

Proximal Humerus Fracture Rehabilitation Protocol

Your shoulder rehabilitation program begins while you are in the hospital. Early goals are to reduce shoulder stiffness and pain. The following steps can help you have optimal recovery:

- Early and continuous physical therapy
- Adequate pain control to tolerate exercises
- Edema control to reduce swelling (ice/sling)
- Early restoration of passive shoulder flexion to full as tolerated

Passive Range of Motion (PROM): PROM for all patients having undergone a TSA/HHR should be defined as ROM that is provided by an external source (therapist, instructed family member, or other qualified personnel) with the intent to gain ROM without placing undue stress on either soft tissue structures and/or the surgical repair. PROM is not stretching!

Phase I - Immediate Post-Surgical (0-week 4)

Goals:

- Decrease pain and inflammation, increase passive range of motion (PROM) of shoulder, educate regarding joint protection, independent with transfers and ADLs.

Precautions:

- Sling should be worn for **4 to 6 weeks** (including while sleeping) depending on progression and surgeon preference
- While lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension / anterior capsule stretch / subscapularis stretch. **(When lying supine patient should be instructed to always be able to visualize their elbow. This ensures they are not extending their shoulder past neutral.) – This should be maintained for 6-8 weeks post-surgically.**
- **Avoid shoulder hyperextension / anterior capsule / subscapularis stretch.**
- Avoid lifting objects and AROM, shoulder motion behind the back, sudden movements and supporting body weight by involved hand.
- **Limit external rotation to neutral (0 degrees) and any active internal rotation through week 4.**
- Keep incision clean and dry (no soaking for 2 weeks)

Exercises:

- Passive forward flexion in supine to tolerance.
 - Goal of 0-90 degrees by end of week 2 to allow wound healing.
 - Progress to full as soon as possible.
- Pendulums
- Sub-maximal, pain-free isometric shoulder exercise in neutral
- Scapular musculature sets/isometrics
- Pulleys at week 3
- Active distal extremity exercise (elbow, wrist, hand)
- Cryotherapy as much as able for pain and inflammation

Phase II - Early Strengthening (Weeks 4-6)

Goals:

- Continue PROM progression until flexion PROM is restored
- Introduce AAROM
- Control pain and inflammation
- Do not overstress healing tissue
- Allow continued healing of soft tissue (subscapularis)
- Re-establish dynamic shoulder stability and scapular mobility

Criteria for progression to next phase:

- Tolerates P/AAROM, isometric program
- Has achieved 140 degrees PROM flexion, 120 degrees PROM ABD

Week 3:

- Continue with PROM, AAROM, Isometrics
- Scapular strengthening
- Begin assisted horizontal adduction
- Progress distal extremity exercises with light resistance as appropriate
- Gentle joint mobilizations as indicated
- Initiate rhythmic stabilization
- Continue use of cryotherapy PRN

Week 4:

- Begin active FF, IR, ER, and ABD in supine position in pain-free ROM
- Progress scapular strengthening exercises
- Begin isometrics of rotator cuff and periscapular musculature

Phase III - Moderate Strengthening (weeks 6-12):

Goals:

- Full PROM forward elevation
- Active flexion in the plane of the scapula to 120 degrees without shrug
- Gradual restoration of shoulder strength, power and endurance
- Gentle increase external rotation
- Optimize neuromuscular control
- Gradual returns to functional ADLs

Precautions:

- No heavy lifting of objects (no heavier than 5 lbs.)
- No sudden lifting or pushing activities or jerking motions

Week 6:

- Increase anti-gravity internal/external-flexion, abduction
- Active external rotation in modified neutral
- Initiate assisted IR behind back (light)

Week 10-12:

- Begin resisted flexion, ABD, ER
- Progress internal rotation behind back from AAROM to AROM as ROM allows.
 - Goal of L2, but avoid stress on the anterior capsule

Phase IV - Advanced Strengthening (weeks 12 to 6 months):**Goals:**

- Maintain full non-painful AROM
- Gradual return to more advanced functional activities
- Improve muscular strength, power and endurance
- Progress closed chain exercises as appropriate

Precautions:

- Avoid exercise and functional activities that put stress on the anterior capsule and surrounding structures (example: no combined ER and ABD above 80 degrees of abduction)
- Ensure gradual progression of strengthening

Criteria for discharge from skilled therapy:

- Patient able to maintain full non-painful AROM
- Normal ADL function
- Independent HEP

4-6 months:

- Return to recreational hobbies, gardening, sports, golf, doubles tennis as released by the Surgeon.