

ELBOW ULNAR NERVE TRANSPOSITION POST-OPERATIVE GUIDELINES

The following elbow ulnar nerve transposition guidelines were developed by HSS Rehabilitation and are categorized into four phases with the ultimate goal of returning the overhead athlete to full competition. Classification and progression are both criteria-based and time based due to the healing constraints of the human body. The first phase is focused on post-operative recovery and healing. Phase two is focused on building foundational strength and stability which will allow the athlete to progress to phase three which includes advanced mobility, strengthening and plyometrics. With the completion of phase three the athlete will be able to progress into phase four which includes interval sports programs. Cardiovascular endurance, hip, core and lower extremity strength should be addressed throughout recovery. The clinician should use their skilled judgement and decision making as the athlete advances as all progression may not be linear and may take longer than timeframes indicated.

Follow physician modifications as prescribed.

ELBOW ULNAR NERVE TRANSPOSITION POST-OPERATIVE GUIDELINES

Phase 1: Post-Operative Recovery (Weeks 1-3)

PRECAUTIONS

- Avoid pain/paresthesia provoking activities
- No elbow PROM by clinician, no forced elbow motion

ASSESSMENT

- Quick DASH (Disabilities of Arm, Shoulder & Hand)
- ASES (American Shoulder and Elbow Surgeons Shoulder Score)
- KJOC (Kerlan-Jobe Orthopaedic Clinic Overhead Athlete Shoulder and Elbow Score)
- NPRS (Numeric Pain Rating Scale)
- Static scapular assessment (Kibbler Grading)
- Cervical mobility
- Elbow AROM/PROM

TREATMENT RECOMMENDATIONS

- Week 1:
 - Splint at 60° for week 1
 - Gripping exercise (pain-free)
 - Wrist AROM
- Week 2:
 - Brace set at 15°-100° for weeks 2-4
 - Elbow AROM in brace
 - Continue gripping and wrist AROM exercises
 - Scapula isometrics
 - Manual sidelying scapula stabilization exercises

CRITERIA FOR ADVANCEMENT

- Reduced irritability
- 15°-100° elbow AROM

EMPHASIZE

- Reduction of tissue irritability
- Protection of surgical site
- Soft tissue healing

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Phase 2: Intermediate (Weeks 4-5)

PRECAUTIONS

- Avoid pain/paresthesia provoking activities
- Brace D/C is MD directed
- No elbow PROM by clinician, no forced elbow motion

ASSESSMENT

- Quick DASH
- ASES
- KJOC
- NPRS
- Static scapular assessment (Kibbler grading)
- Cervical mobility
- Elbow AROM/PROM

TREATMENT RECOMMENDATIONS

- Continue elbow AROM
 - Emphasize full elbow extension
- Begin isotonics for scapula, shoulder, elbow
- Upper body ergometry (if adequate ROM)
- Begin IR/ER strengthening, progress to overhead as tolerated
- Begin PNF diagonals
- Scapular retraction/protraction
- Serratus activation
- Upper extremity flexibility exercises
 - Posterior shoulder: cross body and modified sleeper stretch if needed

CRITERIA FOR ADVANCEMENT

- Full elbow AROM
- Reduced tissue irritability

EMPHASIZE

- Reduction of tissue irritability
- Restoration of full elbow ROM
- Strength of scapular stabilizers, rotator cuff

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Phase 3: Advanced Recovery (Weeks 6-7)

PRECAUTIONS

- Avoid pain/paresthesia provoking activities

ASSESSMENT

- Quick DASH
- ASES
- KJOC
- NPRS
- Static scapular assessment (Kibbler grading)
- Cervical mobility
- Elbow AROM/PROM
- Wrist AROM/PROM
- Shoulder MMT
- Grip Strength

TREATMENT RECOMMENDATIONS

- Continue isotonics for scapula, shoulder, elbow
- Throwers Ten
- Advanced Throwers Ten
- Begin light wrist/forearm exercises
 - Flexion/extension, Pronation/supination
- Advance shoulder strengthening in overhead position
- Begin plyometrics program (with adequate strength base)
 - Double hand → Single hand → Overhead 90/90

CRITERIA FOR ADVANCEMENT

- Full elbow AROM
- Full shoulder AROM
- Tolerance of all above exercises without irritation

EMPHASIZE

- Shoulder and elbow flexibility
- Strength and endurance of shoulder and scapular stabilizers

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Phase 4: Return to Performance Progression (Weeks 8-12+)

PRECAUTIONS

- Pain provoking activities

ASSESSMENT

- Quick DASH
- ASES
- KJOC
- NPRS
- Static/dynamic scapular assessment (Kibbler grading)
- Cervical mobility
- Thoracic mobility
- Elbow AROM/PROM
- Hand and Wrist AROM/PROM
- Shoulder MMT
- Grip strength

TREATMENT RECOMMENDATIONS

- Continue full upper extremity strengthening program
- Continue upper extremity flexibility exercises
- Eccentric strengthening
- Exercise blade in multiple positions
- Initiate interval throwing program at 8 weeks
- Monitor workload

CRITERIA FOR RETURN TO PARTICIPATION

- Pain free progression through interval sports program
- Independent with all arm care exercises
- Assess need for HSS Video Throwing Analysis Program

EMPHASIZE

- Power and endurance development
- Advanced scapular stabilization
- Initiation of interval sports programs

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References

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