection, your pain might feel like a standard shoulder strain, but it stays focused on that upper ridge.

The pain often flares up when you raise your arm overhead. Simple tasks like reaching for a cup on a high shelf or placing a bag on the top rack of your car can trigger a sharp twinge. This happens because the extra bone fragment moves abnormally. It rubs against the tendons below, causing irritation and inflammation. You might notice the discomfort gets worse after you have been active all day.

Resting your arm by your side usually brings some relief. However, you might still feel stiffness or tenderness when you first wake up in the morning. Lying on that shoulder at night can be difficult, especially if you press directly on the sore spot. Some people report a lingering soreness that does not go away quickly after exercise.

In rare cases, a fall or direct blow to the shoulder can injure the joint between the bone fragments. This sudden trauma can cause immediate, intense pain and swelling. If you have had previous shoulder surgery, such as a reverse total shoulder replacement, you might notice local tenderness at this site. For most patients, this postoperative soreness fades away on its own over time. The presence of this extra bone fragment does not typically stop your shoulder from healing well after major surgery.

If your symptoms persist despite rest and basic care, your surgeon will look for signs of impingement. This is where the moving parts of your shoulder rub together uncomfortably. Understanding exactly where the pain comes from helps us choose the right path forward. Whether that means gentle management or a minor procedure, we aim to reduce that daily friction so you can move freely again.

What's actually happening

Your shoulder blade has a bony flap called the acromion. Normally, this bone fuses into one solid piece during childhood. In some people, it remains as two separate pieces joined by a flexible band of tissue. This is what we call os acromiale. It is not uncommon. In patients with shoulder issues needing an MRI, about 2 in 100 have this extra bone fragment.

Think of this joint like a loose hinge on a door. Instead of moving smoothly as one unit, the two pieces shift slightly against each other. This abnormal motion can rub against the tendons above it. These tendons form your rotator cuff, which acts like a strong rope to lift your arm. The constant rubbing can irritate these tissues. This irritation often leads to wear and tear, or even tears in the rotator cuff. The pain you feel is often the result of this friction and inflammation.

Sometimes, this condition stays quiet for years. You might not notice it until a minor injury strains the area. The flexible joint between the bone pieces can get injured, though this is rare. For most people, the fragment stays stable. However, if the movement becomes too erratic, it can cause ongoing discomfort. We see this often in young athletes who put heavy stress on their shoulders. Careful examination and imaging help us confirm if this loose bone is the source of your pain.

If you are having shoulder replacement surgery, this extra bone fragment does not usually cause problems. Studies show that having os acromiale does not negatively impact the success of the procedure. You might feel some local tenderness after surgery. This happens in about one out of four patients. The good news is that this soreness usually goes away on its own as you heal. Your surgeon will check for this during your assessment to ensure the best plan for your recovery.

What we can do about it

At Mater Private Hospital Rockhampton, Dr Kieran Hirpara approaches this condition by matching the treatment to your specific symptoms and activity level. Most people start with non-surgical care. We aim to reduce pain and improve shoulder movement through guided exercise. A physiotherapist will teach you exercises to strengthen the muscles around your shoulder blade. This helps stabilise the area and takes pressure off the painful bone fragment. We usually recommend giving this approach at least six to twelve weeks to work. During this time, you may need to modify activities that cause sharp pain or grinding sensations.

If exercise alone does not provide enough relief, we may discuss medical management options. Over-the-counter pain relievers or anti-inflammatory medications can help manage daily discomfort. For more persistent pain, we might suggest an injection into the shoulder joint. Cortisone injections reduce inflammation and can provide relief for several weeks to a few months. Other injection types, such as hyaluronic acid or platelet-rich plasma (PRP), are sometimes used to support tissue healing, though their long-term effects vary. These injections are not a cure, but they can create a window of reduced pain that allows you to participate more effectively in physiotherapy.

Surgery is considered only when conservative measures have failed to give you enough improvement. If your symptoms remain severe and limit your daily life, we may discuss operative options. The goal of surgery is to

either remove the unstable bone fragment or secure it in place so it can heal properly. This decision is made together, weighing the potential benefits against the risks of recovery. For most patients, surgery is a last resort after a thorough trial of non-operative care has been completed.

What to expect

Os acromiale is a small, extra bone fragment in your shoulder blade. It affects about 1 in 50 people. Many people have no symptoms at all. When it does cause pain, the discomfort often comes and goes. It may flare up with overhead activities or heavy lifting.

