Orthopaedic institute of ohio

General Rehabilitation Guidelines

Total Shoulder Arthroplasty or Resurfacing Hemiarthroplasty

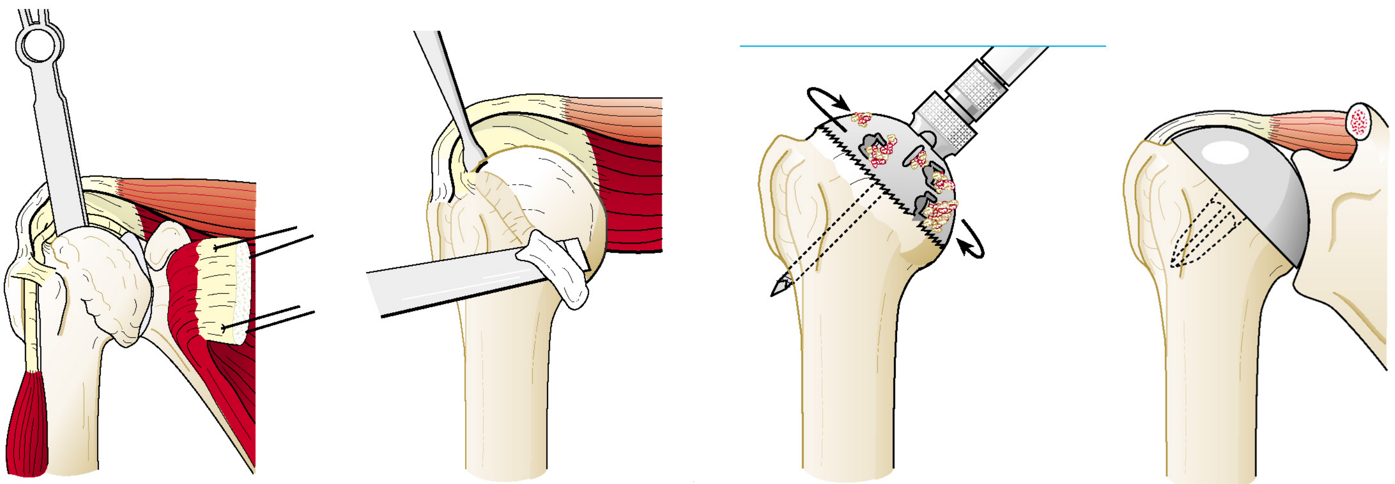
Samir Patel, MD

Precautions:

- *Basis*
    - Subscapularis tendon is taken down and repaired during case
    - Posterior capsule tension is often "loose" in early phases of recovery due to attenuation from preoperative posterior humeral translation
    - Cement fixation of polyethylene to glenoid bone is tenuous under high loads
- *Precautions*
    - No external rotation past 40° for 8 weeks
    - No active internal rotation for 8 weeks
    - No cross body adduction for 6 weeks
    - No lifting/pushing/pulling > 5lb for first 8 weeks
    - Long Term: no forceful jerking movements (starting outboard motor, push mower or chain saw; no repetitive impact loading (chopping wood)

Inpatient: (0-4 days)

- Start CPM (when available)
    - Set to provide passive forward elevation in scapular plane to 90°
    - Should be used for first 48-72 hours until patient comfortable with self-assisted motion exercises
    - Arm should be removed every 1-2 hours to prevent compressive neuropathy
- ***ROM***
    - Instruct in home program, and begin, Codman's exercises
    - Instruct in home program, and begin, self-assisted forward elevation and external rotation
        - Supine forward elevation to 140°
        - External rotation with stick to 25°
    - Instruct in home program and begin cervical, elbow and wrist ROM and grip strengthening



- ***Strength***
  - Instruct in home program, and begin, closed chain external rotation isometric exercises
  - Instruct in home program and begin scapular retraction and depression
- ***Other***
  - Instruct to don and doff sling or shoulder immobilizer
  - Instruct on proper use of ice or cryocuff
    - 20-30 minutes at a time, several times per day
    - should be done especially after exercises
  - Arrange for outpatient physical follow-up to begin on day of office follow-up
  - Provide with written copy of home exercises to be done 5x/day

