

Rotator Cuff Disorders

MRI of a full-thickness rotator cuff tear. The bright stripe at the top of the ball of the shoulder is fluid filling the gap left by the torn tendon.

Kieran Hirpara © ⓘ 4.0



What you're feeling

You may notice pain in the front of your shoulder or on the outside of your upper arm. This discomfort often stems from the complex interaction between your rotator cuff tendons and surrounding soft tissues. You might also feel pain at the front of your shoulder if the long head of your biceps tendon is involved. This tendon disorder frequently exists alongside other shoulder issues and can be a significant source of your pain and difficulty moving.

Your symptoms do not always match the size of a tear. Small tears may be present without causing any pain, especially as you age. However, large or massive tears often cause weakness and severe functional impairment. You might find that everyday tasks become difficult. Reaching up to put a plate in a high cupboard can be painful. Lifting a heavy grocery bag or pushing open a heavy door may feel impossible. If you have a large tear, these activities may be incompatible with manual labour, leaving you unable to perform work-related duties.

Pain often flares up at night, disrupting your sleep. You might also feel stiffness when you first wake up. After activity, the ache can linger for hours. You may experience a catching or locking sensation in your shoulder. These subjective mechanical symptoms are common complaints. It is important to note that your mental health can influence how much pain you feel and how well your shoulder functions, sometimes more than the physical size of the tear itself.

If your diagnosis remains unclear after a thorough examination, your surgeon may use 'shoulder pain' as the working diagnosis. This approach helps prevent unnecessary invasive procedures. While imaging can show structural abnormalities, it does not always tell the whole story, as some people have tears on scans without any symptoms. Your surgeon will look at your specific symptoms and history to guide your care.

What's actually happening

Your rotator cuff is a group of four tendons that act like strong ropes. They attach your upper arm bone to your shoulder blade. These tendons hold your arm bone securely in its socket. They also allow you to lift and rotate your arm smoothly.

As you age, these tendons wear down. This is very common. The constant movement of your shoulder can cause small frays. Over time, these frays can grow into larger tears. When a tear happens, the balance in your shoulder joint changes. The arm bone may shift upwards instead of staying centered in the socket. This upward shift is called superior migration. It happens because the tendons can no longer pull the bone down firmly.

This misalignment causes pain and weakness. The bones rub against each other more than they should. This extra friction leads to inflammation and stiffness. You might feel a catching sensation or hear clicking sounds. The pain often gets worse when you lift your arm above your head. This is because the space for your tendons becomes tighter.

If the tear is left untreated, the ongoing friction can damage the joint surface further. This wear-and-tear arthritis can develop in the shoulder joint. It is known as arthrosis. The smooth cartilage that cushions the bones begins to break down. This makes movement increasingly painful and difficult.

Your surgeon looks at these changes to decide on the best treatment. For some tears, rest and therapy are enough. For others, surgery may be needed to repair the torn tendons. The goal is always to restore the normal position of the arm bone. This helps relieve pain and improve your ability to use your arm.

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. We begin by helping you manage your symptoms without surgery. You can try changing your daily activities to avoid movements that cause pain. Our physiotherapists will guide you through specific exercises to strengthen the muscles around your shoulder. This approach aims to improve your movement and reduce discomfort. For many people, this is enough to manage their condition long-term. Research shows that about 90% of patients treated conservatively for rotator cuff tears had no or only slight pain after 13 years. Around 70% of these patients had no disturbance in their daily activities at that same time. We usually recommend giving this non-surgical treatment a fair chance before considering other options.

If you need extra help with pain, we may discuss medical management. This can include pain medication or anti-inflammatory drugs to help you stay active. We also consider injections into the shoulder joint. Corticosteroid injections can reduce inflammation, but we use caution with these. We may withhold them if a rotator cuff repair is planned within the next 6 months, as they can affect tendon health. Platelet-rich plasma (PRP) injections are another option, though current evidence suggests they may not be beneficial in the short term for chronic rotator cuff disease. We tailor these choices to your specific needs and the nature of your tear.

Surgery is considered when conservative care has not given enough improvement, or if you have a structural or acute problem that needs immediate attention. Arthroscopic rotator cuff repair is often favoured to improve

shoulder function. In some cases, where the tear is large or irreparable, we may look at other surgical options like partial repair or tendon reconstruction. For older patients, even those over 75 years, surgery can still achieve high clinical success rates with good pain relief. We review your individual risk factors and the size of the tear to decide if surgery is the right step for you. This is a shared decision based on what will help you return to the activities you value.

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, including a 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.

What to expect

Your shoulder's journey varies depending on whether you choose surgery or conservative care. If you manage your tear without an operation, the outlook is often positive. About 90% of patients have no or only slight pain thirteen years after diagnosis. Around 70% report no disturbance in their daily activities at that same thirteen-year mark. However, nonoperative treatment of traumatic full-thickness tears carries a considerable early failure rate. If you leave a significant tear untreated, it can lead to wear-and-tear arthritis in the joint.

Surgery offers a different path. If you undergo rotator cuff repair, you will notice steady improvement over time. You will experience approximately 60% of your ultimate functional recovery at three months and about 75% at six months. Long-term outcomes from primary tendon repair remain superior to physiotherapy for small-to-medium tears up to fifteen years of follow-up. Surgical intervention can alter the early natural history of degenerative disease, providing clinically relevant differences in pain and function compared to nonoperative treatment.

