



HUDSON PRO ORTHOPAEDICS & SPORTS MEDICINE

IMRAN ASHRAF, MD

REHABILITATION GUIDELINES FOR POSTERIOR SHOULDER RECONSTRUCTION +/- LABRAL REPAIR

The rehabilitation guidelines are presented in a criterion based progression. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance and injury severity. Specific time frames, restrictions and precautions may also be given to protect healing tissues and the surgical repair/reconstruction.

PHASE I (Surgery to 0-3 weeks post op)

APPOINTMENTS	Meet with the physician at 1 post op Begin physical therapy within 7 days after surgery
REHAB GOALS	<ol style="list-style-type: none"> 1. Protection of the post-surgical shoulder 2. Activation of the stabilizing muscles of the gleno-humeral and scapulo-thoracic joints 3. Maintain ROM at the elbow and wrist
PRECAUTIONS	<ol style="list-style-type: none"> 1. Sling immobilization required for soft tissue healing for 4 weeks. Remove sling during the 4th week in safe environments and discontinue after 4 weeks 2. Hypersensitivity in axillary nerve distribution is a common occurrence 3. No internal rotation past neutral for 6 weeks and no internal rotation with abduction for 8 weeks to protect repaired tissue
SUGGESTED THERAPEUTIC EXERCISE	<ul style="list-style-type: none"> • Begin week 3, sub-maximal shoulder isometrics for IR/ER, flex/ext, & abd/add • Hand gripping • Elbow, forearm and wrist AROM • Cervical Spine and scapular AROM • Desensitization techniques for axillary nerve distribution • Postural exercises
CARDIOVASCULAR FITNESS	Walking, stationary bike - sling on. No TREADMILL (Avoid running and jumping due to the distractive forces that can occur at landing)
PROGRESSION CRITERIA	3 weeks post op

PHASE II (Begin at 3 weeks post op to 8 weeks post op)

APPOINTMENTS	Meet with the physician at 6 weeks post op Physical therapy 1-2x/week
--------------	--

PHASE II GOALS	<ol style="list-style-type: none"> 1. Full AROM in cardinal planes, except internal rotation 2. Progress IR range of motion gradually to prevent oversteering the repaired posterior tissues of the shoulder 3. Strengthen shoulder and scapular stabilizers in protected position (0-45 degrees abduction) 4. Begin proprioceptive and dynamic neuromuscular control retraining. Avoid closed chain exercises due to stress to posterior repair
PRECAUTIONS	<ol style="list-style-type: none"> 1. Sling immobilization required for soft tissue healing for 4 weeks. Remove sling during the 4th week in safe environments and discontinue after 4 weeks 2. Hypersensitivity in axillary nerve distribution is a common occurrence 3. No internal rotation past neutral for 6 weeks and no internal rotation with abduction for 8 weeks to protect repaired tissues 4. Avoid passive and forceful movements into internal rotation and horizontal adduction
SUGGESTED THERAPEUTIC EXERCISE	<ul style="list-style-type: none"> • AA/AROM in all cardinal planes – assessing scapular rhythm, respecting IR ROM guidelines • Rotator cuff strengthening in non-provocative positions (0-45 degrees abduction) • Scapular strengthening and dynamic neuromuscular control • Cervical spine and scapular AROM • Postural exercises • Core strengthening
CARDIOVASCULAR FITNESS	Walking, stationary bike, stairmaster. NO SWIMMING OR TREADMILL. (Avoid running and jumping until athlete is at least 8 weeks post op and has full rotator cuff strength in a neutral position due to the distractive forces that can occur at landing)
PROGRESSION CRITERIA	<ol style="list-style-type: none"> 1. Full AROM, except internal rotation 2. 5/5 IR/ER strength at 45 degrees abduction

PHASE III (Begin at 8 weeks post op)

APPOINTMENTS	Meet with the physician at 12 weeks post op Physical therapy 1x/2-3 weeks
PHASE III GOALS	<ol style="list-style-type: none"> 1. Full AROM in all cardinal planes with normal scapulo-humeral movement 2. 5/5 rotator cuff strength at 90 degrees abduction in the scapular plane 3. 5/5 peri-scapular strength
PRECAUTIONS	<ol style="list-style-type: none"> 1. Avoid posterior pain with activity/rehab. Post activity soreness should be mild and subside within 24 hours 2. All exercises and activities to remain non-provocative and low to medium velocity 3. Avoid activities where there is a higher risk for falling or outside forces to be applied to the arm 4. No swimming or throwing sports
SUGGESTED THERAPEUTIC EXERCISE	<u>Motion</u> No restrictions for internal rotation, normalize to other side gradually and with appropriate end feel

