The intent of this protocol is to provide the clinician with guidelines of the postoperative rehabilitation of someone undergoing total shoulder arthroplasty or hemiarthroplasty. It is not intended to be a substitute for special instructions from Dr. Paff or clinical decision making regarding the progression of a patient’s post-operative course. The actual post-surgical physical therapy management must be based on surgical approach, physical exam/findings, individual progress, and/or the presence of post-operative complications. Please contact Dr. Paff with any questions.

Phase I: Immediate Post-Surgical Phase: Typically 0-4 weeks; 2 PT Visits

Goals:
- Allow healing of soft tissue
- Maintain integrity of replaced joint
- Gradually increase shoulder passive range of motion, restore elbow/wrist/hand active range of motion
- Reduce pain and inflammation
- Reduce muscle inhibition
- Independent with activities of daily living (ADL’s) while maintaining integrity of replaced joint

Precautions:
- Sling should be worn for the first 7-10 days and then worn as needed for comfort
- While lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension, anterior capsule stretch, or subscapularis stretch
- Avoid shoulder AROM into abduction or flexion past 90 degrees.
- No lifting of objects
- No internal rotation (IR) behind the back or resisted internal rotation
- No supporting of body weight by hand on the involved side
- No excessive stretching or sudden movements (especially into external rotation (ER))

Post-Operative PT Visit #1: Typically 8-10 days post-operatively
- Supine passive forward flexion to 90° (hand to top of head)
- Passive IR to chest
- Active distal extremity exercises (elbow/wrist/hand)
- Pendulums
- Scapular sub-max isometrics (primarily retraction)
- Frequent cryotherapy for pain, swelling, and inflammation management
- Patient education regarding proper positioning and joint protection techniques

Post-Operative PT Visit #2: Typically 2-3 weeks post-operatively
- Continue previous exercises
- Passive ER to neutral with arm by side
- Active assisted exercises into flexion as tolerated - table slides to wall slides/walks
- Begin sub-maximal deltoid isometrics in neutral (avoid IR)
- Continue distal extremity AROM
- Continue PROM
- Continue cryotherapy as much as able for pain and inflammation management
Criteria for progression to the next phase:
- Tolerates PROM program
- Achieves at least 90° of flexion
- Achieves at least 0° of external rotation
- Achieves at least 70° of internal rotation measured at 30° abduction

Phase II: Early Strengthening Phase: Typically 4-6 weeks; 2-3x per week

Goals:
- Restore full shoulder PROM
- Gradually restore shoulder AROM
- Control pain and inflammation
- Allow continued healing of soft tissue
- Re-establish dynamic shoulder stability

Precautions:
- While lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension, anterior capsule stretch, or subscapularis stretch
- In presence of poor shoulder mechanics, avoid repetitious shoulder AROM exercises/activity against gravity in standing
- No lifting of heavy objects (heavier than a coffee cup)
- No supporting of body weight by hand on the involved side
- No sudden jerking movements

Early Phase II: (typically 4-5 weeks)
- Continue with PROM/AAROM/Isometrics (slow progression of PROM into external rotation and abduction with arm externally rotated)
- Scapular strengthening
- AAROM pulleys flexion and abduction (as long as PROM>90°)
- Begin assisted horizontal adduction
- Gentle glenohumeral and scapulohumeral mobilizations as indicated
- Initiate glenohumeral and scapulohumeral rhythmic stabilization
- Continue cryotherapy as much as able for pain and inflammation management

Late Phase II: (typically 6 weeks)
- Begin active flexion, internal rotation, external rotation, abduction in pain free range of motion
- Progress scapular strengthening
- Continue cryotherapy as much as able for pain and inflammation management

Criteria for progression to the next phase:
- Tolerates PROM/AROM/isometric program
- Achieves at least 140° of flexion PROM
- Achieves at least 120° of abduction PROM
- Achieves at least 60° of external rotation PROM in plane of scapula
- Achieves at least 70° of internal rotation PROM measured in plane of scapula at 30° abduction
- Able to actively elevate the arm to 90° with good mechanics in supine
Phase III: Moderate Strengthening Phase: Typically 6-12 weeks: 2-3x per week

Goals:
- Restore shoulder AROM
- Optimize neuromuscular control
- Gradual return to functional activities with involved extremity

Precautions:
- No heavy lifting of objects (>5lbs)
- No sudden lifting or pushing activities
- No sudden jerking

Early Phase III: (typically 6-10 weeks)
- Continue PROM as needed to maintain ROM
- Advance PROM to stretching as appropriate (wand)
- Progress AROM exercises/activity as appropriate
- Initiate assisted shoulder internal rotation behind the back stretch
- Resisted shoulder internal and external rotation in scapular plane
- Begin light functional training
- Begin progressive supine active elevation strengthening (anterior deltoid) with light weights (1-2lb) as tolerated
- Continued distal upper extremity strengthening and scapular strengthening

Late Phase III: (typically 10-12 weeks)
- Resisted flexion, abduction, extension (weights/theraband) in standing and/or prone
- Continue progressing internal and external rotation strengthening

Criteria for progression to the next phase:
- Tolerates PROM/AROM/strengthening
- Achieves at least 120° of flexion AROM
- Achieves at least 120° of abduction AROM
- Achieves at least 60° of external rotation AROM in plane of scapula
- Achieves at least 70° of internal rotation AROM measured in plane of scapula at 30° abduction

(Note: Patients that are rotator cuff deficient, goals and criteria must be more functionally based. Flexion and abduction should ideally be near 90° with 30° of external rotation and 70° of internal rotation. Patient should be able to reach their hand to the top of their head to perform personal hygiene.)
Phase IV: Advanced Strengthening Phase: Typically 10-12 weeks to MMI: 1x per week

Goals:
- Maintain non-painful AROM
- Enhance functional use of the upper extremity
- Improve muscular strength, power, endurance
- Gradual return to more advanced functional activities
- Progress closed chain exercises as appropriate

Precautions:
- Avoid exercises that put excessive stretch on anterior capsule (90-90 position)
- Ensure gradual strengthening

Early Phase IV: Typically patients are on a HEP performed 3-4 days per week with PT progression:
- 1 visit per week
  - Gradually progression strengthening program
  - Gradual return to moderately challenging functional activities

Late Phase IV:
- Return to recreational hobbies, including gardening, sports, etc.

Criteria for discharge:
- Maintain non-painful AROM
- Maximized functional use of the upper extremity
- Maximum strength, power, endurance
- Return to activities/work