It is important to have realistic expectations. One-year follow-up does not determine your long-term outcome. For patients aged fifty years and younger, surgery provides long-term pain relief but not significant long-term improvement in motion. A large proportion of these younger patients have an unsatisfactory long-term result. Your mental health has a stronger association with your reported pain and function than the size of your tear.

If your initial repair does not hold, revision surgery is an option. Short-term clinical outcomes for revision repair are similar to those of primary repair. Revision rotator cuff reconstruction improves shoulder function at midterm follow-up of at least two years. Salvage options also exist if arthritis develops from an untreated chronic tear. Your surgeon will discuss which path aligns best with your specific tear and lifestyle.

When to see someone

See your GP if you have persistent shoulder pain that does not improve with rest, or if you notice weakness and instability. These are warning signs of a mechanical or degenerative problem. Ask for a specialist review if your symptoms interfere with sleep or work. This is especially important if you are under 50, as young patients may

have unsatisfactory long-term results after repair. Large tears can cause severe functional impairment and are often resistant to non-surgical treatment. If you have a family history of rotator cuff tearing, seek advice earlier, as you are more likely to experience repair failures. Do not wait for symptoms to worsen, as early assessment helps prevent further damage.

In more depth

This section goes further than you need for your own treatment decisions. Rotator cuff disorders are worth the extra reading because of one epidemiological fact that reframes every scan report: cuff tears are so common in people without symptoms that finding one does not establish it is causing your pain.

A TORN CUFF IS A NORMAL FINDING WITH AGE

Pooling **6,112** shoulders, the prevalence of rotator cuff abnormalities in **asymptomatic** people is high enough that **degeneration of the rotator cuff should be considered a common aspect of normal human ageing** – and high enough to make it **difficult to determine when an abnormality is new, or is the cause of symptoms** [1].

That is an unusually direct statement from a systematic review, and it should change how a scan report is read. A tear found on your MRI is not automatically the explanation for your pain; it may have been there for years, silently, as it is in a large share of people your age with no shoulder complaint at all.

The clinical consequence is that the diagnosis rests on whether the examination and the history match the imaging – not on the imaging alone. It is also why treating the scan rather than the patient is a recognised trap here.

SURGERY HELPS, AND THE SIZE OF THE BENEFIT IS THE HONEST PART

For degenerative full-thickness tears, surgery does outperform the alternatives. Across **677** patients, **surgical repair produced significantly improved outcomes compared with either conservative treatment or subacromial decompression alone** in older patients – with the authors adding that the **magnitude of the difference between surgery and conservative treatment** deserves attention [2]. A separate comparison across **269** patients found statistically significant differences favouring surgery in both Constant and pain scores at one year [3].

So repair wins, but the authors of the larger study are careful to flag effect size rather than just direction. A difference can be statistically real and still smaller than what a patient would notice – which is why the choice remains genuine rather than obvious, particularly for someone whose demands are modest or whose tear is unlikely to be repairable.

EXERCISE IS NOT A SINGLE TREATMENT, AND THE TYPE APPEARS TO MATTER

Non-operative management is usually described simply as “physiotherapy”, which obscures a real finding. Comparing **seven** types of exercise across **947** patients, **concentric strengthening training performed best**

for both shoulder pain and dysfunction, with **eccentric strengthening and motor control exercise** as alternatives where concentric work is unsuitable [4].

That is worth knowing because it makes “I tried physio and it didn’t help” a question rather than a conclusion – what was actually done, for how long, and was it progressive strengthening or a handout of stretches.

THE OPERATION THAT GETS ADDED, AND DOES NOT NEED TO BE

Acromioplasty – shaving bone from the undersurface of the acromion – is frequently performed alongside cuff repair on the reasoning that it removes a source of impingement on the repair.

The evidence does not support the addition. Across **373** patients, there was **no statistically significant difference in subjective outcome after arthroscopic rotator cuff repair with or without acromioplasty** at intermediate follow-up [5].

If it is proposed as an addition to your repair, that is a reasonable thing to ask about.

REFERENCES

1. Teunis T, Lubberts B, Reilly BT, Ring D. A systematic review and pooled analysis of the prevalence of rotator cuff disease with increasing age. J Shoulder Elbow Surg. 2014;23(12):1913-21.
2. Schemitsch C, Chahal J, Vicente M, Nowak L, Flurin P, Lambers Heerspink F, et al. Surgical repair versus conservative treatment and subacromial decompression for the treatment of rotator cuff tears: a meta-analysis of randomized trials. Bone Joint J. 2019;101-B(9):1100-6.
3. Piper CC, Hughes AJ, Ma Y, Wang H, Neviasser AS. Operative versus nonoperative treatment for the management of full-thickness rotator cuff tears: a systematic review and meta-analysis. J Shoulder Elbow Surg. 2018;27(3):572-6.
4. Zhang W, Du M, Xia L, Hao F, Tian M. Effects of seven types of exercise in the treatment of rotator cuff-related shoulder pain: a network meta-analysis. J Orthop Surg Res. 2025;20(1).
5. Chahal J, Mall N, MacDonald PB, Van Thiel G, Cole BJ, Romeo AA, et al. The role of subacromial decompression in patients undergoing arthroscopic repair of full-thickness tears of the rotator cuff: a systematic review and meta-analysis. Arthroscopy. 2012;28(5):720-7.