CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

REHABILITATION PROTOCOL

Reverse Shoulder Arthroplasty — Rehabilitation Protocol

This protocol guides your recovery after reverse shoulder arthroplasty (reverse shoulder replacement) with Dr Kieran Hirpara at Mater Private Hospital Rockhampton. Each phase below opens with a plain-English explanation of what is happening and what matters most, followed by the structured protocol written **for your physiotherapist** — bring this page or its PDF to your first physiotherapy visit so your rehabilitation stays coordinated. Your physiotherapist may adjust the plan depending on how your recovery progresses.

If you have any concerns about your wound after surgery, get in touch with the rooms. It is often helpful to take a photo of the wound and email it for review.

What to expect

You will have a numb arm when you wake up, and the feeling should start to return after about 24 hours. There may be some numbness or weakness for up to a week.

When you wake up from your operation, you will be in a sling, with a big pad over your shoulder. This pad will be removed before discharge. Underneath will be a waterproof dressing covering a surgical glue strip, which can be left alone for 2 weeks. Your stitches are dissolvable and do not need removing, but there may be some tails of stitch at each end of the wound that can be cut flush with the skin after 2 weeks. You will be booked to see our nurse for a wound check 1–2 weeks after your surgery. If you are unable to attend the dressing check, you can remove your dressing yourself after 2 weeks.

Approximate timeframes for return to activities:

- **Driving** — 6 weeks
- **Swimming** — breaststroke: 8 weeks; freestyle: 12 weeks
- **Golf** — 3 months
- **Lifting** — light lifting can begin at 6 weeks; avoid lifting heavy items for 6 months
- **Work** — sedentary job: 6 weeks; manual job: guided by your surgeon

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Wearing your sling

Your sling (shoulder immobiliser) supports your shoulder while it heals. The rules are simple:

- Wear it for **6 weeks** after your operation, including while sleeping.
- Take it off only for showers and for your exercises, once you have been shown how — and whenever the sling is off, keep your arm by your side.
- Resting at home, it can come off if you are sensible about it: arm supported on a pillow while sitting.
- Use ice if the shoulder is swollen or sore, especially after exercise.

Your physiotherapist will help you put the sling on at first, and will teach you to manage it independently before you go home. Fitting it correctly matters — a loose sling does not support you properly:

1. Always ensure that when fitting the sling, your elbow is positioned in the corner of the sling and well supported.
2. The end of a well-fitted sling should rest comfortably at the knuckle of your little finger. If your hand extends too far out of the sling, it will not provide you with adequate support.
3. Your sling has two Velcro straps — one which attaches around your neck and one around your waist.
4. Once you have positioned your elbow and forearm correctly, use your non-operated arm to swing the upper strap around your neck to the front and attach it through the upper loop on the sling.
5. Use the same method to attach the lower strap around your waist, securing through the lower loop on the sling.

During your time in the sling, be conscious of your posture at all times and avoid allowing your shoulders to adopt a slumped position. To achieve a good postural position, try to keep your ears, shoulders and hips in line — maintaining good posture is important for your back and will help prevent stiffness in your shoulder joint. A rolled-up towel placed in the small of your back when sitting can serve as a friendly reminder.

Your first days in hospital

Before you go home, the hospital physiotherapists will start you on a simple set of exercises, shown below. It helps to understand three terms they will use. *Active* range of motion means movement you do yourself, without aid or help. *Active-assisted* range of motion means using your other arm (or an object, such as a cane) to help move the arm. *Passive* range of motion means the arm stays completely relaxed while your other arm — or someone else — does 100% of the work. In the early weeks your operated shoulder is moved passively or with assistance; the only joints you move actively are your elbow, wrist and hand.

A few practical points for these first days:

- You need to sleep in the sling.
- Use ice for pain relief if needed.
- When wearing your sling, relax your shoulder and let the sling take the weight of your arm.

- Take your painkillers before you do your exercises, and before your physiotherapy appointments.
- You are allowed to take your arm out of the sling for your exercises and showering.
- You need to wear your sling for 6 weeks, especially when out of the house.
- Unless you have chosen to arrange your own physiotherapy, an appointment has been made for you and is detailed in your discharge pack.
- If you have any problems, contact the office or let your physiotherapist know.

