CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION — IN DEPTH

Reverse Shoulder Arthroplasty

X-ray after reverse shoulder replacement. The ball is now fixed to the shoulder blade and the cup to the arm bone — the opposite of normal anatomy — which lets the deltoid muscle lift the arm when the rotator cuff is torn.

Why this operation has been suggested

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 establishes the diagnosis. For long-standing problems we usually try non-operative care first and consider surgery when that has not given enough improvement. For acute fractures, surgery may be recommended straight away.

We suggest this procedure when your shoulder joint is damaged by arthritis or a torn rotator cuff, or after a complex fracture. It replaces the ball and socket to restore movement and reduce pain. The implant survives in 85% of cases at ten years. In younger patients, it survives in 87% of cases at 15 years. This helps you regain function and stability in your shoulder.

Before the operation

We ask you to fast for seven hours before your surgery. This allows your team to bring you forward if the list runs early. Please arrange a lift home and wear comfortable clothing. Bring a list of your current medications. Your surgeon will guide you on stopping any medicines that affect bleeding. We use X-rays and scans to plan your procedure carefully. Blood tests and an anaesthetic review are not routine. If you have other medical conditions, you may need these checks. This ensures your safety before the operation.

On the day

You present to the hospital's surgical admissions unit for check-in and preparation. You meet the anaesthetist who discusses your care plan. This operation is done under general anaesthetic combined with a regional nerve block. You will be fully asleep for the operation, and the block – an injection that numbs the nerves supplying

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the arm before you wake up — provides pain relief for the first 12 to 24 hours after surgery. The anaesthetist will meet you before the operation and talk you through both parts.

You are then taken into the operating theatre where your surgeon performs the procedure. You wake up in the recovery area while nurses monitor you as the anaesthetic wears off. Once you are stable, you either go to the ward or go home, depending on the procedure and your recovery.

What the operation involves

Your surgeon makes a single cut over the shoulder area to access the joint. The worn-out bone and cartilage surfaces are removed. Your surgeon then fits a customised metal and plastic implant into the shoulder. This new joint changes how the ball and socket sit together, allowing your shoulder muscles to lift your arm more effectively.

If you are having this operation for a fracture, your surgeon may use screws or plates to hold the broken bone pieces in place before fitting the implant. In some complex cases, structural bone grafting is used to support the joint. For severe bone loss, patient-specific implants may be used to restore the natural joint line.

Once the implant is secure, your surgeon closes the skin. A fine self-adhesive mesh is laid over the closed wound first, holding the skin edges together. A liquid skin adhesive is then painted over the mesh, where it sets to seal the whole thing. This closure stays on for roughly one to two weeks and then lifts and peels away by itself, so there is nothing to be taken out.

After the operation

You will wake in the recovery ward with your arm in a simple sling for comfort. We manage your pain using standard methods, and you will have a clean dressing over the single cut made over the shoulder area. Most patients stay one night in hospital after this operation, though some are able to go home the same day. You must have someone stay with you for the first 24 hours. You cannot drive for at least six weeks. Please see Driving after upper-limb surgery for full details. Your surgeon will guide your early movements to help you heal safely.

Recovery

You will likely notice significant swelling and stiffness in the first few days. This is normal. Your arm rests in a simple sling for comfort, which you remove only for exercises and washing. We do not use hinged braces or abduction pillows. Pain management is key to early movement. Most patients find their pain scores drop significantly within two weeks as the initial swelling settles.

Early, active rehabilitation is safe and effective. You will follow a guided programme with your physiotherapist to restore forward elevation. You may perform self-directed home therapy if it suits your routine, as outcomes are similar to supervised sessions. Your goal is to regain functional movement while protecting the repair. Active

external rotation is complex and develops gradually. You will focus on gentle, controlled motions rather than forceful stretching.

Return to daily activities depends on your individual healing. You must not drive while in a sling. Our policy requires no driving for at least six weeks after any shoulder operation, regardless of which arm was treated. You can resume driving once your surgeon clears you, typically at the six-week review. See our guide on driving after upper-limb surgery for full details. Your timeline may differ; your surgeon and physio will guide you through each stage of recovery.

What can go wrong

Most patients do well, but problems can occasionally happen. Your surgeon and the team monitor you closely to spot any issue early.

If you have wear-and-tear arthritis with an intact rotator cuff, this procedure may not offer better function than standard joint replacement. You might notice little change in your shoulder's movement or strength compared to other options. Discuss this clearly with your surgeon before deciding.

Younger patients often face higher risks in the first three months after surgery. You might experience more pain, swelling, or infection during this period. Be extra vigilant with your care routine and report any unusual symptoms immediately.

If you are having this surgery to replace a failed previous shoulder replacement, outcomes are generally less predictable. You may find that pain relief, lifting ability, or overall satisfaction is lower than if this were your first surgery. There is also a higher chance of needing further procedures.

Taking blood-thinning medication after surgery can increase the risk of wound issues and the need for re-operation. You might notice increased bleeding, oozing, or delayed healing around the incision site. Inform your team about all medications you are taking.

During revision surgery, there is a higher risk of breaking the bone fragment where your arm muscles attach. You might feel sudden sharp pain or a change in how your shoulder feels. Report any new instability or weakness right away.

If the baseplate of the implant loosens, you may experience persistent pain or a feeling of instability. This can sometimes lead to further surgery. Any new grinding sensation or loss of function should be checked promptly.

Using certain techniques to revise the shoulder stem can lead to higher rates of loosening or the joint slipping out of place over time. You might notice clicking, grinding, or a sudden loss of control in the shoulder. Seek medical advice if these sensations become frequent or painful.

