



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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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<ul style="list-style-type: none">- Squats, lunges, heel taps, single leg stance, shuttle presses, side stepping• Vaso for pain and swelling control
Home Exercise Program	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Protect the repair/incision site• Minimal pain• Minimal to no edema



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

Goals	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Hinged brace from weeks 2-6<ul style="list-style-type: none">○ 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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)<ul style="list-style-type: none">- Ex: s/l ER, rows, rhythmic stabilizations, horizontal abduction• Scapular stability and control exercises (side-lying, prone)• Criteria to progress to next phase:<ul style="list-style-type: none">- 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	<ul style="list-style-type: none"> Progress back to sport level conditioning
Exercises 12+	<ul style="list-style-type: none"> Continue lower extremity and core interventions as needed Continue plyometrics and towel drills as necessary Criteria for return to throwing program <ul style="list-style-type: none"> Physician clearance 5/5 MMT or within 10% of uninvolved with HHD Full AROM Pain-free towel drills and plyometric drills Initiate return to throwing program <ul style="list-style-type: none"> Light throw into wall for mechanics
Post-op Weeks 8-12	<ul style="list-style-type: none"> Wean from brace at week 8 Plyometric progression can be initiated at week 10 (1 week double arm, 1 week single arm) Example interventions <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Pain-free, full AROM of shoulder and elbow 5/5 MMT or within 10% of uninvolved side with HHD for shoulder /rotator cuff strength 5/5 MMT or within 10% of uninvolved 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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