Anatomic Total Shoulder Replacement — Rehabilitation Protocol

Overview

- Indicated for glenohumeral osteoarthritis with intact rotator cuff
- Subscapularis repair protected for 6 weeks post-operatively
- Sling for 4–6 weeks
- Avoid active internal rotation and combined extension/adduction for 6 weeks
- Full recovery typically 9–12 months

Rehabilitation Phases

Phase 1 — Protection	Weeks 0–6
Goals: • Protect subscapularis repair • Minimise pain and swelling • Maintain hand, wrist, and elbow mobility	**Exercises & Interventions:** • Pendulum exercises • Elbow, wrist, and hand ROM • Passive/active-assisted forward flexion and external rotation • Scapular retraction (pain-free) • Ice and elevation
Precautions: ■ No active internal rotation for 6 weeks (subscapularis protection) ■ Sling at all times except exercises and hygiene ■ No pushing up from arms of chair	

Phase 2 — Active Motion	Weeks 6–12
Goals: • Restore active shoulder ROM • Begin rotator cuff and deltoid strengthening • Improve scapular control	**Exercises & Interventions:** • Active shoulder elevation, abduction, ER, and IR • Rotator cuff strengthening (theraband — all planes) • Deltoid strengthening • Scapular stabilisation exercises • Functional tasks at waist height • Hydrotherapy if available
Precautions: ■ Avoid heavy lifting and repetitive overhead tasks until 3 months	

Rehabilitation Phases (continued)

Phase 3 — Strengthening	Weeks 12–20
Goals: • Progressive strengthening of shoulder girdle • Restore full functional independence • Proprioception and neuromuscular control	**Exercises & Interventions:** • Progressive resistance training — full shoulder girdle • Closed-chain upper limb exercises • Functional and ADL strengthening • Overhead activity as tolerated • Return-to-sport-specific conditioning
Phase 4 — Return to Function	Months 6–12
Goals: • Full return to recreational activity and sport • Maintain long-term implant health	**Exercises & Interventions:** • Maintenance strengthening programme • Low-impact sports — swimming, golf, cycling • Ongoing physiotherapy as required

Clinical Notes

- Subscapularis integrity is critical to outcome — repair quality guides Phase 1 restrictions
- Glenoid component loosening risk — avoid repetitive heavy overhead loading long-term
- Component position confirmed on post-operative radiograph — review before progressing

References

1. Neer CS. Replacement arthroplasty for glenohumeral osteoarthritis. J Bone Joint Surg Am. 1974.
2. Matsen FA, Lippitt SB, DeBartolo SE. Shoulder Surgery: Principles and Procedures. WB Saunders. 2004.
3. Sajadi KR, et al. Total shoulder arthroplasty: outcomes after a minimum follow-up of five years. J Shoulder Elbow Surg. 2011.
4. Denard PJ, Lädermann A. Immediate versus delayed passive range of motion following total shoulder arthroplasty. J Shoulder Elbow Surg. 2016.
5. Holloway GB, et al. Subscapularis closure after total shoulder arthroplasty. J Shoulder Elbow Surg. 2001.

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.