



Non- OP Proximal Humeral Fracture Management

The first two weeks for all proximal humerus fractures managed non-operatively entails complete shoulder immobilization in a sling until the patient is seen in clinic for radiographic assessment. Subsequent progression will depend on if the fracture is categorized as **stable** (such as an impacted fracture, or minimally-displaced 2-part fracture) or **unstable** (more displacement/more fragments) to be determined by the provider in clinic. At all points in recover, motion progression should not create pain in the involved shoulder nor create a feeling of movement across the fracture site.

Stable Proximal Humeral Fracture Management

Phase I: Stable Fractures (impacted or minimally displaced two part fractures)

***(2-4 weeks)**

GENERAL GUIDELINES AND PRECAUTIONS

- Sling immobilization at all times except therapy (home or clinic) and personal hygiene
- No active use of the involved arm
- No rotation of the involved arm (internal or external)
- PAIN-FREE PROM forward elevation – max 90 degrees elevation

GOALS

- Protect fracture site from movement to optimize healing environment
- Decrease risk for stiffness associated with immobilization
- Promote distal circulation of hand and forearm
- Education patient about activity guidelines and rehab progression/expectations

EXERCISES

- Active grip, wrist flexion/extension; forearm pronation/supination; elbow flexion/extension; scapular retraction/protraction as tolerated
- Small circle pendulum clockwise and counterclockwise
- Passive forward elevation to 90 degree maximum

CRITERIA TO PROGRESS TO PHASE II

- Pain not increased with passive elevation to 90 degrees AND
- Clearance based on radiographic evidence of lack of fracture fragment displacement at 4 week radiographic assessment

PHASE II:

***Patient returns to the Salina Regional Health Center Orthopedic and Sports Medicine Clinic at 4 weeks for radiographs (4-6 week)**

GENERAL GUIDELINES AND PRECAUTIONS *Proximal humerus fracture guidelines*

- Remain in sling at all times other than PT (home or clinic) and personal hygiene
- No active motion or active use of the arm
- **PAIN-FREE** Passive elevation – max to 140; ER max to 40
- No internal rotation (vertebral or at 90)

GOALS

- Protect fracture site with immobilization to optimize healing environment
- Encourage motion in pain free range up to stated limits to prevent stiffness while healing in immobilization

EXERCISES

- Passive forward elevation up to max 140 (supine well arm assisted; table top step back; table top supported using well arm to slide)
- Passive external rotation with arm at neutral (alongside of body) up to max 40 (seated well arm assisted; supine cane assisted with arm supported into scapular plane)
- May begin aquatics for Basic UE program with slow speed of motions; avoid hook and rotate exercise and cross body adduction (hug yourself)
- Continue pendulum, elbow, wrist, hand, and scapular retraction

CRITERIA TO PROGRESS TO PHASE III

- Pain-free passive forward elevation to 140; ER to 40
- Clearance by MD based on evidence of early callus at 6 week radiograph assessment

PHASE III:

*** Patient return to the SRHC Orthopedic and Sports Medicine Clinic at 6 weeks for radiographs (6-12 weeks)**

GENERAL GUIDELINES AND PRECAUTIONS

- Wean from sling gradually at home first, then in community
- Avoid lifting more than 5 lbs
- Avoid weight bearing of affected arm

GOALS



- Emphasis on restoring passive range of motion.
- Restore full passive motion of the glenohumeral joint first, then progress to active assisted, then active motion through the full range
- Restore functional use of the arm for ADL's below shoulder level (feeding, grooming...)
- Protect healing fracture from stress overload

EXERCISES

- **PAIN-FREE** Passive range of motion without range limits for elevation, ER (0); ER(90) and IR toward full motion in all planes
- Continue aquatic program in all planes and may gradually increase speed of motion
- Forward elevation progression: supine active assisted, active, to incline, to vertical supported, to vertical unsupported (after full passive range is established)
- ER/IR AROM against gravity when full passive range is established
- Scapular protraction and retraction
- Active motion through short arc from balanced position and rhythmic stabilization in balanced position (90 deg elevation in supine)

CRITERIA FOR RETURN TO WORK/SPORT *Proximal humerus fracture guidelines*

- Per MD clearance based on demands of such, status of fracture healing, status of motion and strength – determined on a case by case basis

PHASE IV:

***Patient returns to the SRHC Orthopedic and Sports Medicine Clinic at: 12 weeks for radiographs (12 weeks +)**

GENERAL GUIDELINES AND PRECAUTIONS

- Per MD clearance based on sufficient fracture healing

GOALS

- AROM to equal PROM for elevation with normalized mechanics and no pain against gravity (in vertical position) and also for ER at neutral and 90 degrees
- Strength to equal opposite UE in all major muscle groups
- Functional return to work/sport; GFR > 90%; DASH < 10%

EXERCISES



- Continue stretching to end range as tolerated in all planes until full motion is achieved if this has not already been accomplished.
 - Begin strength progression with light band/hand weight resistance for all major upper extremity muscles, including rotator cuff and scapular stabilizers.
 - Begin functional progression as needed specific to sport and work demands.
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UNSTABLE PROXIMAL HUMERAL FRACTURE MANAGEMENT

The progression for unstable proximal humeral fractures differs in that these fractures require 4 weeks of complete shoulder immobilization in a sling, followed by initiation of the rehab process at Phase II if cleared following radiographic assessment.

- For **UNSTABLE** fractures
 - Phase I above is not included
 - Phase II covers weeks 4-8
 - Phase III covers weeks 8-12
 - Phase IV is as above

KEY CLINIC CONCEPTS

- 1. Rehabilitation activities should not ever create a feeling of motion at the fracture site; any pain with rehab activities should be less than 3/10 and transient with resolution within one hour of such activity**
- 2. Full passive motion shoulder be restored in all planes prior to beginning the active assisted to active motion progression**
- 3. Full active motion with good mechanics should be restored prior to strengthening exercises**