

TOTAL SHOULDER ARTHROPLASTY

Physical Therapy

PHASE I: MAXIMUM PROTECTION (WEEK 0 TO 6)

Goals

- Reduce inflammation
- Decrease pain
- Postural education
- PROM as instructed

Restrictions/Exercise Progression

- Sling x 6 weeks
- Ice and modalities to reduce pain and inflammation.
- Cervical ROM and basic deep neck flexor activation (chin tucks).
- Instruction on proper head neck and shoulder (HNS) alignment.
- Active hand and wrist range of motion.
- Passive/AA biceps ROM.
- Active shoulder retraction.
- Passive range of motion:
 - *Flexion 90° x weeks 0-2, 120° weeks 2-4, then gradually progress as tolerated.*
 - *External rotation 0° x 2 weeks, 15° ER at 0° and 30° abduction weeks 2-4, 30° ER at 0° and 45° abduction at 4-6 weeks. Gradual return to full after 6 weeks.*
 - *Avoid internal rotation (thumb up back) until 6 weeks post-op.*
 - *Encourage walks and low intensity cardiovascular exercise to promote healing.*

Manual Intervention

- STM – global shoulder and CT junction.
- Scar tissue mobilization when incisions are healed.
- Graded GH mobilizations.
- ST mobilizations.

PHASE II: PROGRESSIVE STRETCHING AND ACTIVE MOTION (WEEKS 6 TO 8)

Goals

- Discontinue sling.
- Gradual return to full ROM.
- Postural education.
- Focus on posterior chain strengthening.

Exercise Progression

- Progress to full range of motion flexion and external rotation as tolerated. Use a combination of wand, pulleys, wall walks or table slides to ensure compliance.
- Gradual introduction to internal rotation using shoulder extensions (stick off back).
- Serratus activation; Ceiling punch (weight of arm) many initially need assistance.
- Scapular strengthening—prone scapular series (rows and I's). Emphasize scapular strengthening under 90°.
- External rotation on side (no resistance).
- Gentle therapist directed CR, RS and perturbations to achieve ROM goals.
- Cervical ROM as needed to maintain full mobility.
- DNF and proper HNS alignment with all RC/SS exercises.
- Low to moderate cardiovascular work.

Manual Intervention

- STM—global shoulder and CT junction.
- Scar tissue mobilization.
- Graded GH mobilizations.
- ST mobilizations.
- Gentle CR/RS to gain ROM while respecting repaired tissue.

PHASE III: STRENGTHENING PHASE (WEEKS 8 TO 12)

Goals

- 90% passive ROM, 80-90% AROM by 12 weeks.
- Gradual progression ROM all planes as tolerated.
- Normalize GH/ST arthrokinematics.
- Activate RC/SS with isometric and isotonic progression.
- Continue to emphasize posterior chain strengthening but introduce anterior shoulder loading.

Exercise Progression

- Passive and active program gradually pushing for maximum flexion and external rotation.
- Continue with stick off the back, progressing to internal rotation with thumb up back.
- Add resistance to ceiling punch.
- Sub-maximal rotator cuff isometrics.
- Advance prone series to include T's or at 45° as tolerated.
- Add rows with weights or bands.
- Supine chest-flys providing both strength and active anterior shoulder stretch.
- Supine PNF patterns through available range.
- Biceps and triceps PRE.
- Scaption; normalize ST arthrokinematics.
- 10 weeks; add quadruped or counter weight shift. Therapist directed RS and perturbations in quadruped—bilateral progressing to unilateral-tripod position.

Manual Intervention

- STM and Joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain ROM while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

PHASE IV: ADVANCED STRENGTHENING PHASE (WEEKS 12 TO 24)

Exercise Progression

- Full range of motion all planes—emphasize terminal stretching with cross arm, TUB, triceps, TV, sleeper and door/pec stretch.
- Begin strengthening at or above 90° with prone or standing Y's, seated 90/90, D2 flexion pattern and 90/90 as scapular con-trol and ROM permit. Patient health, physical condition and goals/objectives will determine if strengthening above 90° is appropriate.
- Add lat pulls to gym strengthening program.
- Continue with closed chain quadruped perturbations; add open chain as strength permits. Patient overall condition, strength, goals and objectives determine additional advancement.
- Initiate plyometric and rebounder drills as appropriate.

RTS Program (weeks 20-24)

- Continue to progress RC and scapular strengthening program as outlined.
- Advance gym strengthening program.
- RTS testing for interval programs (golf, tennis etc.).
- Follow-up examination with the physician (6 months) for release to full activity.