Cleveland Clinic
José Vega, MD, MA

Physical Therapy Protocol: Olecranon Stress Fracture Screw Fixation

Phase 1: Postop Day 1 through 7 – Pain Control and Muscle Activation

Physician Goals: Decrease pain and inflammation, initiate passive shoulder motion, start scapular strengthening and shoulder isometrics
Exercises: Passive shoulder flexion/ER/IR to tolerance, pendulums, wrist flexor/extensor stretching, putty/grip exercises; submaximal shoulder isometrics: ER, IR, abduction, flexion, and extension (must be pain free), periscapular stabilizer strengthening with seated neuromuscular control drills with manual resistance
Comments: Hinged elbow brace worn at all times including PT, locked in 90° of elbow flexion
Total Visits: 2

Phase 2: Weeks 2 through 5 – Range of Motion Recovery + Elbow Protection

Physician Goals: Regain normal elbow range of motion, improve strength and endurance; continue to avoid resisted elbow extension
Exercises: Begin elbow PROM, then active-assisted ROM, then AROM within brace ROM restrictions listed below, progress scapular strengthening exercises with seated manual resistance: protraction/retraction, elevation/depression, diagonal patterns, progress to light isotonic strengthening exercises for wrist, elbow, and shoulder; beginning week 3 initiate Throwers Ten program; beginning week 4 initiation wrist flexion and elbow flexion against manual resistance
Comments: Brace settings – Week 2: 30° to 110°, Week 3: 10° to 125°, Week 4: 0° to 145°
Total Visits: 8 – One to two times per week with daily HEP

Criteria to progression to phase 3: Elbow PROM at least 10° to 125° with minimal pain, good manual muscle testing of key muscles/movements (elbow flexion/extension, wrist flexion, shoulder IR/ER and scapular abduction)

Phase 3: Weeks 6 through 8 – Strength Recovery

Physician Goals: Regain full elbow ROM if not already done, progress upper extremity strengthening
Exercises: Initiate Advanced Throwers Ten program, initiate 2-hand plyometrics – chest pass, side-to-side throw, and overhead pass, initiate prone plank exercise; beginning week 8 initiate 1-hand plyometrics – 90°/90° ball throw, 0° ball throw, continue Advanced Throwers Ten, initiate side plank with shoulder ER strengthening exercise; start blood flow restriction (BFR) with 50% arterial occlusion pressure 30-15-15-15 rep scheme with 60s rest, 20-30% contralateral arm 1 rep max, wrist flexion, wrist ulnar deviation, finger flexion, forearm pronation, eccentric forearm pronation
Comments: Discontinue elbow brace at 6 week
Total Visits: 6 – One to two times per week with daily HEP

Phone: 440-204-7800 jvegamd.com

Criteria for progression to phase 4: Full painless elbow PROM and AROM, no tenderness on exam, >70% shoulder and elbow strength compared to nonoperative arm

Phase 4: Weeks 9 through 12 – Prepare to Begin Throwing Program

Physician Goals: Improve shoulder, elbow, forearm strength and endurance in anticipation of initiation of throwing program after week 12; reintroduce resisted elbow extension
Exercises: Continue Advanced Throwers Ten program, 1-hand and 2-hand plyometrics program, beginning week 10 initiate seated chest-press machine, seated row machine, biceps/triceps machine or cable strengthening, continue blood flow restriction (BFR) with 50% arterial occlusion pressure 30-15-15-15 rep scheme with 60s rest, 20-30% contralateral arm 1 rep max, wrist flexion, wrist ulnar deviation, finger flexion, forearm pronation, eccentric forearm pronation
Comments: Position players may begin interval hitting program at week 10, see separate testing protocol for clearance to initiate throwing program
Total Visits: 8 – One to two times per week with daily HEP

CT scan of the affected elbow is typically obtained at 12 weeks to ensure bony healing before initiation of interval throwing program.

Please see separate testing protocol for determining readiness to begin interval throwing program