

## **POST-OPERATIVE SUPERIOR LABRAL ANTERIOR TO POSTERIOR REPAIR (SLAP II) GUIDELINES**

The following post-operative shoulder SLAP stabilization guidelines were developed by Hospital for Special Surgery Rehabilitation and are categorized into five phases with the ultimate goal for returning the overhead athlete to full competition. They can be used for patients undergoing superior labral procedures with attention given to exact location and size of repair as well as any concomitant procedures. It is important that full range of motion is restored while respecting soft tissue healing. 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 soft tissue healing and maintenance of pain-free ROM. Phases two and three are focused on building foundational strength and stability which will allow the athlete to progress to phase four which includes plyometric exercises. With the completion of phase four the athlete will be able to start the final phase which includes interval sports programs. Cardiovascular endurance, hip and core strengthening should be addressed through the rehabilitation process. The clinician should use their skilled judgement and decision making as the athlete advances as all progression may not be linear.

## POST-OPERATIVE SUPERIOR LABRAL ANTERIOR TO POSTERIOR REPAIR (SLAP II) GUIDELINES

### Phase 1: Recovery (Week 1)

PRECAUTIONS	<ul style="list-style-type: none"> <li>▪ Sling for 3 weeks</li> <li>▪ No bicep strengthening for 6 weeks</li> <li>▪ If combined with bicep tenodesis, no bicep strengthening for 8 weeks</li> <li>▪ No forced stretching</li> <li>▪ Avoid painful activities</li> </ul>
ASSESSMENT	<ul style="list-style-type: none"> <li>▪ Quick Disabilities of Arm, Shoulder &amp; Hand (Quick DASH)</li> <li>▪ American Shoulder and Elbow Surgeons Shoulder Score (ASES)</li> <li>▪ Numeric Pain Rating Scale (NPRS)</li> <li>▪ PROM</li> <li>▪ Palpation</li> <li>▪ Static scapular assessment (Kibbler Grading)</li> <li>▪ Cervical mobility</li> </ul>
TREATMENT RECOMMENDATIONS	<ul style="list-style-type: none"> <li>▪ Gripping and hand AROM</li> <li>▪ Postural awareness</li> <li>▪ Scapular retraction</li> <li>▪ Elbow AROM</li> <li>▪ Wrist AROM: flexion/extension/pronation/supination</li> </ul> <p>Range of Motion</p> <ul style="list-style-type: none"> <li>▪ Week 1: PROM: external rotation (ER) to neutral, elevation in scapular plane 60°</li> </ul>
CRITERIA FOR ADVANCEMENT	<ul style="list-style-type: none"> <li>▪ Decreasing discomfort at rest</li> </ul>
EMPHASIZE	<ul style="list-style-type: none"> <li>▪ Protection of repair</li> <li>▪ Reduction of tissue irritability</li> <li>▪ Prevention of muscle atrophy</li> </ul>



