

General Rehabilitation Guidelines

ORIF Proximal Humerus Fractures

Samir Patel, MD

Precautions:

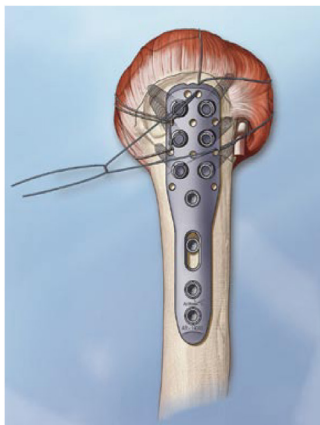
- *Basis*
 - Tuberosities are repaired and bony healing must occur before stress is applied to rotator cuff tendons
 - Recent literature suggests that early motion may result in tuberosity migration
 - Tuberosity migration causes stiffness from mechanical impingement
 - Tuberosity migration causes weakness from abnormal soft tissue tension
 - The current trend in rehabilitating these injuries is to go slower rather than quicker and promote anatomic tuberosity healing
 - It is much easier to treat postoperative stiffness with a manipulation than it is to treat tuberosity malunion with a second reconstruction procedure
- *Precautions*
 - No external rotation past 40° for 6 weeks
 - No active internal rotation for 6 weeks
 - No cross body adduction for 6 weeks
 - No lifting/pushing/pulling > 5lb for first 6 weeks

Inpatient: (0-4 days)

- Instruct to don and doff sling or shoulder immobilizer
 - Shoulder should be completely immobilized at all times except to change
- Instruct on proper use of ice or cryocuff
 - 20-30 minutes at a time, several times per day
 - should be done especially after exercises
- Instruct in home program, and begin, cervical, elbow and wrist range of motion
- Instruct in home program, and begin grip strengthening
- Arrange for outpatient physical follow-up to begin on day of office follow-up

Other Instructions

- dry gauze to wound q day until dressing totally dry, then cover prn
- may shower at 7 days but no bath or hot tub for 3 weeks
- no anti-inflammatory medications x 6 weeks unless on ASA for other reasons



Outpatient Phase 1: (Hospital discharge – Week 4)

- **ROM**
 - Continue cervical, elbow and wrist ROM
 - Pendulum exercises
 - Passive forward elevation to 90°
 - Passive ER to 25°
 - Passive IR as tolerated (not behind back)
- **Strengthening**
 - No cuff strengthening
 - Begin and instruct in program of postural correction
 - May begin scapular retraction and depression
- **Sling**
 - Arm in sling at all times except for exercises and bathing
 - Includes sling at night
- **Other**
 - Continue cryotherapy
 - Incision mobilization and desensitization
 - Modalities to decrease pain and inflammation

Outpatient Phase 2: (Weeks 5-8)

- **ROM**
 - Instruct in home program and begin self-assisted forward elevation to 90° and progress in 20° increments per week
 - May use pulleys
 - Instruct in home program and begin self-assisted ER to 40°
 - IR in scapular plane as tolerated
 - No IR behind back
 - No cross body adduction
 - Grade I-II scapulothoracic and glenohumeral mobilizations
 - **NOTES:** Hydrotherapy program is okay in provided the limits of no active internal rotation and ER limit to 40° are kept. Should not begin prior to week 3 so wound is fully healed
- **Strength**
 - No cuff strengthening
 - Continue scapular retraction and depression
 - Lower extremity aerobic conditioning
- **Sling**
 - May discontinue use of the sling in the daytime but continue to wear at night through the six week mark
- **Other**
 - Continue modalities to decrease pain and inflammation
 - Incision mobilization and desensitization techniques
 - Continue cryotherapy as necessary

Outpatient Phase 3: (Weeks 9-12)

- **ROM**

- Progressive return to full forward elevation and external rotation
- May begin posterior capsular stretching program
- May begin IR behind
- Grade III-IV glenohumeral and scapulothoracic mobilizations
- Begin anterior chest wall stretches (pec minor)

- **Strength**

- Instruct in home program and begin submaximal isometrics in flexion, abduction, IR, ER and extension
- Add progressive isotonic with low resistance, high repetitions as tolerated
- Progressive two-hand supine
- Emphasize anterior deltoid strength and scapular stabilization
- Emphasize upper trapezius, serratus anterior force couple rehabilitation to create stable scapular base
- Assess for and correct compensatory movement patterns
- UBE with low resistance
- Continue aerobic conditioning

Outpatient Phase IV: (> Week 12)

- **ROM**

- Progressive return to full motion in all planes
- Emphasize posterior capsule stretching
- Maintenance home flexibility program

- **Strength**

- Continue rotator cuff and scapular strengthening program
 - Progressive increase in resistance as strength improves
- Continue UBE with progressive resistance as tolerated
- Maintenance home exercise program
- Recreation/vocation specific rehabilitation
- Maintenance aerobic conditioning program