

REHAB PROTOCOL FOR CLAVICLE ORIF

PHASE I (surgery to 6 weeks after surgery)

Appointments	<ul style="list-style-type: none"> Rehabilitation appointments begin 2 weeks after surgery unless instructed otherwise by surgeon
Rehabilitation Goals	<ul style="list-style-type: none"> Protect the post-surgical shoulder Activate the stabilizing muscles of the glenohumeral and scapula-thoracic joints 135° of active and passive range of motion (PROM) for shoulder flexion, abduction, internal rotation (IR) and external rotation (ER) to neutral
Precautions	<ul style="list-style-type: none"> Sling immobilization required for soft tissue healing for 4-6 weeks. May remove sling during the 4th week in safe environments (at night) Hypersensitivity in supraclavicular nerve distribution is a common occurrence Range of Motion Precautions <ul style="list-style-type: none"> 0-3 weeks: - No shoulder extension, abduction, IR, ER past 20° in neutral or ER with abduction. Stop flexion at first end feel or at 90° 4-6 weeks: - Forward elevation/flexion to 135° - IR to 50° - ER in scapular plane and 90° abduction to 30°
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> Codman's, closed chain PROM Posterior capsule mobilization Scapular squeezes and scapular clocks Hand gripping Elbow, forearm and wrist active ROM Cervical spine ROM Desensitization techniques for axillary nerve distribution Postural exercises
Cardiovascular Exercise	<ul style="list-style-type: none"> Walking, stationary bike - sling on No swimming or treadmill

	<ul style="list-style-type: none"> • Avoid running and jumping due to the distractive forces that can occur at landing
Progression Criteria	<ul style="list-style-type: none"> • 5/5 IR and ER strength at 0° of shoulder abduction • Full flexion and abduction PROM

PHASE II (Usually 6 weeks after surgery, begin when Phase I criteria met)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments are 1-2 times per week
Rehabilitation Goals	<ul style="list-style-type: none"> • Full shoulder active ROM in all cardinal planes • Strengthen shoulder and scapular stabilizers in protected position <ul style="list-style-type: none"> ○ (0° - 45° abduction) • Begin proprioceptive and dynamic neuromuscular control retraining
Precautions	<ul style="list-style-type: none"> • ROM Precautions <ul style="list-style-type: none"> ○ Progressively and gradually moving to full AROM
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • AAROM and active range of motion (AROM) in all cardinal planes – assessing scapular rhythm • Gentle shoulder mobilizations as needed • Rotator cuff strengthening in non-provocative positions (0° - 45° abduction) • Scapular strengthening and dynamic neuromuscular control • Biceps and triceps strengthening • Cervical spine and scapular active range of motion • Postural exercises • Core strengthening
Cardiovascular Exercise	<ul style="list-style-type: none"> • Walking, stationary bike, Stairmaster • No swimming or treadmill • Avoid running and jumping until athlete has full rotator cuff strength in a neutral position due to the distractive forces that can occur at landing
Progression Criteria	<ul style="list-style-type: none"> • Full shoulder active ROM

	<ul style="list-style-type: none"> • Negative apprehension and impingement signs • 5/5 shoulder IR and ER strength at 45° abduction
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PHASE III (Usually 12 weeks after surgery, begin when Phase II criteria met)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments are once every 1-2 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> • Patient to demonstrate stability with higher velocity movements and change of direction movements • 5/5 rotator cuff strength with multiple repetition testing at 90° abduction in the scapular plane • Full multi-plane shoulder AROM
Precautions	<ul style="list-style-type: none"> • Progress gradually into provocative exercises by beginning with low velocity, known movement patterns
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Motion <ul style="list-style-type: none"> ○ Posterior glides if posterior capsule tightness is present • Strength and Stabilization <ul style="list-style-type: none"> ○ Dumbbell and medicine ball exercises that incorporate trunk rotation and control with rotator cuff strengthening at 90° abduction. Begin working towards more functional activities by emphasizing core and hip strength and control with shoulder exercises ○ TheraBand/cable column/ dumbbell IR and ER in 90 abduction and rowing ○ Higher velocity strengthening and control, such as the inertial, plyometrics, rapid TheraBand drills. ○ Plyometrics should start with 2 hands below shoulder height and progress to

	<p>overhead, then back to below shoulder with one hand, progressing again to overhead</p> <ul style="list-style-type: none"> ○ Begin education in sport specific biomechanics with initial program for throwing, swimming or overhead racquet sports
Cardiovascular Exercise	<ul style="list-style-type: none"> • Walking, biking, Stairmaster and running (if Phase III criteria has been met) • No swimming
Progression Criteria	<ul style="list-style-type: none"> • Patient may progress to Phase IV: <ul style="list-style-type: none"> ○ 5/5 rotator cuff strength with multiple repetition testing at 90° abduction in the scapular plane ○ Full multi-plane shoulder AROM

PHASE IV (when Phase III criteria met, usually 16 weeks after surgery)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments are once every 3 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> • Patient to demonstrate stability with higher velocity movements and change of direction movements that replicate sport specific patterns (including swimming, throwing, etc) • No apprehension or instability with high velocity overhead movements • Improve core and hip strength and mobility to eliminate any compensatory stresses to the shoulder • Work capacity cardiovascular endurance for specific sport/work demands
Precautions	<ul style="list-style-type: none"> • Progress gradually into sport specific movement patterns
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Motion <ul style="list-style-type: none"> ○ Posterior glides if posterior capsule tightness is present • Strength and Stabilization

	<ul style="list-style-type: none"> ○ Dumbbell and medicine ball exercises that incorporate trunk rotation and control with rotator cuff strengthening at 90° abduction and higher velocities. Begin working towards more sport specific activities ○ Initiate sport specific programs (throwing program, overhead racquet program or return to swimming program) depending on the athlete's sport ○ High velocity strengthening and dynamic control, such as the inertial, plyometrics, rapid TheraBand drills
Cardiovascular Exercise	<ul style="list-style-type: none"> • Design to use sport/work specific energy systems
Progression Criteria	<ul style="list-style-type: none"> • Patient may return to sport after receiving clearance from the orthopedic surgeon and the physical therapist/athletic trainer