



## Proximal Humerus Fracture

### Phase I – Immediate Post-Surgical (Week 0-3)

Goals:

- Maintain integrity of repair
- Diminish pain and inflammation
- Prevent muscular inhibition
- Independent with ADLs with modifications while maintaining the integrity of the repair

Precautions:

- No active range of motion (AROM) of the shoulder
- Maintain arm in sling, remove only for bathing and exercise
- No lifting of objects
- No shoulder motion behind back
- No excessive stretching or sudden movements
- No supporting of body weight by hands

Criteria for progression to Phase II:

- Passive range of motion (PROM) flexion to at least 60 degrees
- PROM ER in scapular plane to at least 45 degrees
- PROM IR in scapular plane to at least 45 degrees
- PROM ABduction to at least 90 degrees in scapular plane

#### Week 0-1

- Abduction brace/sling at all times except showering; Sleep in brace/sling
- Shower with operative arm held at the side
- Pendulum (Codman) exercises
- Begin scapular musculature isometrics and cervical ROM
- Patient education: posture, joint protection, positioning, hygiene
- Finger, hand, wrist elbow AROM
- Cryotherapy for pain and inflammation

#### Week 2-3

- Abduction brace/sling at all times except showering; Sleep in brace/sling
- Start PROM to tolerance
  - Flexion
  - Abduction in the scapular plane
  - ER in scapular plane
  - IR in scapular plane

### Phase II – Protection (Week 4-12)

Goals:

- Allow healing of soft tissue
- Do not overstress healing rotator cuff
- Gradually restore full passive ROM



### Precautions

- No lifting
- No supporting of body weight by hands and arms
- No excessive behind the back movements
- No sudden jerking motions

### Criteria for progression to Phase III

- Full AROM
- Full PROM

### Week 4-5

- Discontinue sling/brace
- Cryotherapy as needed
- Initiate active assisted range of motion (AAROM) flexion in supine position
- Gentle scapular/glenohumeral joint mobilization as indicated to regain full passive ROM
- Pendulum exercises
- Continue scapular musculature isometrics and cervical ROM
- Initiate prone rowing to neutral arm position
- May use heat prior to ROM exercises
- Ice after exercise

### Week 6-7

- Initiate AROM exercises
  - Shoulder flexion in scapular plane
  - Shoulder abduction

### Week 8-12

- Continue AAROM, AROM and stretching exercises
- Begin rotator cuff isometrics

## **Phase III – Intermediate Phase (Week 13-16)**

### Goals:

- Full AROM
- Maintain full PROM
- Dynamic shoulder stability
- Gradual restoration of shoulder strength, power and endurance
- Optimize neuromuscular control
- Gradual return to functional activities

### Precautions:

- No heavy lifting (<5 lbs)
- No sudden lifting or pushing activities
- No sudden jerking motions

### Criteria for progression to Phase IV

- Able to tolerate the progression to low-level functional activities
- Demonstrates return of strength/dynamic stability



- Re-establish dynamic shoulder stability
- Demonstrate adequate strength and dynamic stability for progress to higher demanding working/sport specific activities

#### Week 12-13

- Dynamic stabilization exercises
- May use pool (aquatherapy) for light ROM exercises
- Initiate strengthening program
  - External rotation (ER) and Internal rotation (IR) with theraband
  - ER side-lying
  - Lateral raises
  - Full can in scapular plane (avoid empty can abduction exercises)
  - Prone rowing
  - Prone horizontal abduction
  - Prone extension
  - Elbow flexion/extension
- Active and passive range of motion as tolerated in all planes, progress to full range of motion

#### Week 14

- Initiate light functional activities

#### Week 15-16

- Progress to fundamental shoulder exercises

### **Phase IV – Advanced Strengthening (Week 17-24)**

Goals:

- Maintain full non-painful AROM
- Advance conditioning exercises for enhanced function use of the extremity
- Improve muscular strength, power and endurance
- Gradual return to full functional activities

#### Week 17-24

- Continue ROM and self-guided capsular stretching
- Continue progression of strengthening
- Advance proprioceptive, neuromuscular activities

### **Phase V – Return to Full Activity**

Goals:

- Gradual return to strenuous work activities
- Gradual return to recreational activities
- Gradual return to sport activities

#### Week 25

- Can begin golf, tennis, ect.
- May initiate interval sports program (if applicable)



### **Criteria to Return to Sport**

- Surgeon clearance
- Pain free shoulder function
- Adequate active and passive range of motion necessary for required sport/activity
- Greater than 90% strength as compared to the non-operative shoulder