

Snapping scapula

What you're feeling

Snapping scapula means you hear or feel a grating, clicking or snapping sound from your shoulder blade as it moves over your chest wall. Doctors sometimes call it “washboard syndrome”, because the sound can feel like a wheel running over a washboard. The noise itself is common. About a third of people with no symptoms at all have some grating from the shoulder blade. On its own, without pain, it needs no treatment.

What usually brings people to see someone is pain. It sits around or under the shoulder blade, often near the inner edge closest to your spine. It tends to worsen with overhead activity, reaching up or across your body, and it can show up as reduced performance at sport. The pain comes from an inflamed bursa, the thin fluid-filled cushion that lets the shoulder blade glide smoothly over the ribs, or from the shape of the bone itself. The chest wall acts like a sound box, so the noise you hear is louder than the movement causing it.

The pain can make everyday tasks hard. Lifting a heavy pan onto a high shelf, hanging washing on a line, or reaching for a seatbelt can all set it off. Some people notice it most after activity rather than during it. It can be severe enough to disturb sleep or stop you using your arm normally.

If your symptoms are not settling, are getting worse over weeks, wake you at night, or stop you working or using your arm, see your GP or ask for a specialist review.

What's actually happening

Your shoulder blade is designed to glide. It sits on your chest wall, separated from it by a thin layer of slippery, fatty tissue that works like a gasket between two moving surfaces. Four joints work together to move your shoulder, and about two-thirds of the movement comes from the ball-and-socket joint itself, with the remaining third coming from the shoulder blade sliding over the ribs. When that glide is smooth, you never notice it.

The problem in snapping scapula is that something disturbs this glide. Sometimes it is the shape of the bone: the inner edge of the shoulder blade may be angled or curved towards the ribs more than usual, so it sits closer to the chest wall than it should. Sometimes it is a small lump of extra bone on the blade. Often it is the muscles around the blade working unevenly, so the blade does not track smoothly as you move. Any of these can make the blade rub or catch instead of gliding.

The rubbing irritates the cushion between the blade and the ribs. That cushion, called a bursa, is a thin fluid-filled sac that works like a shock absorber between bone and soft tissue. When it becomes inflamed it thickens and becomes tender, and that is the pain you feel under or around the shoulder blade. The friction can also cause a reactive thickening of the tissue itself, the body's response to repeated rubbing.

This explains the symptoms described above. The noise comes from the roughened surfaces moving over each other, and the chest wall amplifies it like a sound box. The pain comes from the inflamed cushion, not from the noise itself. That is why the two problems are treated differently, and why treatment focuses on calming the inflammation and retraining the muscles that control the blade.

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. At the clinic, we take a history, examine your shoulder and arrange imaging where it is needed to work out what is causing the noise and the pain.

Most people settle without an operation, so treatment starts without surgery. The first step is a physiotherapy programme to strengthen the muscles that control your shoulder blade, along with stretching of muscles that have become tight. Changing the activities that bring the symptoms on also helps. Give this a proper trial of 3 to 6 months before thinking about anything further.

If pain persists, medicine can help settle the inflammation. Anti-inflammatory tablets, the same kind many people take for muscle aches, are part of this stage. We can also offer an image-guided injection of steroid and local anaesthetic into the bursa under your shoulder blade. This does two jobs: it calms the inflamed cushion, and it confirms that this is where your pain is coming from.

Surgery is considered only when pain continues after several months of these treatments and they have not given you enough improvement. The operation is keyhole surgery, done through small cuts with a camera. It removes the inflamed bursa between your shoulder blade and your ribs. The upper inner corner of your shoulder blade is trimmed only if it is found to be prominent during the operation. Most people's pain improves substantially after surgery, but some clicking often remains. We will talk through what surgery could mean for you and decide together whether it is the right step.

What to expect

Most people settle without an operation. Treatment starts with physiotherapy to strengthen the muscles that control your shoulder blade, anti-inflammatory medicine and changing the activities that bring the symptoms on. Give this a proper trial of 3 to 6 months. Many people find their pain eases over this time and never need surgery.

If pain continues after several months of these treatments, surgery may be considered. Keyhole surgery removes the inflamed bursa between your shoulder blade and your ribs, and trims the upper inner corner of the blade only if it is found to be prominent. Most people's pain improves substantially after surgery. Some clicking often remains, because the treatments that help pain mostly fix the pain, not the noise. Complete relief of every symptom is not the usual result.

Without treatment, symptoms can persist and may be severe enough to disturb sleep or stop you using your arm normally. The condition can be difficult to recognise and treat, so it is worth getting a clear diagnosis early rather than waiting for it to settle on its own.

If your symptoms are not settling, are getting worse over weeks, wake you at night, or stop you working or using your arm, see your GP or ask for a specialist review.

