

Total Shoulder Replacement Rehab Protocol

KANDILNOTES

The intent of this protocol is to provide the therapist with a guideline for the postoperative rehabilitation course for reverse Total Shoulder Arthroplasty (TSA) or Hemiarthroplasty (Humeral Head Replacement, HHR). Patient. It is not intended to be a substitute for appropriate clinical decision making. The actual postsurgical physical therapy management must be based on the surgical approach, physical exam and/or findings, individual progress, and/or the presence of postoperative complications. If the therapist requires assistance with the progression of a postoperative patient, please consult with Dr. Kandil or his team.

Phase I – Immediate Post Surgical Period (0-4 weeks)

Goals:

- Healing of soft tissue
- Maintain integrity of replaced joint
- Gradually increase passive range of motion (PROM) of shoulder: Restore active range of motion (AROM) left elbow/wrist/hand
- Diminish pain and inflammation
- Prevent muscular inhibition
- Independent with activities of daily living (dressing, bathing, etc.) with modifications while maintaining the integrity of the replaced joint.

Precautions:

- Sling should be worn for 3 weeks for comfort
- Sling should be use for sleeping and removed gradually over the course of the next 3-4 weeks, for periods throughout the day.
- While lying supine a small pillow or towel roll should be placed behind the elbow to avoid shoulder extension/anterior capsule/septic scapular stretch due to risk of anterior dislocation
- Avoid shoulder active range of motion.
- No lifting of objects
- No shoulder motion behind back
- No excessive stretching or sudden movements (particularly external rotation)
- No supporting of body weight by hand on involved side
- Keep incision clean and dry (no soaking for 2 weeks)
- No driving for 3-4 weeks

Criteria for progression to the next phase:

- Tolerates PROM program
- At least 90° of PROM flexion
- At least 90° of PROM abduction

- 45° PROM ER in plane of scapula
- At least 70° PROM IR in plane of scapula
- Isometrically activate all shoulder, RC and upper back musculature

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Postoperative day 1 (in-hospital):

- Passive forward flexion in supine to tolerance.
- ER in scapular plane to available gentle PROM (as documented in operative)–limit ~30°
(**Attention:** DO NOT produce undue stress on the anterior joint capsule and subscapularis particularly with shoulder in extension)
- Passive internal rotation to chest
- Active distal extremity exercise (elbow, wrist, hand)
- Pendulums
- Frequent cryotherapy for pain, swelling and inflammation management
- Patient education regarding proper positioning simple & joint protection techniques

Postoperative day 2-10 (out of hospital):

- Continue above exercises
- Passive flexion and abduction in the scapular plane
- Passive external rotation
- Begin scapula musculature isometrics/sets
- Begin active assisted elbow ROM
- Continue cryotherapy as much as able for pain and inflammation management

Postoperative day 10-21 (out of hospital):

- Continue previous exercises
- Continue to progress PROM as motion allows
- Gradually progressed to AAROM in pain-free ROM
- Progress active distal extremity exercise to strengthening is appropriate
- Restore active elbow ROM

Phase II –Early Strengthening (weeks 3-6):

Goals:

- Continue PROM progression/gradually restore full passive ROM
- Progress AAROM Ocean elevation and ER
- Control pain and inflammation
- Allow continued healing of soft tissue
- Do not overstress healing tissue
- Re-establish dynamic shoulder stability

Precautions:

- Sling should be used as needed for sleeping and removed gradually over the course of the next 2 weeks for periods throughout the day

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- While lying supine a small pillow, roll or towel should be placed behind the elbow to avoid shoulder hyperextension/anterior capsule stretch.
- No heavy lifting objects (no heavier than a coffee cup)
- No supporting of body weight by hands or arms
- No sudden jerking motions

Criteria for progression to next phase:

- Tolerates P/AAROM , isometric program
- Has achieved 140° PROM flexion
- Has achieved 120° PROM in scapular plane
- Has achieved 60+° PROM ER in plane of scapula
- Has achieved at least 70° PROM IR in plane of scapula
- Able to actively elevate shoulder against gravity with good mechanics to 100°.

Week 3:

- Continue with PROM, a AROM, isometrics
- Scapular strengthening
- Begin assisted horizontal adduction
- Progress distal extremity exercise with light resistance as appropriate
- Gentle joint mobilizations as indicated
- Initiate rhythmic stabilization
- Continue use of cryotherapy for pain and inflammation

Week 4:

- Begin active forward flexion, internal rotation and external rotation in supine position, in pain-free AROM. Be aware of what RTC muscles remain, if any.
- Progress scapular strengthening exercises
- Begin isometrics of periscapular and rotator cuff muscles is present

Phase III –Moderate Strengthening (week 6-12):

Goals:

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

Precautions:

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

Criteria for progression to the next phase (IV):

- Tolerates AA/AROM

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- Has achieved at least 140° AROM flexion supine
- Has achieved at least 120° AROM scapular plane supine
- Has achieved 60+° AROM ER in plane of scapula supine, if applicable
- Has achieved at least 70° AROM IR in plane of scapula supine
- Able to actively elevate shoulder against gravity with good mechanics to at least 120°.

Week 6:

- Increase antigravity forward flexion, abduction is appropriate
- Active internal rotation and external rotation and scapular plane, depending on RTC muscles present
- Advanced PROM as tolerated, begin light stretching as appropriate
- Continue PROM as needed to maintain R OM
- Initiate assisted IR behind back
- Begin light functional activities

Week 8:

Begin progressive supine active elevation (anterior deltoid strengthening) with light weights (1-3 pounds) and throat degrees of elevation

Week 10-12:

- Begin resisted flexion, abduction, external rotation is able (therapy and has/support cords) do not overload deltoid
- Continue progressing internal and external strengthening

Progress internal rotation behind back from a AROM to AROM as ROM allows
(Pay close attention to avoid stress on anterior capsule.)

Phase IV –Advanced Strengthening (weeks 12-6 months):

Goals:

- Maintain full non-painful active ROM
- Enhance functional use of UE
- Improve muscular strength, power and endurance
- Gradual return to more advanced functional activities
- 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 abduction above 80° of abduction)
- Ensure gradual progression of strengthening

Criteria for discharge from skilled therapy:

- Patient able to maintain full non-painful active R OM
- Maximize functional use of UE

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- Maximized much muscular strength: Power and endurance
- Patient has returned to more advanced functional activities

Week 12+:

- Typically, patient is on just a home exercise program by this point 3-4 times per week.
- Gradually progressive strengthening program
- Gradual return to moderately challenging functional activities

4-6 months+:

Return to recreational hobbies, gardening, sports and golf or tennis