Reverse Total Shoulder Arthroplasty Protocol

(with Subscapularis Release)

Week One	Weeks Two to Three
Initial Evaluation	**Evaluate**
➢ Posture and position of the shoulder girdle ➢ Inspect for signs of infection ➢ Ensure integrity of the incision ➢ PROM after complete resolution of interscalene block	➢ Posture and position of the shoulder girdle ➢ Continue inspection of incision ➢ PROM
Patient Education	**Patient Education**
➢ Sling use is typically 2-3 weeks ➢ Discuss frequency and duration of treatment (2x/week for 12-16 weeks is anticipated) **<u>Precautions:</u>** ➢ Do not combine ADD/IR/EXT for 6 weeks *Patient to be able to see their elbow while lying in supine ➢ Avoid excessive stretching/sudden movement ➢ Minimize support of body weight with arm ➢ Avoid tucking shirt in, reaching for wallet, or donning bra behind back ➢ Patient should not push up from seated position while in GH EXT	➢ Continue sling use ➢ Educate patient regarding posture and position of the shoulder girdle, changes in shoulder mechanics as it relates to the intention of this surgery ➢ Reinforce precautions as the patient begins to use their involved arm more freely and frequently
Therapeutic Exercise	**Therapeutic Exercise**
➢ AROM cervical spine, elbow, wrist, and hand ➢ Initiate submaximal pain free periscapular and deltoid isometrics (avoid EXT beyond neutral)	➢ Continue therapeutic exercise from week one ➢ Initiate AAROM exercises
Manual Techniques	**Manual Techniques**
➢ Initiate PROM to include elevation and ER to tolerance in plane of scapula *No IR until week 6 ➢ Support arm in neutral after PROM (avoid IR against abdomen or EXT into bed)	➢ Continue PROM ➢ May initiate gentle mobilizations and desensitization of incision as appropriate
Modalities	**Modalities**
➢ Cryotherapy for the first 72 hours	➢ Frequent cryotherapy (4-5x/day, 10-15 min intervals)
Goals	**Goals**
➢ Prevent dislocation/promote healing of soft tissue ➢ Ensure patient and family understand precautions as they relate to bed mobility, transfers, and other ADLs ➢ Initiate/enhance PROM	➢ Prevent dislocation/promote healing of soft tissue ➢ Confirm adherence to precautions by patient and family ➢ Progress PROM ➢ Return to self-feeding and light ADLs

Weeks Three to Six	Weeks Six to Eight
Evaluate	**Evaluate**
➢ Posture and position of the shoulder girdle ➢ PROM of the shoulder	➢ Posture and position of the shoulder girdle ➢ PROM of the shoulder
Patient Education	**Patient Education**
➢ Wean from sling (use in community/outdoor environments and during sleep) ➢ Emphasize postural alignment when out of sling ➢ Reinforce precautions	**<u>Long-term Precautions:</u>** ➢ Activities involving impact or sudden starts/stops shall be avoided, including but not limited to: wood chopping, hammering, pull cord starters, and sawing wood by hand
Therapeutic Exercise	**Therapeutic Exercise**
➢ May add resisted elbow, wrist, and hand exercises ➢ Progress periscapular and deltoid isometrics ➢ Initiate AROM and isotonic exercises by week 6 with no resistance: prone row, prone extension to neutral, sidelying ER with towel roll, and cane press/serratus punch ➢ Progression of active elevation in scapular plane beginning in supine to stabilize scapula and progressing towards functional upright position	➢ Initiate UBE in standing with no resistance by week 8, keeping pain free ➢ Progress isotonics to include weights (focus on low weight, high repetition program) ➢ Initiate light theraband exercises in standing: row, extension ➢ Attempts should be made to complete exercises in positions which require reflexive trunk stabilization prior to extremity movement (limit seated if able)
Manual Techniques	**Manual Techniques**
➢ Continue PROM, initiate gentle IR PROM in scapular plane at 6 weeks (not to exceed 50 deg) ➢ Continue gentle mobilization and desensitization of incision as appropriate ➢ Initiate scapulothoracic mobilization (grades I-II) ➢ Initiate gentle rhythmic stabilization in supine	➢ Continue PROM ➢ Utilize scapulothoracic mobilization as appropriate ➢ Progress rhythmic stabilization
Modalities	**Modalities**
➢ Any modalities as indicated	➢ Any as indicated
Goals	**Goals**
➢ Prevent dislocation/promote healing of soft tissue ➢ Return to normal completion of basic ADLs (dressing, hygiene) ➢ Ensure continued adherence to precautions ➢ PROM goals: *Scapular plane elevation to 120 deg *ER in scapular plane to 30 deg	➢ Develop functional use of involved arm by gradually restoring GH AROM with focus on scapular control to optimize movement pattern ➢ PROM goals: *Scapular plane elevation to 140 deg *ER in scapular plane to 40 deg ➢ AROM goals: *Elevation to 90 deg