These are the exercises the hospital physiotherapists will start you on, continued at home as guided by your physiotherapist.

Your hospital exercises

Wrist, hand and fingers

Keep your hand moving by bending your wrist forwards, backwards and side to side. Also keep your hand and fingers moving by opening and closing them, or by squeezing a stress ball.

10 times, 3 times per day

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Elbow

Bend and straighten your elbow.

10 times, 3 times per day

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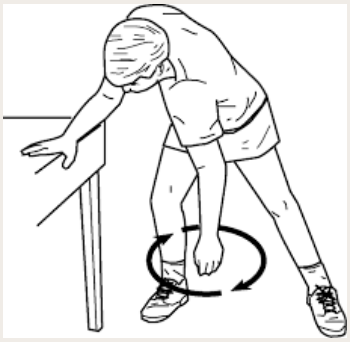

Pendulums

This is a passive exercise. Lean forward and let your arm relax down. Use your body to move the arm gently either clockwise or anti-clockwise, along with forwards, backwards and side to side.

About 30 seconds each way, 3 times per day

Forward flexion

Sitting on a chair and leaning forward, cradle your operated arm with the other arm and gently move your arm upwards in front of you. Lower it back down with the assistance of your non-operated arm. You could also try lying on your back in bed and helping the arm upwards if you would prefer.

10 times, 3 times per day

Abduction

Sitting on a chair and leaning forward, cradle the arm again and help it out to the side (e.g. like rocking a baby).

10 times, 3 times per day

External rotation

Sitting on a chair, only move your arm from where it would be in the sling to pointing straight in front of you. Don't go further outwards.

Gently, 10 times, 3 times per day

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Lower trapezius setting

Squeeze your shoulder blades downwards and together.

Hold 5 seconds, 5 times; repeat 3 times daily

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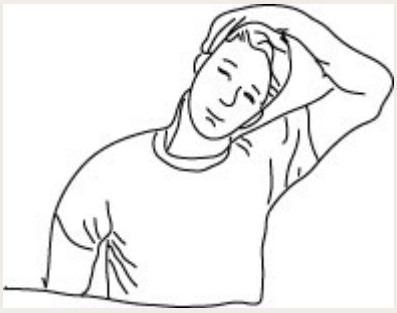

Upper trapezius stretch

Use your non-operated arm to bring your ear towards your shoulder, away from the operated side.

Hold 10 seconds, 3 times; repeat 3 times per day

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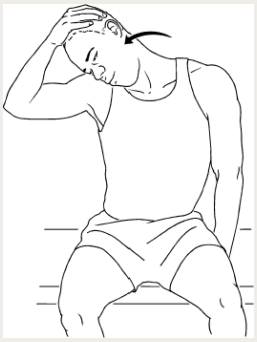

Levator scapulae stretch

Use your non-operated arm to bring your nose towards your nipple or armpit area.

Hold 10 seconds, 3 times; repeat 3 times per day

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Phase I – Protection (Weeks 0–3)

The first three weeks are about protecting your new shoulder joint while everything settles. You stay in the sling (including overnight), manage swelling with ice and compression, and keep your elbow, wrist and hand moving while the shoulder itself is only moved passively – gently, by your physiotherapist or with the arm fully relaxed.

The rules that matter most: do not move the shoulder actively, do not reach behind your back or rotate the arm inwards, do not lift anything, and do not push up through your hands. When lying on your back, keep a small pillow or rolled towel under your elbow so the shoulder does not stretch backwards.

For your physiotherapist:

Goals

- Protect surgical repair
- Reduce swelling, minimise pain
- Maintain upper extremity (UE) range of motion (ROM) in elbow, hand and wrist
- Gradually increase shoulder passive range of motion (PROM)
- Minimise muscle inhibition
- Patient education

Sling

- Neutral rotation
- Use at night while sleeping

Management

- Swelling management: ice, compression
- Range of motion / mobility:
  - PROM: external rotation (ER) in the scapular plane to tolerance; flexion/scaption ≤ 120 degrees; abduction (ABD) ≤ 90 degrees; seated glenohumeral (GH) flexion table slide; pendulums; seated horizontal table slides
  - Active-assisted range of motion (AAROM): none
  - Active range of motion (AROM): elbow, hand, wrist

