OrthoVirginia
West End Orthopaedic Clinic

D. Christopher Young, M.D.
Head Team Physician
University of Richmond
Clinical Associate Professor of
Orthopedic Surgery, VCU
Jacob C. Puglisi, PA-C, ATC
Physician Assistant

Total Shoulder Arthroplasty/Hemiarthroplasty Protocol

The intent of this protocol is to provide the therapist with a guideline for the postoperative rehabilitation course after Total Shoulder Arthroplasty (TSA) or Hemiarthroplasty. It is not intended to be a substitute for appropriate clinical decision-making regarding the progression of a patient's post-operative course. If there are any questions or concerns, please contact our office prior to beginning the physical therapy program.

Phase I (Post op Day #1 - 3 weeks)

Goals:

- Allow healing of soft tissue
- Maintain integrity of the shoulder replacement
- Progressive increase in passive range of motion of the shoulder to tolerance
- Restore/Maintain active range of motion (AROM) of Elbow, Wrist, Hand
- Decrease pain and inflammation
- Gradual return to activities of daily living (i.e. grooming, dressing)

Precautions:

- The sling/immobilizer should be used for sleeping and when out in public for the first 3 weeks. The sling/immobilizer can be removed only for exercise, bathing, when writing a letter, typing on the computer, etc. (the shoulder should be supported at all times when the sling/immobilizer is removed.
- While lying supine a small pillow or towel roll under the distal humerus to avoid shoulder hyperextension
- Avoid stress to the anterior capsule and avoid stressing the subscapularis repair.
- No lifting, pushing, pulling or carrying objects heavier than 1 lbs.
- Avoid sudden, jerking type movements (especially with shoulder external rotation)
- Keep the surgical site clean and dry (do not soak in water for at least 4 weeks, avoid hot tubs)
- Driving may resume after discontinuing the use of the sling/immobilizer and you have satisfactory motion to drive safely and effectively.

Postoperative Day #1 (in hospital)

- Elbow, Wrist, and Hand motion only to avoid stiffness of these joints.
- Ice treatments every 2 - 3 hours for pain/inflammation
- Patient education regarding proper positioning & joint protection techniques

Chippenham Boulders Office
1115 Boulders Parkway, Suite 100, N. Chesterfield, Virginia 23225
Office: 804.320.1339 Fax: 804.560.1481

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Postoperative Days # 2-10 (out of hospital)

- Gentle passive supine forward elevation in plane of scapula
- Pendulums
- Gentle passive supine ER in scapular plane to 20 degrees. (Attention: DO NOT produce undue stress on the anterior joint capsule and subscapularis particularly with shoulder in extension)
- Cervical spine AROM
- Positioning full time in sling/immobilizer. May remove for previously mentioned activities.
- Assure normal neurovascular status
- Begin active assisted Elbow ROM

Postoperative Days # 10-21

- Continue previous exercises
- Stationary bike or recumbent bike only for cardiovascular endurance
- May initiate core exercises
- Begin sub-maximal, pain-free shoulder isometrics with the arm in neutral position
- Once achieved 100-110 degrees of forward elevation with PROM, may initiate pulleys for ROM
- Continue to progress PROM as motion allows
- Gradually progress to pain free AAROM with the shoulder
- Achieve/Maintain full active ROM of the elbow
- May initiate shoulder shrugs and scapular retractions (no weight)

Complications/Cautions:

- If pain level is not dissipating, decrease intensity and amount of exercises
- No lifting, pushing, pulling, carrying, etc anything greater than 1 lbs.
- **Protect the subscapularis repair**

Criteria for progression to the next phase:

- Progression with PROM
- Able to tolerate isometrics program
- Minimal to no shoulder pain

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Phase II (Weeks 3-6)

Goals:

- Continue PROM progression/ gradually restore pain free full passive ROM
- Gradually initiate/ restore active motion of the shoulder
- Continue to control pain and inflammation
- Allow continued healing of soft tissue
- Gradual return to restoring dynamic shoulder stability
- Wean out of sling and wear for "at-risk situations" for approximately 6 weeks post-op.

Precautions:

- While lying supine a small pillow role or towel should be placed behind the elbow to avoid shoulder hyperextension / anterior capsule stretch.
- No heavy lifting of objects - maintain limitation of nothing greater than 1 lbs.
- No sudden jerking motions
- Do not initiate dynamic rotator cuff strengthening until 12 weeks post-op.
- Assure normal scapulohumeral rhythm with Active-Assisted forward elevation.
- Continue to protect the subscapularis repair

Week 3:

- Continue with PROM, progressing to AAROM
- Continue with isometrics
- Modalities PRN
- Stationary bike or recumbent bike only for cardiovascular endurance
- Continue gradual progression with core exercises, as tolerated.
- Initiate gentle scapular strengthening (no weight - shoulder shrugs/scapular protraction)
- Gentle Joint Mobilizations as indicated

Weeks 4 - 6:

- May initiate Active forward flexion, internal rotation, external rotation, and abduction all in the supine position, with the focus of pain free ROM
- Progressive serratus anterior strengthening (no weight)
- Progress scapular strengthening exercises (no weight)
- Begin isometrics of rotator cuff and periscapular muscles
- Theraband scapula retractions
- Gradual progression with scapular strengthening

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Phase III (Week 6-12)

Goals:

- Gradual restoration of shoulder strength, power, and endurance
- Optimize neuromuscular control
- Gradual return to functional activities with involved upper extremity

Precautions:

- No heavy lifting of objects (no heavier than 1 lbs.)
- No sudden lifting or pushing activities
- No sudden jerking motions

Week 6 - 10:

- Continue to progress with previous exercises
- Advance PROM as tolerated, begin light stretching
- Continue PROM as need to maintain ROM
- **Begin shoulder AROM against gravity**.
- Active internal rotation and external rotation in scapular plane
- Initiate assisted IR behind back
- Begin light functional activities
- Initiate gentle rhythmic stabilization exercises
- Theraband ER strengthening (pain free, elbow by side). May initiate at 8 weeks.
- No resisted IR strengthening until 12 weeks.

Week 10-12:

- Begin resisted flexion, Abduction, External rotation - light theraband
- Progress internal rotation behind back from AAROM to AROM as ROM allows (avoid excessive stress on the anterior capsule.)
- Gradual progression of theraband strengthening of the rotator cuff and scapula below 90 degrees
- May begin gentle IR strengthening with light theraband at 12 weeks.
- Initiate isotonic dumbbell exercises for deltoid, supraspinatus, no higher than 2 lbs. at 12 weeks (once maximum ROM has been achieved) - use clinical judgment (patient dependent)

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Phase IV (Week 12 - 24)

Goals:

- Maintain pain free active ROM
- Enhance functional activities
- Improve muscular strength and endurance

Precautions:

- Avoid exercise and functional activities that put stress on the anterior capsule and surrounding structures
- Encourage gentle strengthening.
- Avoid high load type exercises/activities (i.e. heavy weight lifting, chopping wood, contact sports).

Suggested Exercises:

- Continue with gradual progression of all exercises
- Daily stretching
- Progress to light closed chain exercises as appropriate.
- Instruct in a home exercise program

Criteria for discharge from formal physical therapy:

- Patient able to maintain pain free active ROM
- Maximized functional use of the upper extremity
- Maximized muscular strength and endurance
- Patient has returned to more advanced functional activities

6 months and beyond

- Return to light recreational hobbies, gardening, golfing, doubles tennis
- Avoid high load upper extremity activities

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