- **Therpay goals** (prior to discharge from hospital)
  - 140° self-assisted elevation to allow eventual active overhead reach
  - 25° self-assisted external rotation to allow eventual progression to full function and prevention of secondary impairments
  - initiation of arm being used for functional activities such as eating, combing hair (ADLS requiring minimal force)
  - independence in home exercise program
  - understanding of precautions
- **Wound 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 to Week 4)
- ***ROM***
  - Continue program of self-assisted forward elevation and external rotation
    - No ER beyond 25° slowly progress to 35°
    - IR in scapular plane as tolerated; no IR behind back
    - No IR in abduction, extension or cross body adduction
  - Joint mobilization of glenohumeral joint and scapulothoracic junction grades I/II as dictated by patient's tolerance.
  - Continue cervical, elbow and wrist ROM and grip strengthening
  - Postural control exercises
- ***Strength***
  - Continue isometric external rotation
  - Instruct in a home program, and begin, closed chain isometric abduction, forward elevation
    - No adduction, IR or extension
  - Begin scapular retraction and depression but no shrugs
  - Begin and encourage aerobic conditioning such walking or stationary bike
- ***Sling***
  - Continue to wear except for between exercise sessions and bathing
- ***Other***
  - Incision mobilization and desensitization
  - Modalities for pain, inflammation and edema control (no e-stim)
  - Cryotherapy as needed

Outpatient Phase 2: (Weeks 5 – 8)

- ***ROM***
  - Continue program of self-assisted forward elevation and external rotation
  - No ER beyond 40° until Week 7 and then progressive return to full in 10-15° increments per week
  - IR in scapular plane as tolerated
    - No IR behind back
    - No IR in abduction, extension or cross body adduction
  - Grades I/II glenohumeral and scapulothoracic mobilization techniques
  - At Week 7 may begin AROM in forward elevation and external rotation with no resistance
  - May use pulleys for forward elevation and abduction
  - Continue cervical, elbow, wrist ROM and grip strengthening
  - Postural control
- ***Strength***
  - Continue isometrics
  - Continue scapular retraction and depression
  - At Week 7, instruct in a home program, and begin, progressive supine two-hand press
  - At Week 7 may begin biceps/triceps strengthening with elbow supported
  - Lower body aerobic conditioning
- ***Sling***
  - May discontinue use of sling in daytime but should continue to wear at night through Week 6 to protect subscapularis repair
- ***Other***
  - Continue scar massage

Outpatient Phase 3: (Weeks 9 -12)

- ***ROM***
  - Continue program of self-assisted forward elevation and external rotation with goal of progressive return to full range
  - May begin ER stretch in progressive degrees of abduction
  - Begin IR stretches in abduction
  - Begin cross body abduction stretch for posterior capsule
  - Begin anterior chest wall stretching
  - Grade III/IV glenohumeral and scapulothoracic mobilization techniques
- ***Strength***
  - Instruct in home program and begin isotonic rotator cuff and deltoid strengthing starting with light resistance
    - Start in non-impingement position and progress through increasing degrees of abduction as tolerated
  - Advance periscapular strengthening of posterior shoulder girdle (trapezius, rhomboids, latissimus dorsi, serratus anterior)
  - Advance scapular stabilization with closed chain scapular clocks, table top ball rolls and wall washes, scapular punches and dumps
  - UBE with light resistance especially in reverse direction to promote scapular strengthening
  - Low weight high repetition to build endurance and encourage muscle hypertrophy and cuff remodeling
  - continue biceps and triceps strengthening
  - Continue aerobic conditioning

NOTES: Hydrotherapy program is okay in phases 1 and 2 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

- Hydrotheraphy should include core body strengthening and aerobic conditioning

Outpatient Phase 4: Weeks 12 - 16)

- ***ROM***
  - Continue maintenance flexibility program until full ROM and emphasize posterior capsular stretching with side-lying IR stretch and cross body abduction stretch
- ***Strength***
  - Progressive cuff, deltoid and periscapular strengthening
    - Emphasize strengthening force couples
  - Add proprioceptive exercises to improve joint position in space
  - Continue UBE with progressive resistance
  - Continue aerobic conditioning and core body strengthening
  - Functional progression exercises depending on activities