

## **ELBOW SCOPE LOOSE BODY/POSTERIOR BONE SPUR DECOMPRESSION POST-OPERATIVE GUIDELINES**

The following elbow scope loose body/posterior bone spur removal guidelines were developed by HSS Rehabilitation and are categorized into four phases with the ultimate goal of returning the 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 plyometric exercises. With the completion of phase three the athlete will be able to start the final phase which includes interval sports programs. Cardiovascular endurance and 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 indicate.

**FOLLOW SURGEON MODIFICATIONS AS PRESCRIBED**

## **ELBOW SCOPE LOOSE BODY/POSTERIOR BONE SPUR DECOMPRESSION POST-OPERATIVE GUIDELINES**

### **Phase 1: Post-Operative Recovery (Week 1)**

#### **PRECAUTIONS**

- Avoid pain provoking activities
- No forced end range motion

#### **ASSESSMENT**

- Quick Disabilities of Arm, Shoulder & Hand (Quick DASH)
- Numeric Pain Rating Scale (NPRS)
- Static scapular assessment (Kibler grading)
- Cervical mobility
- Thoracic mobility
- Glenohumeral mobility
- Elbow passive range of motion (PROM)/active range of motion (AROM)
- Kinetic chain assessment
- Postural assessment

#### **TREATMENT RECOMMENDATIONS**

- Gripping
- Wrist AROM: flexion/extension/pronation/supination
- Wrist stretches: flexors, extensors
- P/AROM elbow flexion and extension
- Lumbopelvic control and stabilization
- Modalities as needed

#### **CRITERIA FOR ADVANCEMENT**

- Minimal discomfort at rest

#### **EMPHASIZE**

- Reduction of tissue irritability
- Prevention of muscle atrophy
- Restoration of full wrist/hand mobility

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### Phase 2: Intermediate (Weeks 2-5)

#### PRECAUTIONS

- Avoid pain provoking activities
- Avoid forced end range motion

#### ASSESSMENT

- Quick DASH
- NPRS
- Static/dynamic scapular assessment (Kibler grading)
- Cervical mobility
- Glenohumeral mobility
- Elbow AROM/PROM
  - Assess end feel
- Kinetic chain assessment
- Postural assessment

#### TREATMENT RECOMMENDATIONS

- Flexibility
  - Elbow
    - Progress P/AROM but do not force motion
    - Avoid aggressive elbow extension
  - Shoulder
    - Cross body and sleeper stretch as needed
- Exercises
  - Week 2:
    - Scapular isometrics
    - Rotator cuff (RC) isometrics
      - Start at 0° abduction
      - Progress to 45° and 90° abduction if asymptomatic
    - Prone row, extension
  - Week 3:
    - RC isotonic
  - Week 4:
    - RC eccentrics
    - Tricep isometrics

- Throwers Ten/ Advanced Throwers Ten
- Bicep curls
- Scapula stabilization:
  - Prone T, W, Y, I
- Upper extremity ergometer (if ROM allows)

### **CRITERIA FOR ADVANCEMENT**

- Full, pain-free elbow ROM
- Tolerance of scapular and RC exercises without discomfort

### **EMPHASIZE**

- Restoration of full elbow AROM
- Activation of RC and scapular stabilizers
- Shoulder flexibility

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### **Phase 3: Advanced Recovery (Weeks 6-9)**

#### **PRECAUTIONS**

- Avoid pain provoking activities

#### **ASSESSMENT**

- Quick DASH
- NPRS
- Static/dynamic scapular assessment (Kibler grading)
- Cervical mobility
- Thoracic mobility
- Shoulder AROM/PROM
- Elbow AROM/PROM
- Kinetic chain assessment
- Postural assessment
- Rotator cuff and grip strength using handheld dynamometer

#### **TREATMENT RECOMMENDATIONS**

- Progress above treatment recommendations
- Progress tricep extensions while managing symptoms
- Strength and endurance in 90/90 shoulder position
  - 90° shoulder IR isotonics with resistance band
  - 90° shoulder ER isotonics with resistance band
- Proprioceptive neuromuscular facilitation diagonals
- Advanced Throwers Ten
- Scapular stabilization
  - Closed kinetic chain quadruped arm protraction
    - Unstable surface
    - Perturbations
  - Wall slide with lower trapezius lift off
  - Dynamic hug
  - Continue prone T, W, Y, I
  - Cable column: rows, lat pulldowns, cable press, chops/lifts
- End range stabilization using exercise blade/perturbations
- Core strength/kinetic linking

- Pre throw plyometrics
  - Double arm wall dribbles
  - Single arm wall dribbles
  - Clock wall dribbles
- Double arm plyometric
- Single arm plyometrics
- Eccentric catches
- Towel drill
  - If an overhead athlete can hold a towel and move the arm through a throwing path as if throwing a baseball
- Lower extremity strengthening

### **CRITERIA FOR ADVANCEMENT**

- Full shoulder and elbow ROM
- Pain-free plyometrics, endurance exercises
- Pain-free towel drill (see above)

### **EMPHASIZE**

- Restoration of neuromuscular control
- Restoration of scapular and RC muscle balance and endurance
- Initiation of plyometric progression

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### **Phase 4: Advanced Recovery (Weeks 10-12+)**

#### **PRECAUTIONS**

- Avoid painful activities

#### **ASSESSMENT**

- Quick DASH
- NPRS
- Static/dynamic scapular assessment (Kibler grading)
- Cervical mobility
- Thoracic mobility
- Shoulder AROM/PROM
- Elbow AROM/PROM
- Shoulder manual muscle testing
- Kinetic chain assessment
- Postural assessment

#### **TREATMENT RECOMMENDATIONS**

- Continue plyometrics
- Continue shoulder stretching pre/post throwing
- Continue shoulder RC and scapular maintenance program
- Initiate interval sports program
- Monitor workload and intensity
- Collaborate with ATC, performance coach/strength and conditioning coach, skills coach and/or personal trainer to monitor load and volume with return to sport participation

#### **CRITERIA FOR RETURN TO SPORTS PARTICIPATION**

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

#### **EMPHASIZE**

- Return to sports participation

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### References

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