



Indiana University Health

IU Health Physicians Orthopedics & Sports Medicine

MEDIAL EPICONDYLE OPEN REDUCTION INTERNAL FIXATION (ORIF)

PHYSICAL THERAPY PROTOCOL

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Patient: _____

Date of Surgery: _____

Frequency: _____x/week x _____weeks



Phase I: Immediate Post-Op (0-2 weeks)

Goals	• Protection of incision • Allow for bone healing • Decrease pain and inflammation • Patient education: bone healing time, activity modification, swelling management, HEP • No elbow AROM, incisions clean and dry, immobilization per physician instructions
Restore Passive Shoulder and Elbow ROM	• Splint for 10-14 days at 90 degrees of elbow flexion • Gradual, pain-free elbow PROM • Shoulder strengthening (sub-maximal isometrics EXCEPT flexion due to closed fist/gripping and ER) • Scapular retraction or clocks in S/L • Trunk ROM/core strengthening (No weight bearing on elbow or carrying/lifting) • Lower extremity strengthening and balance - Squats, lunges, heel taps, single leg stance, shuttle presses, side stepping • Vaso for pain and swelling control
Home Exercise Program	• Posture education • Elbow immobilized per physician instructions • Scapular control exercises (side lying clocks, seated retractions, scapular PNF) • No active elbow OR wrist extension, flexion, pronation, supination
Criterion to Progress to Phase II	• Protect the repair/incision site • Minimal pain • Minimal to no edema



Phase II: PROM progression to AROM (2-6 weeks)

Goals	• Slow progression of elbow extension and flexion ROM (Do not push aggressively) • Manage pain and inflammation • Promote tissue and bone healing • No soft tissue mobilization or cross friction massage directly on the scar for 6 weeks • No elbow joint mobilizations for 6 weeks • No wrist flexion or pronator strengthening for 6 weeks • No wrist flexor or pronator stretching for 6 weeks • No valgus stress to elbow for 6 weeks • Vaso and E-stim for pain and edema control
Interventions	• Hinged brace from weeks 2-6 ◦ Week 2-3: 30 deg - 100 deg range ◦ Week 3-4: 20 deg -110 deg range ◦ Week 4-5: 10 deg -120 deg range ◦ Week 5-6: 0 deg-130 deg range • Gentle PROM of elbow and wrist (Do not push ROM into pain) Muscular end feel: traditional stretching Capsular/firm end feel: low load, long duration • Progress to elbow AROM at 4 weeks • Ulnar nerve mobility if needed (avoid valgus stress to elbow with nerve glide) • Shoulder strengthening (wrist weights for S/L ER and prone scap series) • Light rhythmic stabilizations proximal to elbow • Continue trunk/core strengthening, LE strengthening, and balance (no holding medicine balls/weight OR weight bearing with involved arm) • Shoulder PROM (DO NOT APPLY PRESSURE DISTAL TO ELBOW FOR ER/IR; USE HUMERUS)
Criterion to Progress to Phase III	• Shoulder total arc of motion (ER+IR at 90 degrees of abduction) dominant + non-dominant • Full PROM of elbow (refer back to physician if not achieved) • Pain free with exercise • No swelling



Phase III: Intermediate Phase (6-12 weeks)

Goals	• Gradual increase to WNL elbow and forearm ROM in all planes • Pain free with all exercises • NO swelling • Initiate light strengthening of wrist and elbow musculature • Promote proper scapular control and mobility • Improve overall conditioning and strength
Post-op Weeks 6-8	• Unlock brace to full motion at 6 weeks • Wean from brace at 8 weeks • Focus on elbow extension and flexion AROM • Initiate pain-free wrist and elbow strengthening at 6 weeks **Delay if flexor-pronator mass is repaired (check with surgeon) • Continue balance, lower extremity strengthening, and core strengthening (<5 lbs of weight) • Continue shoulder ROM and strengthening (no valgus stress on the elbow) - Ex: s/l ER, rows, rhythmic stabilizations, horizontal abduction • Scapular stability and control exercises (side-lying, prone) • Criteria to progress to next phase: - Pain free with all exercises - Full AROM of elbow - Symmetrical hip ROM - 5/5 lower extremity strength (MMT) - 50 degrees of seated thoracic rotation each direction - Shoulder total arc of motion dominant = non-dominant - 4/5-5/5 MMT of involved shoulder musculature



Phase IV: Return to Sport Activity (weeks 12+)

Goals	• Progress back to sport level conditioning
Exercises 12+	• Continue lower extremity and core interventions as needed • Continue plyometrics and towel drills as necessary • Criteria for return to throwing program - Physician clearance - 5/5 MMT or within 10% of uninjured with HHD - Full AROM - Pain-free towel drills and plyometric drills • Initiate return to throwing program - Light throw into wall for mechanics
Post-op Weeks 8-12	• Wean from brace at week 8 • Plyometric progression can be initiated at week 10 (1 week double arm, 1 week single arm) • Example interventions - Prone 90/90 ER, prone quick drops - Rhythmic stabilization - PNF patterns - <u>Double arm plyometrics</u>: Medicine ball chest pass, chops - <u>Single arm plyometrics</u>: 90/90 ball on wall/tramp, manual plyo's • Throwing mechanics/Towel drills <u>initiated same week as single arm plyometrics</u> (need to be pain-free) • Weight bearing on involved arm at week 8 • Running at week 8
Criterion to Progress to Phase IV	• Pain-free, full AROM of shoulder and elbow • 5/5 MMT or within 10% of uninjured side with HHD for shoulder /rotator cuff strength • 5/5 MMT or within 10% of uninjured side with HHD for scapulothoracic musculature

References

Kamath AF, Cody SR, Hosalkar HS. Open reduction of medial epicondyle fractures: operative tips for technical ease. J Child Orthop. 2009;3(4):331-6.

Huleatt JB, Nissen CW, Milewski MD. Pediatric Sports Medicine Injuries: Common Problems and Solutions. Clin Sports Med. 2018;37(2):351-362.

By signing this referral, I certify that I have examined this patient and physical therapy is medically necessary. This patient ___ would ___ would not benefit from social services.

Date: _____

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