Posterior Shoulder Stabilization
Clinical Practice Guideline

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Background Information:
The included guideline is intended for post-operative rehabilitation and includes arthroscopic posterior shoulder stabilization surgical procedures. Progression through this guideline is time dependent on soft tissue healing as well as criterion-based concerning patient demographics and clinical assessment. Please refer to the surgical note for information regarding each procedure.

Precautions: the intended guidelines are used to reduce the risk of excessive joint laxity/instability and reduce stress to the posterior capsule & labrum. All ROM should be staged, not significantly exceeded, and never forced

- Use of sling for 6 weeks with proper use in neutral rotation (No across belly positions) -Removal for bathing, hygiene, dressing. Can perform writing/typing with elbow supported
- Avoid positions of horizontal adduction or internal rotation
- Horizontal adduction or internal rotation stretches should be avoided for 10-12 weeks
- Avoid weightbearing through involved UE for 10-12 weeks
- Isotonic strengthening should be held until week 8
- Avoid posterior glenohumeral joint mobilizations

Phase 1: Protected Motion (0-6 weeks)

GOALS:

- Maximally protect the surgical repair (capsule, ligaments, labrum, suture anchors)
- Slowly increase staged ROM goals- never force ROM
- Patient education on postoperative restrictions
- Minimize shoulder pain & inflammatory response
- Minimize effects of immobilization

PRECAUTIONS:

- Limit use of UE/avoid lifting with arm.
- Towel roll placed underneath arm during ROM for support
- Avoid horizontal adduction and IR stretching, weight bearing through involved extremity, & strengthening
- Use of sling for 6 weeks with proper use in neutral rotation (No across belly positions)
  -Removal for bathing, hygiene, dressing. Can perform writing/typing with elbow supported

Post-Operative to 4 weeks	***Weeks 4 to 6***
PROM & AAROM ▪ Forward elevation to 90 degrees (wand) ▪ Initiate shoulder ER at neutral (wand) *No Isometric or Isotonic Strengthening* *Wrist/hand AROM as tolerated* *Modalities/cryotherapy PRN*	*PROM & AAROM* ▪ Forward elevation to 120 degrees ▪ Continue shoulder ER at neutral ▪ Pendulums (unweighted) *No Isometric or Isotonic Strengthening* *Wrist/hand AROM as tolerated* *Modalities/cryotherapy PRN*

MILESTONES TO PROGRESS TO PHASE 2:

1. Proper sling use
2. Control of pain & inflammation
3. Physician clearance for sling discharge

Phase 2: Moderate Protection (7-12 weeks)

GOALS:

- Normalize arthrokinematics of glenohumeral & scapulothoracic joints
- Full shoulder ROM obtained by week 10
- Increase total arm strength and neuromuscular control
- Monitor and decrease pain and/or inflammation

PRECAUTIONS:

- Limit use of UE/avoid lifting with arm.
- Towel roll placed underneath arm during ROM for support
- Avoid horizontal adduction and IR stretching, weight bearing through involved UE (until weeks 10-12)
- Initiate isometric or isotonic strengthening at week 8

Post-Operative 7 to 10 weeks	***Weeks 10 to 12***
ROM ▪ Progress forward elevation to 180 degrees (wand) ▪ Initiate progression of ER at 90° abduction ▪ AROM as tolerated without substitution ▪ Begin Biceps AROM *Strengthening Progression (initiate at week 8)* *Early Stage* ▪ Glenohumeral submax ISOM ▪ Dynamic ISOM walkouts with band *Late Stage* ▪ Light band/weight isotonic ER/IR at neutral ▪ Light band/weight isotonic scapular stabilization (rows, extension, depression, horizontal abduction with palm down) ▪ Light resistive isotonic elbow flex & ext *Neuromuscular Reeducation* ▪ Rhythmic stabilization in non-provocative positions (initiate at 90° FE then 120° FE, & IR/ER) ▪ Scapular PNF with manual resistance and/or scapular clocks *Modalities/cryotherapy PRN*	*ROM* ▪ Continue previous terminal ROM (except horiz add and IR) ▪ Gentle horizontal adduction and IR *Strengthening* ▪ Continue previous isotonic progression for rotator cuff, scapular stabilizers, & elbow ▪ ER & IR strengthening at 45° abduction ▪ Initiate scaption/abduction ▪ Incorporate LE/core exercises *Neuromuscular Reeducation* ▪ Continue previous exercises ▪ Initiate manual resistance PNF D2 pattern within ROM *Functional Activity* ▪ Initiate a walk to jog progression program (with physician clearance) *Modalities/cryotherapy PRN*

MILESTONES TO PROGRESS TO PHASE 3:

