Rehabilitation protocol adopted from the Massachusetts General Hospital Sports Physical Therapy program and the American Academy of Orthopedic Surgeons for non-surgical rehabilitation of clavicle fractures (7,15).

PHASE ONE: 0 – 4 Weeks Post-Injury	Program
 GOALS: 1. Protect Clavicle: Arm sling for 6 weeks 2. Regain Range of Motion (ROM): Perform protected ROM 3. Control pain and swelling: Ice 3-5 times/day (15 min) PRECAUTIONS: Maintain arm below 90° 5lb lifting restriction No pulling, pushing or excessive reaching ROM Precautions: Flexion to 90° External rotation(ER) at 0° as tolerated; internal rotation (IR) and external rotation at 90° to 45° No IR behind back; No horizontal adduction 	EXERCISES(3-5x/day; 7 days/week) Stretching/Active Motion Pendulum exercises Supine passive arm lifts Supine ER Strengthening Ball squeezes Isometric rotator cuff (external/internal rotation) Isometric shoulder (abduction, adduction, extension, flexion) Elbow and forearm exercises (i.e. Theraband biceps and triceps) Additional rehab considerations: Soft-tissue/manual therapy for shoulder/neck musculature Cardiovascular training (i.e. stationary bike) throughout rehab
PHASE TWO: 7 – 12 Weeks Post-Injury	
GOALS: 1. Restore ROM: Discontinue sling 2. Increase strength: being gentle strengthening 3. Improve neuromuscular control and proprioception PRECAUTIONS: • No push-ups or pushing • No overhead or across body lifting • ROM Precautions: - Increase ROM by 15º per week - Shoulder flexion and abduction to tolerance - Active horizontal adduction only - Progressive IR and ER as tolerated	EXERCISES(1-3x/day; 7 days/week) Stretching/Active Motion Supine assistive arm lifts Supine and Standing ER Behind back IR Horizontal adduction (active reach only) Hands behind-the-head stretch ER @ 90° abduction stretch IR @ 90° (sidelying) Proprioception drills Strengthening Theraband: IR, ER, forward/serratus punches, biceps curls, rows Sidelying ER Prone: row, extension, 'T's, 'Y's Standing scaption Isotonic biceps curl Rhythmic stabilization Scapulohumeral Rhythm exercises

PHASE THREE: 13 – 18 Weeks Post-Injury

GOALS:

- 1. Continue to protect clavicle
- 2. Restore full ROM
- 3. Continue strengthening progression: strength/power/endurance/stability/control

PRECAUTIONS:

- Continue to avoid pushing and overhead lifting
- Gradual return to recreational activities without force on the arm
- ROM Precautions:
 - Progress to full ROM

EXERCISES(1-2x/ day; 7days/ week) <u>Stretching/Active Motion</u> (continue from Phase 2) and add:

- Standing ER/Doorway
- Wall Slide stretch
- Standing forward flexion
- Supine cross-chest stretch
- Sleeper stretch
- ER at 90º abduction stretch

<u>Strengthening:</u> continue Theraband and dynamic exercises from phase 1 and 2

- o PREs no greater than 5lbs
- Week 12: Wall Push-Ups
- Week 16: Weight training to begin
 - Front pull downs, biceps/triceps
 - Seated rows and bench press

PHASE FOUR: 19 - 28 Weeks Post-Injury

GOALS:

- 1. Maintain full ROM
- 2. Progression of functional activities
- 3. Continue progressive strengthening
- 4. Advance sports and recreational activity per surgeon

PRECAUTIONS:

Weight training precautions

EXERCISES(1x/day; 3 days/week) <u>Stretching/Active Motion</u> (continue from Phase 3)

<u>Strengthening:</u> continue Theraband and dynamic exercises from Phase 3

- o Progress closed chain exercises:
 - Ball on wall
 - Week 20: Push-up on unstable surface
- o Thrower Plyometric Program:
 - 'Rebounder' throws arm at side; weight ball
 - Wall dribbles overhead
 - Wall dribbles at 90°: decelerations, circles
- Week 28-32: Initiate sports programs and regular sport-specific training