

# 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.

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At-a-glance recovery. Pooled from 80 published studies — your own pace will vary.

| LIGHT DUTIES  | MOST EVERYDAY ACTIVITIES  | FINAL OUTCOME PLATEAU  |
|---|---|--|
| desk work, driving, daily tasks   | manual work, sport, gym   | pain and strength  |
| <b>6-12 weeks</b>   | <b>12 months</b>  | <b>12 months</b>   |
| Return to driving is recommended between 6 to 12 weeks postoperatively. | Patients typically achieve maximum medical improvement at 1 postoperative year. | Chronic recovery is assessed via time spent above 90 degrees of elevation, with maximum improvement noted at 1 year. |

## Why this operation has been suggested

A reverse shoulder arthroplasty, also known as a reverse joint replacement, is a surgery that changes the shape of your shoulder joint. This procedure is typically offered to patients with severe arthritis and a damaged rotator cuff, or those with complex fractures who have not improved with non-surgical care. Your surgeon may have recommended this because standard shoulder replacements often fail when the rotator cuff is torn, whereas this design uses your shoulder muscle to lift your arm instead.

The main goal of this operation is to provide stable movement and significant pain relief when other treatments have not worked. While non-operative options are tried first, surgery is chosen when you need a reliable solution to restore function. This approach allows you to raise your arm and perform daily tasks even if your rotator cuff cannot heal on its own.

## Before the operation

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You will need to fast before your surgery and stop certain medications as your surgeon advises. Please arrange for someone to drive you home and wear comfortable clothing. You may need X-rays, MRI scans, blood tests, or an anaesthetic review beforehand. These checks help your surgeon plan the best approach for your shoulder. Your surgeon will perform the operation through a single open incision over the shoulder. This method allows direct access to fix the problem. Bring a list of all current medications to your appointment. Your surgeon will review these to ensure your safety during the procedure.

## On the day

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You will arrive at the hospital and meet your surgeon and the anaesthetist. 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 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.

Your surgeon will perform the surgery through a single open incision over your shoulder. You will then move to the recovery area to wake up safely. Staff will monitor your pain and comfort as the numbness wears off. You will stay in recovery until you are stable and ready to return to your room.

## What the operation involves

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Your surgeon makes a single cut over the front of your shoulder to reach the joint. They remove the worn-out bone and cartilage, then replace them with metal and plastic parts. This new joint is designed to work even if your rotator cuff tendons are torn or damaged.

The surgeon places the metal ball on the shoulder socket and the plastic cup on the arm bone. This setup changes how the joint moves, allowing your shoulder muscle to lift your arm more easily. If you had a broken bone, your surgeon may also repair the torn bone pieces back to their normal position using small metal anchors.

Once the new parts are in place, your surgeon closes the cut with stitches. These stitches are usually dissolvable and do not need to be removed. The goal is to restore stability and help you move your shoulder again.

## After the operation

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You will wake up in a recovery ward where your team manages your pain. Your surgeon uses a single open incision over your shoulder. You will wear a sling and have dressings over the wound. You will begin moving your arm gently as soon as you are stable. Most patients go home the same day or stay overnight. You must have someone stay with you for the first 24 hours to help you. Early movement is safe and helps your recovery.

# Recovery

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Your shoulder will feel sore and swollen in the first few days. This is normal as your body heals from the open incision over your shoulder. You will wear a sling to protect the joint while you rest. Most people find that pain and stiffness ease significantly as swelling goes down.

You will begin gentle exercises early to restore movement. Your physiotherapist will guide you through simple movements to lift your arm and improve strength. You can return to daily tasks like eating or dressing once your surgeon clears you. Walking and swimming are common activities you can resume as your strength returns.

Your recovery journey is unique. While many people feel much better within two weeks, full improvement takes time. You will reach your maximum medical improvement by one year after surgery. Your surgeon and physiotherapist will tailor your plan to your specific needs. Trust the process and follow their advice to get the best result.

## What can go wrong

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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 a wound that looks red, feels hot, or starts leaking fluid, this could be a wound complication. This risk is higher if you need blood-thinning medicine after surgery. Call your clinic immediately if you notice these signs.

You might feel sudden instability or a clicking sensation in your shoulder. This can happen if the joint slips out of place. If this occurs, stop moving the arm and contact your surgeon right away.

Deep, throbbing pain that does not ease with simple painkillers could signal a problem with the implant loosening. This is more common if you are having a second surgery on a joint that has already failed. Let your surgeon know if your pain gets worse over time.