## POST-OPERATIVE SUPERIOR LABRAL ANTERIOR TO POSTERIOR REPAIR (SLAP II) GUIDELINES

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

PRECAUTIONS	<ul style="list-style-type: none"> <li>▪ Sling for 3 weeks</li> <li>▪ Monitor for shoulder stiffness</li> <li>▪ No forced PROM</li> <li>▪ No painful activities</li> </ul>																
ASSESSMENT	<ul style="list-style-type: none"> <li>▪ Quick DASH</li> <li>▪ ASES</li> <li>▪ NPRS</li> <li>▪ PROM</li> <li>▪ Palpation</li> <li>▪ Static scapular assessment (Kibbler grading)</li> <li>▪ Cervical mobility</li> <li>▪ Scapular static assessment</li> </ul>																
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TREATMENT RECOMMENDATIONS	<table border="1"> <tr> <td style="vertical-align: top;">Week 2-3</td> <td> <ul style="list-style-type: none"> <li>▪ Elevation in scapular plane: 90°</li> <li>▪ ER in scapular plane: 5°-10°</li> <li>▪ Internal rotation (IR) in scapular plane: 30°-45°</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">Week 4</td> <td> <ul style="list-style-type: none"> <li>▪ Elevation in scapular plane: 90°-100°</li> <li>▪ ER in scapular plane: 25°-30°</li> <li>▪ IR in scapular plane: 50°-60°</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">Week 5-6</td> <td> <ul style="list-style-type: none"> <li>▪ Elevation in scapular plane: 120°-145°</li> <li>▪ ER in scapular plane: 40°-60°</li> <li>▪ IR in scapular plane: 50°-60°</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">Abduction</td> <td> <ul style="list-style-type: none"> <li>▪ 0°-90° first 6 weeks (gentle motion)</li> </ul> </td> </tr> </table> <p><b>Exercises</b></p> <table border="1"> <tr> <td style="vertical-align: top;">Week 2</td> <td>           Scapular Isometrics           <ul style="list-style-type: none"> <li>▪ Elbow AROM</li> <li>▪ Shoulder AAROM</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">Week 3</td> <td>           RC Isometrics           <ul style="list-style-type: none"> <li>▪ Rhythmic stabilization ER/IR with PT</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">Week 4</td> <td>           Continue RC Isometrics           <ul style="list-style-type: none"> <li>▪ Elastic band row</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">Week 5-6</td> <td>           RC Isotonics if arthroscopic; if open start week 6           <ul style="list-style-type: none"> <li>▪ Scapular strengthening               <ul style="list-style-type: none"> <li>○ Prone row, prone extension</li> </ul> </li> </ul> </td> </tr> </table>	Week 2-3	<ul style="list-style-type: none"> <li>▪ Elevation in scapular plane: 90°</li> <li>▪ ER in scapular plane: 5°-10°</li> <li>▪ Internal rotation (IR) in scapular plane: 30°-45°</li> </ul>	Week 4	<ul style="list-style-type: none"> <li>▪ Elevation in scapular plane: 90°-100°</li> <li>▪ ER in scapular plane: 25°-30°</li> <li>▪ IR in scapular plane: 50°-60°</li> </ul>	Week 5-6	<ul style="list-style-type: none"> <li>▪ Elevation in scapular plane: 120°-145°</li> <li>▪ ER in scapular plane: 40°-60°</li> <li>▪ IR in scapular plane: 50°-60°</li> </ul>	Abduction	<ul style="list-style-type: none"> <li>▪ 0°-90° first 6 weeks (gentle motion)</li> </ul>	Week 2	Scapular Isometrics <ul style="list-style-type: none"> <li>▪ Elbow AROM</li> <li>▪ Shoulder AAROM</li> </ul>	Week 3	RC Isometrics <ul style="list-style-type: none"> <li>▪ Rhythmic stabilization ER/IR with PT</li> </ul>	Week 4	Continue RC Isometrics <ul style="list-style-type: none"> <li>▪ Elastic band row</li> </ul>	Week 5-6	RC Isotonics if arthroscopic; if open start week 6 <ul style="list-style-type: none"> <li>▪ Scapular strengthening               <ul style="list-style-type: none"> <li>○ Prone row, prone extension</li> </ul> </li> </ul>
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## Phase 2: Intermediate (Weeks 2-5) (continued)

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### CRITERIA FOR ADVANCEMENT

- No pain at rest
- 120° shoulder elevation PROM; 45° ER in scapular plane
- Tolerance of scapular and RC exercises without discomfort

### EMPHASIZE

- Reduction of tissue irritability
- Activation of rotator cuff (RC) and scapular stabilizers



## POST-OPERATIVE SUPERIOR LABRAL ANTERIOR TO POSTERIOR REPAIR (SLAP II) GUIDELINES

### Phase 3: Advanced (Weeks 6-15)

PRECAUTIONS	<ul style="list-style-type: none"> <li>▪ No forced PROM</li> <li>▪ Avoid undue stress to anterior shoulder joint</li> <li>▪ No painful activities</li> </ul>
ASSESSMENT	<ul style="list-style-type: none"> <li>▪ Quick DASH</li> <li>▪ ASES</li> <li>▪ NPRS</li> <li>▪ PROM</li> <li>▪ AROM</li> <li>▪ Palpation</li> <li>▪ Static/dynamic scapular assessment (Kibbler grading)</li> <li>▪ Cervical mobility</li> <li>▪ Scapular static/dynamic assessment</li> <li>▪ Grip strength</li> </ul>
<b>ROM Goals</b>	
Week 6-7	<ul style="list-style-type: none"> <li>▪ Initiate light and <u>PAIN FREE</u> ER at 90° shoulder abduction               <ul style="list-style-type: none"> <li>○ Progress to 30°</li> </ul> </li> </ul>
Week 7-9	<ul style="list-style-type: none"> <li>▪ Flexion 160°-180°</li> <li>▪ ER at 90° abduction: 75°-90°</li> <li>▪ IR at 90° abduction: 70°-75°</li> </ul>
Week 9-12	<ul style="list-style-type: none"> <li>▪ Flexion 180°</li> <li>▪ ER at 90° abduction: 100°-115°</li> </ul>
<b>Flexibility</b>	<ul style="list-style-type: none"> <li>▪ Posterior shoulder stretch at PT discretion</li> </ul>
TREATMENT RECOMMENDATIONS	<p><b>Exercises</b></p> <ul style="list-style-type: none"> <li>▪ Progress above</li> <li>▪ Throwers Ten</li> <li>▪ Advanced Throwers Ten</li> <li>▪ Scapular stabilization               <ul style="list-style-type: none"> <li>○ Closed chain quadruped double arm protraction</li> <li>○ Prone “T, I” and progress to “Y” and “W” as ROM allows</li> </ul> </li> <li>▪ End range stabilization using exercise blade/perturbations</li> <li>▪ Shoulder endurance exercise</li> <li>▪ UE ergometry (if ROM allows)</li> <li>▪ Core strength/kinetic linking</li> <li>▪ Weeks 10-16               <ul style="list-style-type: none"> <li>○ 90°/90° ER/IR strengthening</li> </ul> </li> </ul>