1. Full AROM & PROM within guidelines
2. Normalized arthrokinematics with ADLs
3. Minimal to no pain with ROM & strengthening (0-2/10)

Phase 3: Minimal Protection (13-17 weeks)

GOALS:

- Full AROM & PROM
- Improve muscular strength and endurance
- Initiation of functional activities

PRECAUTIONS:

- Do not increase stress to shoulder in a short period or uncontrolled manner
- Do not progress into activity-specific training until full ROM and strength are achieved
- Gradually load UE CKC (weight bearing) activity per below guidelines
- If patient does not perform velocity dependent tasks during work/sport/ADLs do not perform plyometrics

CRITERIA FOR PLYOMETRIC TRAINING

1. Adequate strength of scapular stabilizers & rotator cuff: MMT 4+/5
   (70-80% bilateral comparison with handheld dynamometer)
2. Involved extremity ER to IR ratio >66% (isokinetic or handheld dynamometry testing)
3. Pain-free ADLs and with previous strengthening
4. Minimum 3 weeks of multi-plane activity at increased speed of movement

Post-Operative weeks 12 to 17

ROM

- Continue previous ROM & posterior capsule stretching
- Initiate inferior GH joint mobilizations if lacking glenohumeral abduction

Strengthening

- Initiate standing UE CKC weight bearing at wall (fixed distal segment, no elbow flex)
- Advance isotonic PREs (ex: Thrower's Ten Program: T's, Y's, ER/IR at 90° abd)
- Continue core & lower extremity strengthening

Neuromuscular Reeducation

- External resistance D1 & D2 PNF patterns (manual/band/weight)
- Reactive training: ball drops, wall dribbles, etc..
- Progress into a UE plyometric progression program (once above criteria met)
  -Start with double-arm exercises (ex: chest pass)
  -Progress into single-arm exercises (ex: ball catch & toss drills)

MILESTONES TO PROGRESS TO PHASE 3:

1. No pain or compensation with horizontal adduction or IR stretching
2. Involved extremity ER to IR ratio >66% (isokinetic or handheld dynamometry testing)
3. Pain-free ADLs and with previous strengthening
4. Adequate strength of scapular stabilizers & rotator cuff:
   (>80% bilateral comparison with handheld dynamometer)

Phase 4: Advanced Strength/Return to Activity (weeks 18+)

GOALS:

- Enhance muscular strength and endurance
- Maximize reactive neuromuscular control
- Maintain shoulder ROM

PRECAUTIONS:

- Gradually increase tissue exposure to velocity dependent functional activity
- Continue progressive loading of CKC activity per below guidelines
  (avoid prone push-ups until 5-6 months)
- Progressively involve functional activity/sport-specific training in a controlled & safe manner

MILESTONES TO INITIATE INTERVAL PROGRESSION PROGRAMS (e.g. throwing)

1. Clearance from physician
2. Muscular strength >80% bilateral comparison for rotator cuff & scapular stabilizers
   (handheld dynamometer)
3. Involved extremity ER to IR ratio $\geq$75% (isokinetic or handheld dynamometry testing)
4. Full functional ROM with appropriate scapulohumeral rhythm (see appendix for overhead athlete)
5. Completion of a UE plyometric progression program

Post-Operative weeks 18+

ROM

- ROM/progress all terminal stretches PRN

Strengthening

- Continue with UE isotonic PREs
  Initiate prone CKC UE progression
  -Progression: light supine bench press
  -Progression: controlled falls onto ground/therapy ball (fixed distal segment, no elbow flexion)
  (avoid prone push-ups until 5-6 months)
- Initiate overhead PREs: overhead lat pulldowns & military press (in front of head)

Neuromuscular Reeducation

- Continue with UE plyometrics

Functional Activity

- May begin interval sports progression program once above criteria is met

CRITERIA TO DISCHARGE FOR RETURN TO FULL SPORT ACTIVITY

1. Physician clearance (contact sport activity- 6 months)
2. Normal arthrokinematics of the glenohumeral & scapulothoracic joints (see appendix for overhead athlete)
3. Muscular strength >90% bilateral comparison for rotator cuff & scapular stabilizers
   (handheld dynamometer)
4. Involved extremity ER to IR ratio $\geq$75% (isokinetic or handheld dynamometry testing)
5. Completion of an interval sport progression program

Appendix:

The Overhead Athlete:	**Side to side differences (throwing arm vs non-dominant arm)**
Total rotational ROM at 90° abd (ER plus IR)	< 5 degrees
Shoulder flexion	≤ 5 degrees
Shoulder ER	5 degrees more
Horizontal Adduction	<15 degrees

References:

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Completed Date: 07/14/2018