

## **Hemiarthroplasty (Humeral Head Replacement) With Proximal Humeral Fracture Post-Surgical Rehabilitation Protocol**

### General Principles:

1. These patients are progressed more slowly and may achieve less overall ROM than those without a fracture.
2. Bony healing occurs usually within 8 weeks in adults
3. Return to normal function and motion may require 4 or more months
4. No Extension or Internal Rotation until 6 weeks post-op.

### Overall Goals:

1. Maintain joint stability by pushing less aggressively with ROM of the shoulder
2. Control pain and swelling (with exercise and modalities)
3. Improve strength and motion to maximize function

### **I. Phase I – Early Motion Phase (0 – 6 weeks)**

#### **A. Week 1 Early Passive Motion**

1. Wear the sling at all times except to exercise
2. Hand, wrist, elbow, and cervical AROM
3. Grip and wrist strengthening
4. PROM: Flexion to 90° and ER to limit set by M.D. (often 30°)
5. Modalities as needed for pain relief or inflammation reduction

#### **B. Week 2 Active Assisted ROM**

1. Apply hot packs 10 minutes before exercising
2. Begin pendulum (Codman) exercises with circles in and out
3. PROM: Flexion to 130° and ER to limit set by M.D. (often 40°)
4. Begin gentle AAROM flexion to 130°
5. Supine ER with a stick to 30°
  - a. 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 – 4 AAROM and Isometrics**

1. Continue all above exercises
2. Continue AAROM forward elevation to tolerance
3. Begin submaximal isometrics ER, Flex and ABD (**No Ext or IR x 6 wks**)
4. Begin pulley for flexion to tolerance (with elbow bent)

### **II. Phase II – Active Motion Phase (Week 6 – 12)**

**A. Week 6 – 8 AROM**

1. Begin AROM
  - a. Supine flexion with and without stick
  - b. Progress to sitting (or standing) flexion with a stick
  - c. Sitting flexion with elbow bent and arm close to the body
  - d. Raise arms over head with hands clasped
  - e. Gentle flexion and ABD on slide board or table to tolerance
  - f. Sidelying ER
  - g. Prone Ext and ABD (**pain-free**)
  - h. Serratus Punches
2. Begin Extension and IR: PROM, AROM, and Isometrics
3. Continue PROM and begin gentle patient self stretching (**week 7 – 8**)
  - a. Wall Walking for flexion
  - b. Doorway ER stretch
  - c. S/L post capsule stretch

**B. Week 8 – 10 Early Resisted ROM**

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

**III. 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