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## Phase 3: Advanced (Weeks 6-15) (continued)

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### CRITERIA FOR ADVANCEMENT

- Full shoulder AROM
- 4/5 strength below shoulder height

### EMPHASIZE

- Full P/AROM
- Restoration of scapular and RC muscle balance and endurance



## POST-OPERATIVE SUPERIOR LABRAL ANTERIOR TO POSTERIOR REPAIR (SLAP II) GUIDELINES

### Phase 4: Pylometric Progression (Weeks 16-19)

PRECAUTIONS	<ul style="list-style-type: none"> <li>▪ No painful activities</li> </ul>
ASSESSMENT	<ul style="list-style-type: none"> <li>▪ Quick DASH</li> <li>▪ ASES</li> <li>▪ NPRS</li> <li>▪ PROM</li> <li>▪ AROM</li> <li>▪ Palpation</li> <li>▪ Static/dynamic scapular assessment (Kibbler grading)</li> <li>▪ Cervical mobility</li> <li>▪ Elbow PROM/AROM</li> <li>▪ Scapular static/dynamic assessment</li> <li>▪ Shoulder MMT</li> <li>▪ Grip Strength</li> </ul>
TREATMENT RECOMMENDATIONS	<ul style="list-style-type: none"> <li>▪ Continue shoulder RC and scapular stabilization exercises</li> <li>▪ Continue and progress all Advanced Thrower’s Ten exercises</li> <li>▪ Initiate pylometrics as tolerated             <ul style="list-style-type: none"> <li>○ Pylometric progression (over 4 week period)                 <ul style="list-style-type: none"> <li>▪ Double hand chest pass</li> <li>▪ Double hand overhead soccer pass</li> <li>▪ Double hand chops</li> <li>▪ Single hand IR at 0° abduction</li> <li>▪ Eccentric catch</li> <li>▪ Single hand 90/90 IR</li> </ul> </li> <li>○ Endurance progression                 <ul style="list-style-type: none"> <li>▪ Double hand overhead wall taps</li> <li>▪ Single arm 90/90 wall taps</li> <li>▪ Single arm 12 o’clock to 3 o’clock wall taps</li> <li>▪ Exercise blade in multiple sessions</li> </ul> </li> </ul> </li> </ul>
CRITERIA FOR ADVANCEMENT	<ul style="list-style-type: none"> <li>▪ Full shoulder AROM</li> <li>▪ Symptom free progression through pylometrics and endurance program</li> </ul>
EMPHASIZE	<ul style="list-style-type: none"> <li>▪ Shoulder flexibility, strength and endurance</li> <li>▪ Pain free plyometrics</li> </ul>



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### Phase 5: Return to Performance Progression (Weeks 16+)

PRECAUTIONS	<ul style="list-style-type: none"> <li>▪ All progressions should be pain-free</li> <li>▪ Monitor for loss of strength and flexibility</li> </ul>
ASSESSMENT	<ul style="list-style-type: none"> <li>▪ Quick DASH</li> <li>▪ ASES</li> <li>▪ NPRS</li> <li>▪ PROM</li> <li>▪ AROM</li> <li>▪ Palpation</li> <li>▪ Static/dynamic scapular assessment (Kibbler grading)</li> <li>▪ Cervical mobility</li> <li>▪ Scapular static/dynamic assessment</li> <li>▪ Shoulder MMT</li> <li>▪ Grip Strength</li> </ul>
TREATMENT RECOMMENDATIONS	<ul style="list-style-type: none"> <li>▪ Initiate interval sports programs at 5 months</li> <li>▪ Continue with all upper and lower extremity flexibility exercises</li> <li>▪ Continue with advanced shoulder and scapular strengthening exercises</li> <li>▪ Gradually progress sports activities</li> <li>▪ Monitor workload</li> </ul>
CRITERIA FOR RETURN TO SPORTS PARTICIPATION	<ul style="list-style-type: none"> <li>▪ Symptom free progression through interval sports program</li> <li>▪ Independent with all arm care exercises</li> </ul>
EMPHASIZE	<ul style="list-style-type: none"> <li>▪ Return to sports participation</li> </ul>





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