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SHOULDER RECONSTRUCTION & ARTHROPLASTY PROTOCOL

Anatomic Total Shoulder Arthroplasty (aTSA)

Clinical Rationale & Pathophysiology: Preservation of subscapularis tendon repair following deltopectoral approach is the primary determinant of long-term stability and prosthetic longevity. Rehabilitation balances progressive glenohumeral motion with strict anterior soft tissue protection.

CRITICAL PRECAUTIONS & IMMOBILIZATION RULES

- Sling immobilization required for 4 to 6 weeks at all times, removed only for supervised hygiene and prescribed exercises.
- STRICT LIMITATION of external rotation: Maximum 30° passive ER for first 6 weeks to protect subscapularis repair.
- NO active internal rotation, resisted internal rotation, or reaching behind back for 6 weeks.
- No weight-bearing, lifting, pushing, or pulling >1 lb through the operative upper extremity for 6 weeks.

Phase I: Immediate Protection (Weeks 0 - 6)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Protect subscapularis repair and component fixation • Mitigate post-operative pain and dependent edema • Achieve PROM forward flexion to 120°-140° and ER to 30°	• Strict sling immobilization with abduction pillow • Passive forward elevation in scapular plane (PROM) • Passive external rotation to 30° max with elbow supported • Active distal hand grip, wrist flexion/extension, elbow ROM • Cervical spine and gentle scapular retraction/depression

Phase II: Active-Assisted & Early Strengthening (Weeks 6 - 12)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Wean sling completely by week 6 under clinical guidance • Progress to full active forward flexion and ER • Restore symmetric scapulothoracic rhythm	• Active-Assisted ROM (AAROM) using wand/pulley system • Begin gentle active ROM in supine, progressing to upright • Submaximal isometrics for deltoid and periscapular stabilizers • Gentle subscapularis active IR initiation in pain-free range • Posterior capsule gentle stretching

Phase III: Progressive Resistance & Dynamic Control (Weeks 12 - 18)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Restore normal muscular endurance (>80% contralateral) • Progressive resistive strengthening in all planes • Normalize functional overhead ADL performance	• Theraband resistance exercises for rotator cuff (ER/IR) • Scapular dynamic stabilization (rows, serratus punches, Y-T-Ws) • Biceps/triceps isotonic loading up to 5-10 lbs • Proprioceptive neuromuscular facilitation (PNF) patterns

Phase IV: Advanced Conditioning & Sports Return (Weeks 18+)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Full active functional recovery and joint protection • Return to low-impact recreational activities (golf, swimming, doubles tennis) • Lifetime avoidance of heavy repetitive loading >25 lbs	• Sport-specific simulated drills and gradual return-to-play • Long-term home maintenance strengthening program • Lifetime joint conservation guidelines