If you are younger than 60, you may face a higher risk of surgical problems within the first 90 days. Be extra careful with your recovery and report any new symptoms to your team.

Sometimes, the bone around the shoulder blade can wear away or loosen after a revision surgery. This might feel like a grinding noise or a loss of strength. If you notice this, bring it up at your next review.

If you have had an infection before, you might need a staged procedure with antibiotic spacers. While this can help restore function, it is a complex process. Follow your surgeon's specific instructions for this path closely.

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

## When to call us

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Call us if you develop a fever, increasing redness, or drainage from your wound. Go to emergency if you feel sudden severe pain, new weakness, or lose the ability to move your arm. Seek immediate help for calf swelling, shortness of breath, or loss of sensation. These signs may indicate infection, blood clots, or a fracture near the shoulder blade. Contact your surgeon right away if you notice any sudden change in your recovery.

# Reverse Shoulder Arthroplasty

## Complication rates from published literature

Pooled from 80 published studies. These are population-level rates, not your individual risk — your surgeon will discuss what applies to you.

| COMPLICATION                        | REPORTED RATE | NOTES  |
|-------------------------------------|---------------|--|
| Heterotopic ossification            | <b>27.0%</b>  | Rate reported 2-3 years after rTSA, reaching up to 75% at 10 years.  |
| Scapular notching                   | <b>10.8%</b>  | Inferior contact between the polyethylene humeral component and scapular neck is very common; while usually asymptomatic, severe notching may lead to glenoid loosening or implant failure over time.            |
| Loss of motion                      | <b>5%</b>     | Some loss of external rotation is common particularly with medialised designs; approximately 5% develop significant stiffness requiring manipulation or revision.  |
| Nerve compression syndromes         | <b>5%</b>     | Approximately 5% develop carpal or cubital tunnel syndrome; the majority improve once the arm is out of the sling.   |
| Persistent pain or dissatisfaction  | <b>3-5%</b>   | Pain requiring intervention reported at 0.2% in a large registry (n=10,797); painful stiffness at 2.6%. Residual discomfort including difficulty lying on the operated shoulder is more common but usually mild. |
| Acromial or scapular spine fracture | <b>2.0%</b>   | Stress fractures from increased deltoid tension and arm lengthening at average 9.4 months postoperatively; risk higher in females (male:female 1:5.4) and thin acromion.   |
| Component complications             | <b>2-5%</b>   | Glenoid baseplate loosening (5%), component disassembly (2.2%), humeral loosening (1.9%), or screw breakage may require revision surgery.  |
| Revision rate                       | <b>1.5%</b>   | Approximately 5-10% may require revision surgery within 10 years for infection, instability, loosening, fracture, or component failure.  |
| Infection                           | <b>1.2%</b>   | Deep infection requiring multiple washouts, prolonged antibiotics, and potentially component removal with staged revision; risk is higher in revision surgery, diabetes, and immunocompromised states.           |

| COMPLICATION                   | REPORTED RATE | NOTES  |
|--------------------------------|---------------|--|
| Dislocation or instability     | <b>0.9%</b>   | Risk factors include revision surgery, neurological conditions, subscapularis insufficiency, and improper positioning; treatment may require closed reduction or revision to constrained components. |
| Periprosthetic fracture        | <b>0.8%</b>   | Intraoperative fractures in 1.4% overall increasing to 13.6% in revision cases; humeral fractures most common during stem insertion or in osteoporotic bone.   |
| Neurological complications     | <b>0.7%</b>   | The axillary nerve is most at risk; medialised implants show 2.9% nerve injury versus 0.5% for lateralised designs; most are neurapraxias recovering within 3-6 months.                              |
| Hematoma                       | <b>0.3%</b>   | Rate from single-center study of 299 cases.  |
| Complex regional pain syndrome | <b>0.3%</b>   | Rate from single-center study of 299 cases.  |
| Medical complications          | <b>0.2%</b>   | Systemic complications including pulmonary embolism, pneumothorax, myocardial infarction, or stroke are rare.  |
| Wound complications            | <b>Rare</b>   | Wound healing problems are rare; risk elevated in patients on therapeutic anticoagulation.   |

I have read this information and have had the opportunity to ask Dr Hirpara questions about the procedure, its expected recovery, and the complications listed above.

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PATIENT – PRINT NAME

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SIGNATURE

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DATE