Precautions

- No shoulder AROM
- No shoulder AAROM
- No shoulder PROM into internal rotation (IR)
- No reaching behind back, especially into internal rotation
- No lifting of objects
- No supporting of body weight with hands
- Place small pillow/towel roll under elbow while lying on back to avoid shoulder hyperextension

Criteria to progress

- Gradual increase in shoulder PROM

- 0 degrees shoulder PROM into IR
- Pain < 4/10
- No complications with Phase I

Phase II – Intermediate (Weeks 4–6)

The shoulder now starts to wake up. Passive movement continues to increase, and you begin assisted and then gentle active shoulder movements, along with the first activation work for the shoulder-blade (periscapular) muscles and the deltoid. The sling still goes on at night, but during the day you gradually wean off it over these two weeks. The protective rules still apply: lift nothing heavier than a coffee cup, do not reach behind your back, do not push through your hands, and keep the pillow under your elbow when lying on your back.

For your physiotherapist:

Goals

- Continue to protect surgical repair
- Reduce swelling, minimise pain
- Gradually increase shoulder PROM
- Initiate shoulder AAROM/AROM
- Initiate periscapular muscle activation
- Initiate deltoid activation (avoid shoulder extension when activating posterior deltoid)
- Patient education

Sling

- Use at night while sleeping
- Gradually start weaning sling over the next two weeks during the day

Management

- Continue with Phase I interventions
- Range of motion / mobility:
  - AAROM: active-assistive shoulder flexion, shoulder flexion with cane, cane external rotation stretch, washcloth press, seated shoulder elevation with cane
  - AROM: supine flexion, salutes, supine punch
- Strengthening:
  - Periscapular: scapular retraction, standing scapular setting, supported scapular setting, low row, inferior glide
  - Deltoid: isometrics in the scapular plane

Precautions

- No reaching behind back, especially into internal rotation
- No lifting of objects heavier than a coffee cup
- No supporting of body weight with hands
- Place small pillow/towel roll under elbow while lying on back to avoid shoulder hyperextension

Criteria to progress

- Gradual increase in shoulder PROM, AAROM, AROM
- 0 degrees shoulder PROM into IR
- Palpable muscle contraction felt in scapular musculature
- Pain < 4/10
- No complications with Phase II

Phase III – Intermediate, continued (Weeks 7–8)

The sling is now discontinued. Movement progresses in all directions, including the first gentle passive internal rotation (rotating the arm inwards), and the strengthening work for the deltoid and shoulder-blade muscles steps up, along with the first motor-control (coordination) exercises. The limits that remain: nothing heavier than a coffee cup, no reaching behind your back beyond your pant pocket, no body weight through your hands, and avoid stretching the arm backwards behind your body.

For your physiotherapist:

Goals

- Minimise pain
- Gradually progress shoulder PROM; initiate shoulder PROM IR in the scapular plane
- Gradually progress shoulder AAROM
- Gradually progress shoulder AROM
- Progress deltoid strengthening
- Progress periscapular strengthening
- Initiate motor control exercise
- Patient education

Sling

- Discontinue

Management

- Continue with Phase I & II interventions
- Range of motion / mobility:
  - PROM: full in all planes; gradual PROM IR in scapular plane ≤ 50 degrees
  - AAROM: incline table slides, wall climbs, pulleys, seated shoulder elevation with cane with active lowering
  - AROM: seated scaption, seated flexion, supine forward elevation with elastic resistance to 90 degrees
- Strengthening:
  - Periscapular: row on a physioball, serratus punches
  - Deltoid: seated shoulder elevation with cane, seated shoulder elevation with cane with active lowering, ball roll on wall
- Motor control:
  - IR/ER in scaption plane and flexion 90–125 degrees (rhythmic stabilisation) in supine
- Stretching:
  - Sidelying horizontal adduction (ADD), triceps and lats

Precautions

- No reaching behind back beyond pant pocket
- No lifting of objects heavier than a coffee cup
- No supporting of body weight with hands
- Avoid shoulder hyperextension

