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ELBOW RECONSTRUCTIVE SURGERY PROTOCOL

Triceps Tendon Repair & Reconstruction

Clinical Rationale & Pathophysiology: Anatomical re-anchoring of ruptured distal triceps tendon to the olecranon process utilizing transosseous bone tunnels or double-row knotless suture bridge anchors. Protects healing enthesis from tensile failure during extension.

CRITICAL PRECAUTIONS & IMMOBILIZATION RULES

- Hinged elbow brace required at all times for 6 weeks (locked at 30°-45° initially).
- Brace unlock settings: Wks 1-2 locked 30°-45°; Wks 3-4 unlocked 0°-60°; Wks 5-6 unlocked 0°-90°; Wk 7+ full motion.
- STRICTLY NO ACTIVE RESISTED ELBOW EXTENSION or pushing up from chairs for 8 to 12 weeks.
- No lifting, carrying, or pushing with operative arm (>1 lb) for 12 weeks.

Phase I: Immobilization & Controlled Passive Motion (Weeks 0 - 6)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Protect transosseous / anchor fixation at olecranon • Gradual protected passive flexion progression via weekly brace adjustments • Prevent elbow flexion/extension joint contracture	• Hinged brace worn 24/7 except supervised exercises • Passive elbow flexion within safe envelope; extension blocked by brace • Active forearm pronation/supination and wrist/hand range of motion • Active shoulder, wrist, and hand exercises to maintain kinetic chain • Cryotherapy for post-surgical posterior elbow edema control

Phase II: Discontinue Brace & Active Extension (Weeks 6 - 12)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Discontinue hinged brace at 6 weeks • Attain full unassisted active elbow flexion and active extension without resistance • Eliminate elbow extension lag without forceful joint manipulation	• Active unassisted elbow flexion and gravity-assisted active extension • Full available active pronation, supination, and functional motion • Gentle passive terminal flexion and extension stretching (low load) • Light periscapular and shoulder strengthening • Initiate submaximal isometric triceps contraction at 60° at week 8

Phase III: Progressive Strengthening & Resistance (Weeks 12 - 16)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Restore triceps strength and muscular endurance • Progress functional lifting to 10-15 lbs by week 16 • Eliminate elbow extension lag	• Begin light resisted triceps extension (1-2 lb dumbbell) and elastic bands • Progressive closed chain wall pushups and upper body ergometer • Overhead reaching and light functional triceps endurance drills • Progressive serratus anterior and periscapular strengthening

Phase IV: Unrestricted Return to Heavy Loading & Sport (Weeks 16 - 24)

Rehabilitation Goals & Milestones	Therapeutic Interventions & Exercise Progression
• Full return to heavy manual labor, contact sports, and bodybuilding/lifting • Objective strength testing: elbow extension strength symmetry >85-90%	• Sport-specific power drills, high-resistance triceps loading • Heavy bench press, dips, and overhead pressing after 5-6 months • Final surgeon clearance for unrestricted vocational/athletic duties