

Total Shoulder Arthroplasty

PHYSICAL THERAPY PROTOCOL

PHASE I: Protective Phase

Goals:

Minimize pain and inflammatory response, especially in forearm, wrist and hand.

Achieve staged ROM goals

PROTECT SUBSCAPULARIS TENDON REPAIR

POST-OP DAYS 1-3

- Elbow, wrist and hand AROM (EWH)
- Supine/Sitting passive forward elevation (PFE) to tolerance
 - Supine/Sitting PFE by family member or using opposite arm
- Stress ball squeezes, Coban wrap for hand and forearm swelling
- Codman's pendulum exercises
- C-spine AROM
- Ice
- Positioning full time in sling
- Precautions:
 - Try to limit shoulder extension. **No reaching behind back.**
 - Protect the subscapularis repair, no external rotation

POST-OP WEEKS 1-4

- Continue elbow, wrist and hand motion
- Shoulder shrugs and retractions (no weight)
- Passive and Active forward flexion permitted and encouraged
- No ER past 20 for first 6 weeks to protect Subscap repair
- Isometrics, keeping elbow flexed to 90° (sub maximal, pain free) , NO IR isometrics
- Manual scapula strengthening
- Pain control modalities PRN / Polar Care
- Aquatics PROM, AROM activities (pain free)
- Complications/Cautions:
 - If pain level is not dissipating, decrease intensity and volume of exercises
 - Continue to limit shoulder extension past midline of body
 - Protect the subscapularis

POST-OP WEEKS 4-6

- Heat/Ice PRN to help obtain motion
- D/C sling as comfortable at week 4 and start active forward elevation (AFE)
- Achieve staged PROM goals in FE
- Scapula retractions
- Progressive serratus anterior strengthening (isolated)
- AAFE (pulleys)
- Continue isometric abduction
- Pain control modalities PRN
- Aquatics AAROM→ AROM

- Trunk stabilization/strengthening
- Cautions:
 - Do not initiate dynamic rotator cuff strengthening
 - Assure normal scapulohumeral rhythm with AAFE
 - Protect the subscapularis

PHASE II: Progressive Strengthening

Goals:

Maintain stability of prosthesis

Achieve staged ROM goals

Eliminate shoulder pain

Improve strength, endurance and power

POST-OP WEEKS 6-9

- ER activation, side lying (pain free, elbow by side) No IR strengthening until 12 weeks.
- Continue self stretching all planes to obtain PROM WFL
- Advance scapula strengthening
- Mobilizations PRN
- Aquatics
- Trunk stabilization/strengthening
- Cautions:
 - Strengthening program should progress without pain
 - Strengthening program should emphasize high repetitions, very light resistance and should be performed a maximum of 2 x day

POST-OP WEEKS 9-12

- Continue stretches PRN for PROM WFL
- Advance theraband strengthening of cuff and scapula below shoulder level
 - May begin IR strengthening at 12 weeks
- Initiate isotonic dumbbell exercises for deltoid, supraspinatus
 - Up to 2 lbs max (once nearly full AFE achieved)
- Mobilizations PRN
- Trunk stabilization/strengthening
- Cautions:
 - Strengthening program should progress without pain
 - Strengthening program should emphasize high repetitions, very light resistance and should be performed a maximum of 2 x day

PHASE III: Return to Activity/Advanced Conditioning

Goals:

Maintain stability of prosthesis

Normalize strength, endurance and power for age

Return to full ADL's and recreational activities

POST-OP MONTHS 3-6

- Begin IR strengthening
- Light PFN or manual resistance for cuff/deltoid/scapula (rhythmic stabilization or slow reversal hold) in pain free and comfortable range
- Stretching PRN

- Continue deltoid/cuff/scapula strengthening with the following progressions if needed:
 - Decreasing amounts of external stabilization provided to shoulder girdle
 - Integrate functional patterns
 - Increase speed of movements
 - Integrate kinesthetic awareness drills into strengthening activities
 - Decrease in rest time to improve endurance
 - Transition to maintenance deltoid/cuff/scapula strengthening program
 - Once met D/C strength criteria