When to see someone

The noise alone is not a reason to worry. About a third of people with no symptoms at all have some grating from the shoulder blade, and on its own it needs no treatment. What matters is pain. See your GP or ask for a specialist review if you have pain around or under the shoulder blade that is not settling, is getting worse over weeks, wakes you at night, or stops you working or using your arm. Also ask for a review if the pain is severe enough to disturb sleep, if your performance at sport has dropped, or if overhead activity such as reaching up or across your body brings the pain on. Snapping scapula can be hard to recognise, so a clear diagnosis early is worth having.

In more depth

This section goes further than you need for your own treatment decisions. Snapping scapula is worth the extra reading because the noise and the pain are two different problems, and the treatments that help mostly fix the second one, not the first.

THE NOISE IS COMMON; THE PAIN IS THE PROBLEM

Grating from the shoulder blade is not, on its own, a sign of disease. A classic review of the condition cites an early study that found scapular crepitus in **31% of 100 people with no symptoms at all** [1]. What turns the noise into a condition is pain, usually from an inflamed bursa: the thin, fluid-lined layer of tissue that lets the shoulder blade glide over the ribs.

Shape plays a part. In an imaging study, people with a scapula that curves forward along its inner border (a concave shape with a positive “medial scapula corpus angle”) had a **12-fold higher risk** of snapping scapula [2]. That measurement turned out to be less useful than it first looked: a later study found that the same angle varies considerably with the direction it is viewed from, so it is not reliable enough to diagnose the condition on its own [3]. In a cadaver model, the most important bony feature was how far the inner part of the scapula sat forward towards the ribs [4].

MOST PEOPLE SETTLE WITHOUT AN OPERATION

In a series of **30 shoulder blades in 28 patients** treated with a specific muscle-strengthening programme, **14 (50%)** did well with the exercises alone and **6 (21%)** needed only anti-inflammatory medicine as well, so **71%** reached a good result or better on the study's own grading without surgery [5].

The longest follow-up comes from Finland. **Twelve** people who had open surgery and **9** who were treated without it were reassessed a mean of **22 years** later. Pain with exertion was low in both groups: **0.8 out of 10** after surgery and **1.5 out of 10** without it, a difference too small to be sure was real ($p = 0.357$) [6]. Pain improved promptly after surgery in **7 of 12**, but in the long run both routes ended in much the same place.

An injection of local anaesthetic and steroid into the bursa does two jobs: it treats the inflammation and it tests whether the bursa is really the source of the pain. In one UK pathway, **74** of 94 patients were still troubled after physiotherapy and had an ultrasound-guided injection; **55** had a good initial response, which lasted in **17** [7]. Among the **42** operated patients who were followed up, those who had responded well to the injection improved more after the operation than those who had not [7]. A larger American series followed for at least five years did not find the same link [8], so a poor response to an injection does not rule surgery out.

WHAT SURGERY ACHIEVES, AND WHAT IT DOES NOT

The largest long-term series followed **66** people for **5 to 15 years** after keyhole removal of the bursa and trimming of the corner of the shoulder blade. The average shoulder score rose from **56.7 to 87.2** out of 100, pain fell from **5.2 to 1.4** out of 10, and **77.6%** reached an improvement large enough to notice. Of the **42** who played sport, **38 (90.5%)** went back to it and **31 (73.8%)** returned at or close to their previous level. **Eight (12.1%)** needed a further operation [8]. Another series of **74** shoulder blades had a similar rate of further surgery (**8 of 74**) and found that older patients, people who had had symptoms for longer, and people with lower scores for mental wellbeing before surgery tended to do less well [9].

Complete resolution is the exception. A systematic review of **203** operated shoulders found **42 (20.7%)** were completely better, **139 (68.5%)** were improved but still had some symptoms, and **22 (10.8%)** had a poor result [10]. A 2026 review of **464** patients reached the same overall conclusion: both non-operative and surgical treatment relieve pain, but the mechanical symptoms, the clicking and grating, often do not go away completely [11].

IS THE BONE WORTH REMOVING?

Trimming the upper inner corner of the shoulder blade is the traditional part of the operation, so it is a surprise that it may add little. One centre compared **24** people who had the bursa removed alone with **32** who also had the corner trimmed. Final pain scores (**3.4** and **2.8** out of 10, $p = 0.351$) and shoulder scores (**75.8** and **76.5**, $p = 0.895$) were the same, and clicking was still present in **58%** and **59%** [12]. The operation was shorter without the bone work: **37.5** against **61.2** minutes [12]. The groups were followed for different lengths of time and were not randomised, so this is not the last word, but it is why the decision to trim the bone is made during the operation rather than in advance.

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