If you manage your symptoms with rest, physical therapy, and anti-inflammatory medication, many people find relief. Your surgeon will guide you through these non-surgical options first. For most patients who respond well to this care, the pain settles down and does not return frequently. You can often continue your daily activities with minor adjustments.

However, if your pain persists despite conservative care, surgery may be discussed. Operative treatment for symptomatic os acromiale that has not improved with other methods typically leads to decreased symptoms and better shoulder function. You can expect a gradual improvement in how your shoulder feels over the following weeks and months.

Some patients experience local tenderness at the site of the bone fragment after surgery. This occurs in about 1 out of 4 patients. In the majority of cases, this tenderness resolves on its own over time. You do not need specific treatment for it; it simply fades as your body heals.

It is important to know that os acromiale is often linked with rotator cuff injuries. The abnormal motion at the bone fragment can irritate the surrounding tendons. If you have a rotator cuff tear alongside os acromiale, your surgeon will address both issues. The presence of an os acromiale does not negatively impact the outcomes of reverse total shoulder arthroplasty. This procedure remains a safe and effective option if you require joint replacement.

For professional tennis players, surgical treatment is usually not recommended. The demands of the sport can complicate recovery, so non-surgical management is typically preferred. Your outlook depends on the severity of your symptoms and whether other shoulder structures are involved. With appropriate care, most patients achieve a comfortable and functional shoulder.

When to see someone

See your GP if you have persistent shoulder pain that does not improve with rest. Ask for a specialist review if you notice weakness, instability, or a feeling of locking. Symptoms that interfere with sleep or work also warrant attention. Sudden worsening of pain is another reason to seek care. Awareness of this condition in young athletes is crucial for proper diagnosis. Your surgeon will use clinical examination and imaging to confirm the issue. This helps determine if the pain stems from the extra bone or an associated rotator cuff injury. Early assessment ensures you get the right support for your shoulder health.

In more depth

This section goes further than you need for your own treatment decisions. Os acromiale is worth the extra reading because it is a normal anatomical variant in a meaningful minority of people, usually causes nothing, and is frequently blamed for shoulder pain it is not responsible for.

WHAT IT IS, AND HOW COMMON

The acromion – the bony roof over the shoulder – forms from several separate centres of bone that normally fuse in the late teens or early twenties. In some people one fails to fuse, leaving a permanent fibrous junction. That is an os acromiale, and it is present from adolescence rather than acquired.

Prevalence varies by population. A multicentre study of **6,842** patients found **os acromiale is associated with rotator cuff injuries**, that prevalence in the Japanese population studied was **lower than in non-Asian populations**, and that the fragment size tended to be smaller [1].

That association with cuff injury is worth reading carefully. It establishes that the two occur together more often than chance, not that the os causes the tear. The plausible mechanism runs both ways: an unfused fragment moves slightly under deltoid pull, which may irritate the tendon beneath – or the same shoulder mechanics that predispose to cuff disease make an unstable fragment symptomatic.

WHETHER IT IS THE SOURCE OF PAIN IS THE WHOLE QUESTION

Because it is visible, permanent and abnormal-looking on imaging, an os acromiale readily becomes the reported explanation for shoulder pain. Most are silent, and most people who have one never know.

What distinguishes a symptomatic one is localised tenderness directly over the fragment, pain reproduced by pressing on it, and – where a diagnostic injection is used – relief specifically from injecting that junction rather than the subacromial space beneath. In the absence of those, the finding is best treated as incidental.

The subtypes are conventionally classified by which fusion site is involved [2], which matters surgically because the size of the mobile fragment determines whether it can be excised or must be fixed.

WHY IT COMPLICATES OTHER SHOULDER SURGERY

The practical importance of an os acromiale is often less about its own symptoms than about what it does to operations planned for something else.

The deltoid attaches to the acromion, so an unfused fragment carries that pull across a mobile junction. Removing bone from the undersurface – as in acromioplasty – thins a fragment that is already unstable, and can convert a symptomless variant into a painful one or produce a nonunion. This is the strongest reason for it to be recognised on pre-operative imaging: not to treat it, but to avoid destabilising it.

Where it does require treatment, the choice is between excising a small fragment and fixing a larger one, and fixation across this junction is known to be difficult – the fragment is thin, the deltoid pulls on it continuously, and nonunion rates are appreciable. That difficulty is itself a reason to be confident the os is genuinely the pain source before operating on it.

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