Criteria to progress

- ROM goals (PROM and AROM expectations are individualised and dependent upon ROM measurements attained in the operating room post-operatively):
  - Elevation ≤ 140 degrees
  - ER ≤ 30 degrees in neutral
  - IR ≤ 50 degrees in scapular plane, or back pocket
- Minimal to no substitution patterns with shoulder AROM
- Pain < 4/10

Phase IV – Transitional (Weeks 9–11)

This phase is the bridge back to normal use of the arm. Passive movement should now be full in all planes, and the focus shifts to strengthening the deltoid and shoulder-blade muscles, building dynamic stability and

coordination, and gradually restoring strength and endurance – with a return to full functional activities. The one firm limit: no lifting of heavy objects (over 5 kg).

For your physiotherapist:

Goals

- Maintain pain-free ROM
- Progress periscapular strengthening
- Progress deltoid strengthening
- Progress motor control exercise
- Improve dynamic shoulder stability
- Gradually restore shoulder strength and endurance
- Return to full functional activities

Management

- Continue with Phase II–III interventions
- Range of motion / mobility:
  - PROM: full ROM in all planes
- Strengthening:
  - Periscapular: resistance band shoulder extension, resistance band seated rows, rowing, robbery, lawnmowers, tripod, pointer
  - Deltoid: gradually add resistance with deltoid exercise
- Motor control:
  - IR/ER and flexion 90–125 degrees (rhythmic stabilisation)
  - Quadruped alternating isometrics and ball stabilisation on wall
  - Field goals
  - Proprioceptive neuromuscular facilitation (PNF): D1 diagonal lifts, D2 diagonal lifts

Precautions

- No lifting of heavy objects (> 5 kg)

Criteria to progress

- Performs all exercises demonstrating symmetric scapular mechanics
- Pain < 2/10

Phase V – Advanced strengthening (Weeks 12–16)

The final phase conditions the shoulder for everyday life: keeping your movement pain-free while building the strength and endurance to use the arm confidently. If a rotator cuff repair was performed at the same time as your replacement, rotator cuff (RTC) strengthening starts now. The lifting limit rises, but heavy objects (over 7 kg) are still off-limits. The phase – and the protocol – finishes with clearance from your surgeon once all the milestones have been met.

For your physiotherapist:

Goals

- Maintain pain-free ROM
- Initiate rotator cuff (RTC) strengthening with a concomitant repair
- Improve shoulder strength and endurance
- Enhance functional use of upper extremity

Management

- Continue with Phase II–IV interventions
- Strengthening:
  - Periscapular: push-up plus on knees, "W" exercise, resistance band Ws, prone shoulder extension Is, dynamic hug, resistance band dynamic hug, resistance band forward punch, forward punch, T and Y, "T" exercise
  - Deltoid: continue gradually increasing resisted flexion and scaption in functional positions
  - Elbow: bicep curl, resistance band bicep curls, and triceps
  - Rotator cuff: internal/external rotation isometrics, side-lying external rotation, standing external rotation with resistance band, standing internal rotation with resistance band, internal rotation, external rotation, sidelying ABD progressing to standing ABD
- Motor control:
  - Resistance band PNF pattern, PNF D1 diagonal lifts with resistance, diagonal-up, diagonal-down, wall slides with resistance band

Precautions

- No lifting of heavy objects (> 7 kg)

Criteria to progress

- Clearance from the surgeon, and ALL milestone criteria have been met
- Maintains pain-free PROM and AROM
- Performs all exercises demonstrating symmetric scapular mechanics
- QuickDASH and ASES patient-reported outcome measures

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After your protocol

This protocol works alongside the practice's general recovery advice — see managing post-operative pain and wound care. For the operation itself, see reverse shoulder replacement.

REFERENCES

1. Massachusetts General Brigham Sports Medicine. Rehabilitation Protocol for Reverse Shoulder Arthroplasty. Revised December 2018.
2. Brigham and Women's Hospital. Reverse Total Shoulder Arthroplasty Protocol.
3. Kim Y-T, et al. Four weeks of immobilisation after reverse shoulder arthroplasty yields outcomes comparable to six weeks. Clin Shoulder Elb. 2024.

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