	<p><u>Strength and Stabilization</u> Flexion in prone, hor abd in prone, full can ex, D1 and D2 diagonals in standing below 90 degrees abduction</p> <p>TB/cable column/ dumbbell (light resistance/high rep) IR/ER in 90 degrees abduction and rowing</p>
CARDIOVASCULAR FITNESS	Walking, biking, stairmaster and running (if they have met Phase II criteria) NO SWIMMING
PROGRESSION CRITERIA	Patient may progress to Phase IV if they have met the above stated goals and are at least 12 weeks post op

PHASE IV (Begin when goals and criteria from Phase III are met, ~12 wks)

APPOINTMENTS	Meet with the physician at 18 weeks post op Physical therapy 1x/3 weeks
PHASE IV GOALS	<ol style="list-style-type: none"> 1. Patient to demonstrate stability with higher velocity movements and change of direction movements 2. 5/5 rotator cuff strength with multiple repetition testing at 90 degrees abduction in the scapular plane 3. Full multi-plane AROM
PRECAUTIONS	<ol style="list-style-type: none"> 1. Avoid posterior pain with activity/rehab. Post activity soreness should be mild and subside within 24 hours 2. Progress gradually into provocative exercises by beginning with low velocity, known movement patterns 3. Progress gradually into closed chain exercise focusing on ability to control posterior forces
SUGGESTED THERAPEUTIC EXERCISE	<p><u>Strength and Stabilization</u> Dumbbell and medicine ball exercises that incorporate trunk rotation and control with rotator cuff strengthening at 90 degrees abduction. Begin working towards more functional activities by emphasizing core and hip strength and control with shoulder exercises</p> <p>TB/cable column/ dumbbell IR/ER in 90 degrees abduction and rowing</p> <p>Balance board in push-up position (with RS), prone seiss ball walk-outs, rapid alternating movements in supine D2 diagonal. CKC stabilization with narrow base of support</p>
CARDIOVASCULAR FITNESS	Walking, biking, stairmaster and running (if they have met Phase III criteria) NO SWIMMING
PROGRESSION CRITERIA	Patient may progress to Phase V if they have met the above stated goals and have no apprehension or internal impingement signs

PHASE V (Begin when goals and criteria from Phase IV are met, ~18 wks)

APPOINTMENTS	Meet with the physician at 24 weeks post-op Physical therapy 1x/ 3 weeks
PHASE V GOALS	<ol style="list-style-type: none"> 1. Patient to demonstrate stability with higher velocity movements and change of direction movements that replicate sport specific patterns (including swimming, throwing, etc) 2. No apprehension or instability with high velocity overhead movements 3. Improve core and hip strength and mobility to eliminate any compensatory stresses to the shoulder 4. Work capacity cardiovascular endurance for specific sport or work demands
PRECAUTIONS	<ol style="list-style-type: none"> 1. Progress gradually into sport specific movement patterns 2. Avoid posterior pain with activity. Post activity soreness should be mild and subside within 24 hours
SUGGESTED THERAPEUTIC EXERCISE	<p><u>Strength and Stabilization</u> Dumbbell and medicine ball exercises that incorporate trunk rotation and control with rotator cuff strengthening at 90 degrees abduction and higher velocities. Begin working towards more sport specific activities</p> <p>High velocity strengthening and control, such as the inertial, plyometrics, rapid theraband drills. Plyometrics should start with 2 hand below shoulder height and progress to overhead, then back to below shoulder with one hand, progressing again to overhead</p> <p>Higher velocity strengthening and dynamic control, such as the inertial, plyometrics, rapid theraband drills</p> <p>Initiate throwing program, overhead racquet program or return to swimming program depending on the athlete's sport</p>
CARDIOVASCULAR FITNESS	Design to use sport specific energy systems
PROGRESSION CRITERIA	Patient may return to sport after receiving clearance from the Orthopedic Surgeon and the Physical Therapist/Athletic Trainer