**OPEN LATARJET FOR ANTERIOR STABILIZATION CLINICAL PRACTICE GUIDELINE**

### Background
Ohio State’s Latarjet Anterior Shoulder Stabilization Rehabilitation Guideline is to be utilized following open anterior shoulder stabilization procedures. During the procedure the anterior coracoid is harvested and attached to the deficient portion of the anterior glenoid to improve stability. It is intended to be used in conjunction with the therapist and surgeon’s collaborative input. Therapists should obtain the operative note to ensure an understanding of the procedure performed.

### Disclaimer
Progression is time and criterion-based, dependent on soft tissue healing, patient demographics and clinician evaluation. Contact Ohio State Sports Medicine at 614-293-2385 if questions arise.

### Summary of Recommendations

#### Risk Factors
- Excessive joint laxity
- Exceeding guideline ROM recommendations/goals
- History of instability
- Comorbidities including, but not limited to, connective tissue disorders

#### Precautions
- Limited to 30 degrees external rotation for 6 weeks
- Limit active biceps AROM for first 6-8 weeks due to detachment of coracobrachialis and short head of the biceps
- Avoid extension behind the body for 6 weeks
- Avoid heavy bicep exercises for 12 weeks
- Progression of ROM should not be forced and is per patient’s tolerance
- Return to jogging should be not initiated until 10-12 weeks depending on patient presentation and physician clearance
- Return to non-contact sport 5-6 months; minimum of 6 months for contact sports and climbing
- Initiation of throwing program around month 4 with goal of return to game at 9 months
- Refer back to surgeon with any positive apprehension testing
- No Olympic lifting or bar bench press until 6 months

#### Manual Therapy
- Passive ROM not to exceed guideline
- Soft tissue mobilization per clinical judgment
- Joint mobilizations per guideline to reduce pain and improve mobility

#### Corrective Interventions
- Therapeutic exercises to optimize rotator cuff and periscapular strength
- Neuromuscular re-education to improve joint stability and proprioception
- Therapeutic activity to improve ADL and leisure activities
- Manual (PROM, AAROM, AROM) to restore normal ROM per guidelines
- Modalities to control pain and swelling

#### Outcome Testing
- Disability of Arm Shoulder and Hand (DASH) Questionnaire
- Kerlan-Jobe Orthopaedic Clinic (KJOC) Questionnaire

#### Criteria for discharge with return to sport (9-24 months)
- Full AROM appropriate for patient
- 5/5 MMT shoulder and scapular strength
- No substitution patterns
- Independent with home exercise program per patient needs
- Low pain scores
- Return to full abilities with ADLs
- Initiation and guidance with return to sport phase
During surgery the subscapularis will be either split or taken down and repaired. It is imperative that the treating therapist understands which technique was utilized in surgery. Please consult referring surgeon for operative note.

If the subscapularis was taken down and repair, the following precautions must be taken for 6 weeks:

- No ER past 30 degrees
- No cross body adduction
- No active IR or IR behind the back
- No supporting of body weight with affected side (i.e. pushing self up from a chair)

If the subscapularis was split, the precautions above should be followed except: resisted IR may begin at 4 weeks

### Phase I: Protection (Post Surgical– 0-6 weeks)

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<thead>
<tr>
<th>Post Operative to 6 weeks</th>
<th>Goals</th>
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<tr>
<td></td>
<td>• Max protection of surgical repair (capsule, ligaments, labrum, sutures)</td>
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<td>• Achieve staged ROM goals - do not significantly exceed</td>
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<td>• Patient education on post-op restrictions and maintaining appropriate posture</td>
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<td></td>
<td>• Minimize shoulder pain and inflammatory response</td>
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<td>• Ensure adequate scapular function</td>
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<tr>
<th>Post Operative to 3 weeks</th>
<th>Protection</th>
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<td>• Sling usage 6 weeks (discuss with physician) including while sleeping</td>
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<th>ROM Goals by week 3</th>
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<tr>
<td>• All ROM is to first end feel only</td>
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<tr>
<td>• Forward elevation to 90 degrees</td>
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<tr>
<td>• ER in scapular plane to 20 degrees (no ER at 90 degrees abduction)</td>
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<td>• No abduction or internal rotation</td>
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<td>• Elbow/wrist/hand ROM as tolerated</td>
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<tr>
<th>Weeks 4 to 6</th>
<th>ROM Goals by week 6</th>
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<tr>
<td></td>
<td>PROM</td>
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<tr>
<td></td>
<td>• Forward elevation limited to 135 degrees</td>
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<td>• IR to 50 degrees</td>
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<td>• Abduction to 115 degrees</td>
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<td>• ER in the scapular plane to 30 degrees</td>
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<td></td>
<td>• ER at 90 degrees abduction to 30 degrees</td>
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<td></td>
<td>Start AAROM</td>
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<td></td>
<td>• Cane and wall walks with limitations to 135 degrees</td>
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<td>• Pendulum exercises</td>
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<td></td>
<td>AROM</td>
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<td>• Begin at week 4 within limitations to 115 degrees flexion</td>
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May begin elbow AROM