Weeks Eight to Twelve	Weeks Twelve to Discharge
Evaluate	**Evaluate**
➢ Posture and position of the shoulder girdle ➢ PROM ➢ AROM ➢ Assess functional expectations (RTW/sport)	➢ PROM ➢ AROM ➢ Strength ➢ Deficits limiting RTW or sport goals
Patient Education	**Patient Education**
➢ Reinforce long-term precautions ➢ May initiate discussion related to potential return to sport (see Weeks 12 to Discharge)	**<u>Return to Sport:</u>** ➢ Premorbid activity level is important consideration ➢ Gradual return to non-contact low load sports is generally permissible, including but not limited to: walking, jogging, running, cycling, yoga, golf, and ballroom dancing ➢ Consult with physician regarding non-contact high load sports and non-upper extremity sports with high fall potential
Therapeutic Exercise	**Therapeutic Exercise**
➢ Progress theraband exercises to include ER and IR in standing (as able) ➢ Incorporate low level loading and trunk stabilization as tolerated (wall push-up) ➢ May progress to rhythmic stabilization in standing at shoulder height ➢ Progress isotonics as appropriate to include shoulder height activity (including lateral raises in scapular plane) based on patient presentation and tolerance	➢ Progress loading activity (table push-up or plank at an angle) per relevance and necessity for the individual patient ➢ Progress exercises to shoulder height and above ➢ Progress to work- and sport-specific activity ➢ Encourage participation in the CFA
Manual Techniques	**Manual Techniques**
➢ Any as indicated	➢ Any as indicated
Modalities	**Modalities**
➢ Any as indicated	➢ Any as indicated
Goals	**Goals**
➢ PROM goals: *Scapular plane elevation to 160 deg *ER in scapular plane to 60 deg ➢ AROM goals: *Elevation to 120 deg *Functional ER to 30 deg	➢ Return to work or sport ➢ Independence with HEP ➢ Independence with long-term precautions ➢ AROM goals: *Elevation to 140 deg *Functional ER to 40 deg

Special Considerations
Subscapularis osteotomy
➢ Patients undergoing reverse total shoulder arthroplasty will typically not have the subscapularis muscle osteotomized or repaired in any fashion. However, on occasion, patients will have subscapularis repair or osteotomy during a Reverse Total Shoulder. Please be aware that treatment of this population is drastically different depending on repair vs. release of the subscapularis. Therapist should seek advice and protocol information for the referring surgeon in these cases.
Resurfacing
➢ Resurfacing or "ream and run" procedures will follow the TSA protocol.
Revision surgeries
➢ Sling use for 6 weeks post-op ➢ PROM to be initiated 3-6 weeks post-op ➢ Initiation of AROM and isotonics may require a 1-2 week delay from the basic reverse total shoulder protocol putting it in the 5 week timeframe based on patient presentation and MD discretion
Superior approach
➢ A superior approach may be used in TSA cases where sparing the subscapularis is preferred. This approach causes greater damage to the deltoid. As a result, deltoid activity is delayed in favor of early rotator cuff rehabilitation. We are still exploring rehab details with this procedure and will likely need a protocol created in the future. For now, expect delays in deltoid activation and look to the treating surgeon for details on a case by case basis.

References

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