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## **Humeral Shaft ORIF PT**

Humerus fractures generally take 6-8 weeks to heal. Severity of humerus fractures can vary and affect time to healing and stability of the repair. The rehab protocol below relates to fractures that have a strong and stable surgical repair. Less stable fractures may require more protection and a less aggressive protocol.

The intent of this protocol is to provide the clinician with a guideline for the postoperative rehabilitation course of a patient that has undergone a surgical repair of a humerus fracture. This protocol is no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient they should consult with the referring surgeon

### **Phase 1 (1-3 weeks)**

#### Appointments

Begin physical therapy at 1 week post op, 2 x/week

Follow up with MD 10-14 days post op

#### Rehabilitation Goals

Protect repair

Minimize pain and swelling

Maintain ROM of surrounding joints

Prevent adhesive capsulitis

Minimize cardiovascular deconditioning

#### Precautions

Sling at all times or per MD

No AROM, lifting, pushing, pulling x 6 weeks

No ER > 40 degrees or excessive shoulder EXT x 6 weeks

No supporting of body weight

#### Suggested Therapeutic Exercises

PROM of shoulder:

Flexion to 90 degrees, ER to 30 degrees, IR to tolerance (no behind back)

Scapular clocks: Elevation, depression, retraction, protraction

Pendulums (Codman's)

Incision mobilization

Cervical, hand, wrist, elbow  
 AROM: thumb to shoulder, make fist Cardiovascular Exercises  
 Stationary bike in sling

Progression Criteria  
 Per X-ray evidence of healing  
 PROM flexion to 90 degrees, ER to 30 degrees

### **PHASE II (WEEKS 3-6)**

Rehabilitation Goals  
 Regain PROM  
 Gentle functional use  
 No resistance Precautions  
 Sling and ROM limitations per MD  
 No IR/ER  
 No driving  
 No pushing, pulling, lifting  
 No cuff strengthening

Suggested Therapeutic Exercises  
 PROM in scapular plane (no hand behind back IR)  
 AAROM: - flexion to 90 degrees - ER to 40 degrees, Pulleys  
 AROM of elbow, wrist and hand  
 Continue scapular isometrics and clocks  
 Grade I-II GH and scapular mobilizations

Cardiovascular Exercises  
 Cardiovascular conditioning in sling per MD  
 UBE no resistance  
 Stationary bike  
 ROM limits

Progression Criteria  
 Per X-ray evidence of healing  
 AAROM flexion to 90 degrees, ER to 40 degrees

### **PHASE III (WEEKS 6-12)**

Rehabilitation Goals  
 Regain full PROM Precautions  
 Sling use per MD based on x-ray evidence of healing  
 May begin driving  
 20 lb weight limit  
 No pushing or pulling  
 No overhead activity

Suggested Therapeutic Exercises

Continue PROM/AAROM/AROM cervical, shoulder, elbow, wrist and hand  
 Pec minor stretching to minimize scapular protraction with flexion  
 Submaximal isometric RTC exercises at 6 weeks  
 Progressive isotonic RTC exercises at 8 weeks, low weights, high reps  
 Grade III-IV GH and scapular mobilizations at 8 weeks  
 Posterior scapular stretching at 8 weeks if needed  
 General UE strengthening at 10 weeks

Cardiovascular Exercises  
 UBE with light resistance  
 Stationary bike  
 Swimming per MD

Progression Criteria  
 Advance to work/sport specific conditioning once  
 AROM is = bilateral and strength is 4+/5 in all directions

#### **PHASE IV (WEEKS 12 +)**

Rehabilitation Goals  
 Full ROM in all planes  
 Transition to HEP Precautions  
 Per MD but generally no lifting, pushing or pulling precautions at this point  
 No overhead lifting until 4-6 months post op

Suggested Therapeutic Exercises  
 AROM of cervical shoulder, elbow, wrist and hand emphasizing end ROM  
 GH and scapular joint mobilizations as needed  
 Pec minor stretching  
 Posterior capsule stretching  
 Anterior deltoid strength and scapular stabilization  
 General UE strengthening Cardiovascular Exercises  
 No restrictions Progression Criteria  
 DC to HEP