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<th>Strengthening</th>
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<tr>
<td>• Begin submaximal isometrics (ER, Abduction, Flexion, Extension to hip only)</td>
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<tr>
<td>• Scapular stabilization (scapular clocks)</td>
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<tr>
<td>• ER with light, non-fatiguing theraband at 30 degrees of abduction (open pack position) - within ROM restrictions</td>
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<tr>
<th>Goals to Progress to Next Phase</th>
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<tbody>
<tr>
<td>1. Appropriate healing of surgical repair by adhering to precautions and immobilization guidelines</td>
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<tr>
<td>2. Staged ROM goals achieved but not significantly exceeded</td>
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<tr>
<td>3. Minimal to no pain with ROM</td>
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Phase II: Intermediate Phase

Weeks 7 to 12

**Goals**
- Achieve staged ROM goals to normalize PROM and AROM – **do not significantly exceed**
- Minimize shoulder pain
- Begin to increase strength and endurance
- Increase functional activities

Weeks 7 to 9

**ROM Goals by week 9**

**PROM**
- May perform joint mobilizations (emphasis on posterior mobility)
- Forward elevation 155 degrees
- IR at 90 degrees of abduction to 60 degrees by week 8-9
- ER at 20 degrees ABD to 60 degrees
- ER at 90 degrees ABD to 75 degrees

**AROM**
- Elevation to 145 degrees

**Strengthening**
- Begin light UBE
- PRE’s for scapular stabilizers (rows, shoulder extension, scapular retraction) utilizing low load, high repetition of 12-15 repetitions
- Dynamic resistance with PNF patterns and manual techniques
- Elbow extension strengthening using light weight/high reps
- Begin CKC exercise with table/wall weight shifts while keeping hands shoulder width or closer

Weeks 10 to 12

- Initiation of jogging with physician clearance

**ROM Goals by week 12**

**PROM**
- WNL all planes

**AROM**
- Elevation WNL

**Strengthening**
- Progress PREs in all planes using progressive weight and high repetitions
- Rhythmic stabilization i.e. prone medicine ball eccentric drops, free throws, ball taps, etc.
- Progress CKC exercises while keeping hands shoulder width or closer

**Goals to Progress to Next Phase**

1. Staged AROM goals achieved with minimal to no pain and without substitution patterns
2. Appropriate scapular posture at rest and dynamic scapular control during ROM and strengthening exercises
3. Strengthening activities completed with minimal to no pain
### Phase III: Advanced Activity Phase

**Goals**
- Normalize strength, endurance, neuromuscular control, and power
- Gradual and planned build up of stress to anterior capsulolabral tissues
- Gradual return to full ADLs, work, and recreational activities

**Weeks 12 to 16**
- **ROM**
  - Terminal ER stretches at 12 weeks
  - Self capsular stretches, AROM, and passive stretching as needed
- **Strengthening**
  - Advanced isotonics
  - Begin elbow flexion strengthening
  - Initiate plyometrics (2-handed drills) i.e. chest pass
  - Ball catch/toss at 90 degrees abduction position
  - Begin dumbbell pec exercises with reduced motion in horizontal abduction to 45 degrees
  - Begin light resistance training except: military press, pull ups, behind head pull-downs, overhead tricep extensions
  - Elbow should stay at or in front of midline of the body to reduce anterior shoulder stress

### Phase IV: Return to Sport/Activity

**Weeks 16-20**
- **ROM**
  - May begin more aggressive stretching techniques
- **Strengthening**
  - Begin overhead PRE’s – never behind midline of body
  - Begin light toss or volley (refer to return to throwing program)
  - Continue with specific training program
  - Return to full activity
  - Bench Press with bar at 6 months

**Goals to Progress to Return to Sport**
1. Progress functional activities towards return activity or sport
2. Enhance neuro-muscular control
3. Improve strength, power, and endurance
4. Muscular strength no less than 80% of contralateral side
5. Full functional ROM
6. 5/5 scapular and rotator cuff strength

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**References**