In younger patients, the main reasons for needing another surgery are the joint slipping out (instability) or bone wear. You might feel a popping sensation or see visible swelling. If the shoulder feels unstable, avoid heavy lifting and contact your clinic.

The complications table on this page lists typical rates if you want the specifics.

When to call us

Call us if you have a fever, increasing wound redness or discharge, or sudden severe pain. Go to emergency if you notice calf swelling or shortness of breath. Seek urgent care for loss of sensation or inability to move your limb. New pain at the base of your shoulder or tenderness along the collarbone may signal a fracture. We want to check these symptoms promptly to keep you safe.

In more depth

This section goes further than you need for your own treatment decisions. Reverse shoulder replacement is worth the extra reading because it is the operation that solved a problem previously thought unsolvable — a shoulder with no working rotator cuff — and because its characteristic complication is one most patients have never heard of.

WHY REVERSING THE JOINT WORKS

A normal shoulder is a ball on the arm and a socket on the shoulder blade, and it depends on the rotator cuff to hold the ball centred while the deltoid lifts. Where the cuff is gone, a conventional replacement has nothing to stabilise it and the ball simply rides upwards.

The reverse design swaps them: the ball is fixed to the shoulder blade and the socket to the arm. That moves the centre of rotation inwards and downwards, which lengthens the deltoid's lever arm and lets it lift the arm on its own. It is a mechanical solution rather than a biological one — it does not repair anything, it makes the remaining muscle sufficient.

That also explains the pattern of what it restores. Overhead elevation usually returns well. Rotation depends on muscles the operation does not replace, so reaching behind the back often remains limited, and that should be part of the expectation set before surgery rather than a disappointment after it.

WHERE IT HAS DISPLACED OLDER OPERATIONS

For fractures, the shift has been decisive. Pooling **228,523** patients, reverse total shoulder arthroplasty gave better functional outcomes and complication rates than hemiarthroplasty, and a more favourable revision profile than plate fixation, in elderly patients with proximal humerus fractures [1].

An implant detail worth knowing, because it is often raised: comparing standard components with fracture-specific components in reverse replacement for these fractures across **436** patients found **no significant differences** in clinical outcomes or complication rates [2].

THE COMPLICATION TO KNOW ABOUT

The one that matters here is the **acromial or scapular stress fracture** — the bone above the joint cracking under the increased deltoid tension the design deliberately creates. It is the direct consequence of the mechanism that makes the operation work.

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A meta-analysis identified the risk factors: patients who sustained these fractures were **older with lower BMI**, and other risks included **osteoporosis, inflammatory arthritis, female sex and previous rotator cuff repair** [3]. A separate review found the literature reports these fractures inconsistently — significant discrepancies in how they are defined, diagnosed and counted [4] — so quoted rates should be read with caution.

Set against that, the short-term picture is reassuring: overall rates of mortality and medical and surgical complications are low in the first 90 days, with only **6%** of patients requiring readmission [5].

TWO THINGS THE EVIDENCE DOES NOT SUPPORT

That the subscapularis must be repaired. Across **267** patients, there were **no differences** in abduction, internal rotation or external rotation strength after reverse replacement with or without subscapularis repair, though the authors note the literature on strength outcomes is limited [6].

That the indication does not affect the result. It does. At two or more years, Constant scores were significantly higher in patients having reverse replacement for primary osteoarthritis with an **intact** cuff than for primary osteoarthritis with cuff tears or for secondary osteoarthritis [7]. The same operation gives different results depending on why you needed it — which is worth knowing when you are quoted an average.

REFERENCES

1. Mekhail J, Mullan R, Cross JL, Jahagirdar O, Luo X, Salameh M. Outcomes of reverse total shoulder arthroplasty vs. other surgical fixation methods for proximal humerus fractures: a systematic review and meta-analysis. JSES Rev Rep Tech. 2026;6(2):100644.
2. Apivatgaroon A, Kongmalai T, Kongmalai P. Standard compared with fracture-specific components in reverse shoulder arthroplasty for proximal humeral fractures: a systematic review and meta-analysis. Bone Joint J. 2025;107-B(9):931-41.
3. Elmenawi KA, Sperling JW, Sanchez-Sotelo J, Barlow JD. Risk factors for acromial and scapular fractures following reverse shoulder arthroplasty: a meta-analysis. JSES Rev Rep Tech. 2026;6(1):100578.
4. Davie RA, Nathan K, Persaud SG, Oladeji LO, Taylor SA, Dines JS, et al. Inconsistent reporting of risk factors for acromial stress fractures following reverse total shoulder arthroplasty: a systematic review. J Shoulder Elbow Surg. 2025;34(11):e975-e984.
5. Kent LM, Hurley ET, Davey MS, Klifto CS, Mullett H. Low complication rate following reverse total shoulder arthroplasty at 90-days follow-up: a systematic review. J ISAKOS. 2024;9(2):205-10.
6. Preuss FR, Eble SK, Peebles AM, Osuna-Garcia A, Provencher CMT. Shoulder strength outcomes after reverse total shoulder arthroplasty: a systematic review. JSES Rev Rep Tech. 2022;2(2):131-4.
7. Nové-Josserand L, Nerot C, Colotte P, Guery J, van Rooij F, Hibon A, et al. Reverse shoulder arthroplasty for primary glenohumeral osteoarthritis: significantly different characteristics and outcomes in shoulders with intact vs. torn rotator cuff. J Shoulder Elbow Surg. 2024;33(4):850-62.

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