

Orthopaedic Sports Specialists, P.C.

Michael E. Joyce, M.D. & Alex G. Dukas, M.D.

84 Glastonbury Blvd., Suite 101, Glastonbury, Connecticut 06033

Voice: 860-652-8883, Fax: 860-652-8887

Post-Operative Open Reduction Internal Fixation of Proximal Humeral Fracture Rehabilitation Protocol

General Principles:

1. Initial phase focus on obtaining and maintaining Range of Motion.
2. Bony healing occurs usually within 6 to 8 weeks in adults
3. Second Phase focuses on introducing strengthening.
4. Begin strengthening at six weeks post-operatively, starting with isometrics and progressing to bands and then weights, with a focus on the scapular stabilizers, rotator cuff, and deltoid.
5. Return to normal function and motion may require 3 to 4 months

Goals:

1. Increase and preserve ROM while protecting the fracture site.
2. Control pain and swelling (with exercise and modalities)
3. Perform frequent gentle exercise to prevent adhesion formation

I. Phase I – Early Motion Phase (0 - 5 weeks)

A. Week 1 Early Passive Motion

1. Wear the sling at all times except to exercise
2. Start Pendulums
3. Hand, wrist, elbow, and cervical AROM
4. Grip and wrist strengthening
5. PROM: supine Flexion to 90°. Light gentle passive IR and ER (very gentle)
6. Modalities as needed for pain relief or inflammation reduction

B. Week 2

1. Apply hot packs 10 minutes before exercising
2. Continue pendulum (Codman) exercises with circles in and out
3. Soft tissue mobilization
4. Supine ER with a stick to 30°
5. Support elbow on a folded towel with shoulder in 15° ABD
6. Scapular Stabilization
 - a. Scapular clocks
 - b. Scapular retractions (**no shoulder extension**)

- C. **Week 3 – 5 (begin AAROM when pain diminishes and pt is less apprehensive)**
1. Continue all above exercises
 2. Supine Cane flexion
 3. Begin pulley for flexion to tolerance
 4. Begin to wean out of sling except for at risk activities

II. **Phase II – Active Motion Phase (Weeks 6 – 12).**

-Second Post-Operative Appointment with surgeon at 6 weeks. Check with provider before starting Active ROM.

D. **Week 6 – 8 AROM**

1. Establish full PROM
2. Begin AROM
 - a. Supine flexion to patient tolerance
 - b. Progress to seated (or standing) flexion with a stick
 - c. Seated flexion with elbow bent and arm close to the body
 - d. Perform ER and ABD with hands behind head
 - e. Side lying ER (**pain-free**)
 - f. Serratus Punches
 - g. Begin Extension and IR: (PROM, AROM and Isometrics)
 - h. Begin multi-angle isometrics
 - i. Continue PROM and begin gentle patient self stretching (**week 7–8**)
 - j. Flexion: put hand on wall or top of door
 - k. ER: hold onto door jam and twist
 - l. IR: use good arm to pull affected arm into IR

E. **Week 8 - 10 Early Resisted ROM**

1. Begin Theraband for IR, ER, flexion, ABD, and extension
2. Begin supine IR, ER with 1# (arm supported at 15° ABD) (**pain-free**)
3. Begin UBE with no resistance
4. Prone Ext and ABD (**pain-free**)
5. Progress to adding weight to above exercises **only if pain-free**
6. Biceps / Triceps strengthening with dumbbells

II. **Phase III – Aggressive Stretching and Strengthening Phase (beginning week 12)**

1. Isotonic strengthening with weights all directions
2. Increase theraband or use rubber tubing
3. Increase stretches on door and add prone stretches
4. Begin functional or sport activity for strength gain