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Physical Therapy Rehabilitation following Anterior Shoulder Stabilization

The following post-operative shoulder anterior 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 a variety of anterior stabilization procedures with attention given to exact location of repair and 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.

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PHASE 1: Recovery (Week 1)

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| Precautions | <ul style="list-style-type: none">• Sling for 3 weeks• Avoid stress on anterior shoulder joint• If combined with biceps tenodesis, no biceps strengthening for 8 weeks• No forced stretching• Avoid painful activities |
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| Assessment | <ul style="list-style-type: none">• Quick Disabilities of Arm, Shoulder, & Hand (Quick DASH)• American Shoulder and Elbow Surgeons Shoulder Score (ASES)• Numeric Pain Rating Scale (NPRS)• PROM• Palpation• Static scapular assessment (Kibber Grading)• Cervical mobility |
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| Treatment Recommendations | <ul style="list-style-type: none">• Gripping and hand AROM• Postural awareness• Wrist AROM: flexion/extension/pronation/supination |
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Range of Motion:

- Week 1: external rotation (ER) to neutral, elevation in scapular plane 60°
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| Criteria for Advancement | <ul style="list-style-type: none">• Decreasing discomfort at rest |
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| Emphasize | <ul style="list-style-type: none">• Protection of repair• Reduction of tissue irritability• Prevention of muscle atrophy |
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PHASE 2: Intermediate (Weeks 2-5)

Precautions	<ul style="list-style-type: none"> • Sling for 3 weeks • Monitor for shoulder stiffness • No forced PROM • Avoid undue stress to anterior shoulder joint
Assessment	<ul style="list-style-type: none"> • Quick DASH • ASES • NPRS • PROM • Palpation • Static/dynamic scapular assessment (Kibbler Grading) • Cervical mobility
ROM Goals – Do not force, but assess for stiffness	
Week 2-3	<ul style="list-style-type: none"> • Elevation in scapular plane: 90° • ER in scapular plane: 5°-10° • Internal rotation (IR) in scapular plane: 30°-45°
Week 4	<ul style="list-style-type: none"> • Elevation in scapular plane: 90°-100° • ER in scapular plane: 15°-20° • IR in scapular plane: 50°-60°
Week 5-6	<ul style="list-style-type: none"> • Elevation in scapular plane: 120°-145° • ER in scapular plane: 40°-60° • IR in scapular plane: 50°-60°
Treatment Recommendations	<ul style="list-style-type: none"> • Abduction: 0°-90° first 6 weeks (gentle motion)
Exercises	
Week 2	<ul style="list-style-type: none"> • Scapular Isometrics • Elbow AROM • Shoulder AAROM
Week 3	<ul style="list-style-type: none"> • RC isometrics • Rhythmic stabilization ER/IR with PT
Week 4	<ul style="list-style-type: none"> • Continue RC isometrics • Elastic band row
Week 5-6	<ul style="list-style-type: none"> • No pain at rest • 120° shoulder elevation PROM; 45° ER in scapular plane • Tolerance of scapular and RC exercises without discomfort

**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

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PHASE 3: Advanced (Weeks 6-15)

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

**Criteria for
Advancement**

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

Emphasize

- Full PROM and AROM
- Restoration of scapular and RC muscle balance and endurance

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PHASE 4: Plyometric (Weeks 16-19)

Precautions	<ul style="list-style-type: none"> • No painful activities
Assessment	<ul style="list-style-type: none"> • Quick DASH • ASES • NPRS • PROM/AROM • Palpation • Static/dynamic scapular assessment (Kibbler Grading) • Cervical mobility • Elbow PROM/AROM • Shoulder MMT • Grip strength
Treatment Recommendations	<ul style="list-style-type: none"> • Continue shoulder RC and scapular stabilization exercises • Continue and progress all Advanced Thrower’s Ten exercises • Initiate plyometrics as tolerated <ul style="list-style-type: none"> • Plyometric progression (over 4 week period) <ul style="list-style-type: none"> • Double hand chest pass • Double hand overhead soccer pass • Double hand chops • Single hand IR at 0° abduction • Eccentric catch • Single hand 90/90 IR • Endurance progression <ul style="list-style-type: none"> • Double hand overhead wall taps • Single arm 90/90 wall taps • Single arm 12 o’clock to 3 o’clock wall taps • Exercise blade in multiple sessions
Criteria for Advancement	<ul style="list-style-type: none"> • Full shoulder AROM • Symptom free progression through plyometrics and endurance program
Emphasize	<ul style="list-style-type: none"> • Shoulder flexibility, strength, and endurance • Pain free plyometrics

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PHASE 5: Return to Performance Progression (5 months +)

Precautions	<ul style="list-style-type: none">• All progression should be pain-free• Monitor for loss of strength and flexibility
Assessment	<ul style="list-style-type: none">• Quick DASH• ASES• NPRS• PROM/AROM• Palpation• Static/dynamic scapular assessment (Kibbler Grading)• Cervical mobility• Shoulder MMT• Grip strength
Treatment Recommendations	<ul style="list-style-type: none">• Initiate interval sports program at 5 months• Continue with all upper and lower extremity flexibility exercises• Continue with advanced shoulder and scapular strengthening exercises• Gradually progress sports activities• Monitor workload
Criteria for Return to Participation	<ul style="list-style-type: none">• Symptom free progression through interval sports program• Independent with all arm care exercises
Emphasize	<ul style="list-style-type: none">• Return to sports activity

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