



Reverse Total Shoulder Replacement — Rehabilitation Protocol

Overview

- Indicated for rotator cuff tear arthropathy, complex fractures, and revision arthroplasty
- Sling for 4–6 weeks post-operatively
- Deltoid protection critical — avoid combined adduction and IR
- Full functional recovery typically 6–12 months
- Physiotherapy commences within 1–2 weeks of surgery

Rehabilitation Phases

Phase 1 — Protection	Weeks 0–6
Goals: <ul style="list-style-type: none">• Protect implant and soft tissue repair• Minimise pain and swelling• Maintain hand, wrist, and elbow mobility	Exercises & Interventions: <ul style="list-style-type: none">• Pendulum exercises• Elbow, wrist, and hand ROM• Passive/active-assisted shoulder elevation in scapular plane• Scapular retraction (pain-free)• Grip strengthening• Ice and elevation
Precautions: <ul style="list-style-type: none">■ Avoid combined adduction and internal rotation (dislocation risk)■ Sling at all times except exercises and hygiene■ No active elevation > 90° for 6 weeks	
Phase 2 — Active Motion	Weeks 6–12
Goals: <ul style="list-style-type: none">• Restore active shoulder elevation• Begin deltoid and periscapular strengthening• Improve functional use of arm	Exercises & Interventions: <ul style="list-style-type: none">• Active shoulder elevation and abduction• External rotation strengthening (theraband)• Deltoid strengthening — forward flexion and abduction• Scapular stabilisation exercises• Functional tasks at waist height• Hydrotherapy if available
Precautions: <ul style="list-style-type: none">■ Avoid combined adduction and IR throughout rehabilitation■ No pushing up from chair with affected arm for 3 months	



Rehabilitation Phases (continued)

Phase 3 — Strengthening	Weeks 12–20
Goals: <ul style="list-style-type: none">• Progressive upper limb strengthening• Restore functional independence• Improve endurance and proprioception	Exercises & Interventions: <ul style="list-style-type: none">• Progressive resistance training — shoulder and scapular girdle• Closed-chain upper limb exercises• Functional strengthening for ADL and light work tasks• Overhead activity as tolerated• Dynamic stabilisation exercises
Phase 4 — Return to Function	Months 6–12
Goals: <ul style="list-style-type: none">• Full return to activities of daily living and recreational sport• Maintain long-term shoulder health	Exercises & Interventions: <ul style="list-style-type: none">• Maintenance strengthening programme• Swimming, golf, and light recreational sport as tolerated• Ongoing physiotherapy as required

References

1. Grammont PM, Baulot E. Delta shoulder prosthesis for rotator cuff rupture. *Orthopedics*. 1993.
2. Boileau P, et al. Grammont reverse prosthesis: design, rationale, and biomechanics. *J Shoulder Elbow Surg*. 2005.
3. Wall B, et al. Reverse total shoulder arthroplasty: a review of results according to etiology. *J Bone Joint Surg Am*. 2007.
4. Simovitch RW, et al. Outcomes with use of a reverse shoulder prosthesis for treatment of rotator cuff tear arthropathy. *J Bone Joint Surg Am*. 2012.
5. Mulieri P, et al. Reverse shoulder arthroplasty for the treatment of irreparable rotator cuff tear without glenohumeral arthritis. *J Bone Joint Surg Am*. 2010.

This rehabilitation protocol is intended as a general guide for qualified physiotherapists and healthcare professionals. It should be adapted to individual patient presentation, surgical findings, tissue quality, and progress. All progression decisions should be made in consultation with the treating surgeon.