

Humeral Shaft Fracture (ORIF)

PHASE I: Protected ROM (6 weeks)

- Keep dressing in place, you may shower directly over clear plastic.
- Sutures are all underneath the skin and will dissolve on their own.
- Ice or cold flow systems encouraged for the first week at a minimum: should be used 3-4 times per day.
- Sling should be in place when not performing exercises.
- May start active scapular mobility exercises– Must keep the shoulder musculature relaxed.
- Initiate exercise program 3 times per day during first two weeks:
 - Immediate elbow, forearm and hand range of motion out of sling
 - Pendulum exercises
 - Passive scapular plane elevation as tolerated (see picture below)
 - Passive external rotation of the shoulder to tolerance (see picture below)
- 3 to 5 times each day you should perform assisted overhead reaching and external rotation (outward turning) exercises with the operative arm. Both exercises should be done with the non-operative arm used as the "therapist arm" while the operative arm remains relaxed. Ten of each exercise should be done three to five times each day.
- Overhead reach is helping to lift your stiff arm up as high as it will go. To stretch your overhead reach, lie flat on your back, relax, and grasp the wrist of the tight shoulder with your opposite hand. Using the power in your opposite arm, bring the stiff arm up as far as it is comfortable. Start holding it for ten seconds and then work up to where you can hold it for a count of 30. Breathe slowly and deeply while the arm is moved. Repeat this stretch ten times, trying to help the arm up a little higher each time.

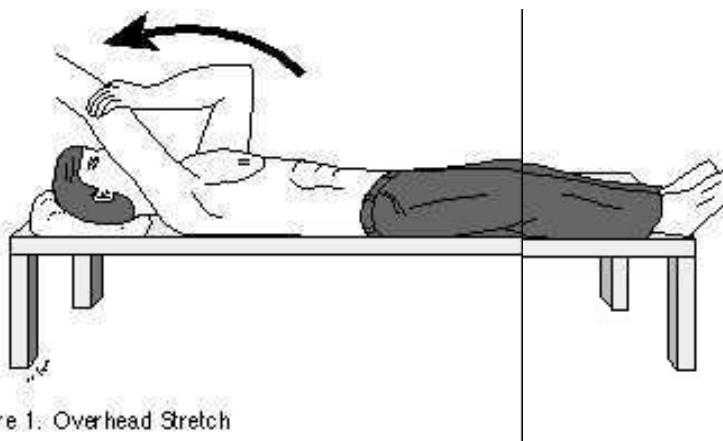


Figure 1: Overhead Stretch

- External rotation is turning the arm out to the side while your elbow stays close to your body. External rotation is best stretched while you are lying on your back. Hold a cane, yardstick, broom handle, or dowel in both hands. Bend both elbows to a right angle. Use steady, gentle force from your normal arm to rotate the hand of the stiff shoulder out away from your body. Continue the rotation as far as it will go comfortably, holding it there for a count of 10. Repeat this exercise ten times.

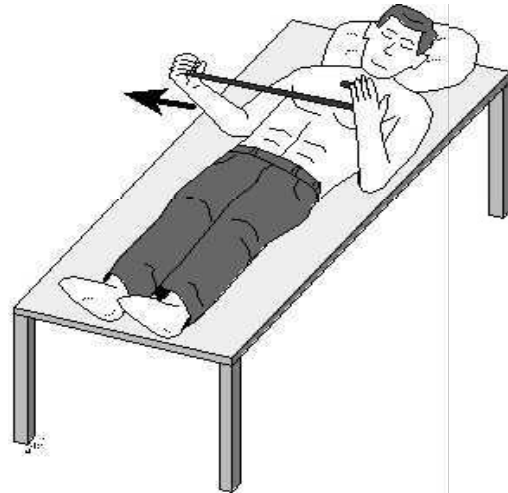


Figure 3. External rotation

PHASE II: Progressive ROM (6 to 12 weeks)

- May discontinue sling.
- Lifting restriction of 5 pounds should be reinforced with patient.
- Start AAROM and AROM – includes pulleys, wand and supine gravity assisted exercises. Emphasize all motions including IR behind the back at 10-12 weeks.
- Isolate and strengthen scapular stabilizers.
- Progress PROM and terminal capsular stretching of the shoulder as needed.
- Avoid AROM in positions of subacromial impingement.
- May start gentle rotator cuff strengthening at 8 weeks

PHASE III: (> 12 weeks)

- Discontinue formal lifting restrictions.
- Advance rotator cuff and shoulder strengthening (Theraband, dumbbells, Hughston's exercises, etc). Include home cuff strengthening program. Continue to emphasize scapular stabilizers.
- Equate active and passive range of motion. Encourage scapulohumeral mechanics during active shoulder motion.
- Simulate work/recreational activities as rotator cuff strength and endurance improve.