Post-Operative Therapy Reverse Total Shoulder Arthroplasty

(Adapted from Unverzagt et al)

Note: This pathway is designed to serve as a guide to rehabilitation. Indications for progression should be based on patient's complete operative procedure, functional capacity, and response to treatment.

Typical outpatient PT may begin at post-operative week 2 and physician preference may range from utilization of home health PT to family instruction in PROM techniques by referring surgeons. Surgeon may request specific start date, and specifically may request a more conservative recap in appropriate situations. In all cases, appropriate inflammation control, PROM, patient education and appropriate shoulder protection and care is focus.

Abduction Pillow:

- Use and recommendation will be case specific

Sling Wear:

- Week 1-2 with abduction pillow and sling, 24 hours/day
- Week 2-4, sling at 24 hours/day
- Gradual wean from sling between weeks 4-6
- During PT and during exercise, sling purposefully removed
- May be extended in case of a complication or in revision RSTA case

Movement Precaution (12 weeks):

- No extension beyond neutral
- No Adduction + IR combined motions
- No Extension + IR combined motion

Mobilizations:

- With RTSA, No mobilizations through GH junction directly at any time throughout rehabilitation
- Anatomical center of rotation shifted and convex/concave rule for arthrokinematics are not applicable, so standard mobilizations are not appropriate

Exceptions:

- Poor Bone Stock: Will delay start of protocol second to surgeon's assessment of repair integrity

Acute Phase | Post-Op – Days 1 to 5

Goals: Promote patient comfort by controlling pain, promote joint healing, specifically soft tissues such as the deltoid

- Patient/family independence with joint protection, PROM, assisting with on/off of clothing, modalities and assistance with prescribed HEP
- Gradual increase PROM of shoulder
- Restore AAROM of elbow/wrist/hand
- Postural awareness
- No AROM, lifting, sudden movements, stretching of operative extremity
- Modalities:
  - Ice application 4-5 times/day for 15-20 minutes

Sub-acute Phase | Post-Op – Days 5 to 3 Weeks

Goals: Promote patient comfort by controlling pain, promote joint healing, specifically soft tissues such as the deltoid

- PROM continued, manual therapy for general shoulder PROM
- Appropriate progression of A/AAROM of elbow, wrist, hand
- Supine Self PROM into flexion
- Sub-maximal periscapular isometrics initiated
- Reinforce patient education with regard to use of abduction pillow
- Cervical AROM program with emphasis on maintenance of neutral posture
- Modalities: continue PRN

Protective Phase | Weeks 3 to 6

Goals: Facilitate healing of soft tissues local to joint, protect deltoid and restore/maintain PROM

- Range of Motion:
  - PROM guidelines – Scapular plane elevation not to exceed 120, ER at 30° abduction to 30-45°, IR at 30° abduction to 30-45°, grade I-II scapular mobilization, all planes
- Therapeutic Exercise:
  - Submaximal RC and periscapular stabilizer isometrics
- Modalities:
  - Interferential electrical stimulation and cryotherapy for pain modulation

- FES for muscle re-education
- Ultrasound/phonophoresis for control of inflammation

Weeks 5 to 6

- May progress AAROM activities, including wand/pulleys, initiate UBE AAROM

Ensure continued HEP compliance and wean from utilization of immobilizer, as tolerated

Strengthening Phase | Weeks 6 to 12

Goals: Initiate light strengthening, proprioception and periscapular stabilization, control pain/swelling

- Range of Motion:
  - Continue PROM scapular plane elevation to 130+°, ER/IR to Torrance at 30° abduction, grade II-III scapular mobilization, all planes
- Therapeutic exercises:
  - Isotonic periscapular progression, light isotonic RC progression with high volume and low intensity, remember that minimal isolated IR/ER will exist to neutral position
    - Considerations: avoid hyperextension
- Modalities: continue PRN

Functional Phase | Weeks 12+

Goals: Focus on progressive strengthening to restore force couple mechanics, enhance dynamic stabilization/neuromuscular control and increase strength, power, and endurance to promote optimal tolerance to functional activity

- Range of Motion:
  - Continue PROM scapular plane elevation to tolerance, ER/IR to tolerance at 30° abduction, grade III scapular mobilization all planes
- Therapeutic Exercise:
  - Progression of AA exercises (UBE, proprioception and CKC mobility exercises, e.g., body blade, physioball)
  - Progression of periscapular activation with Teraband
  - Progression of gentle GH IR and ER isotonic strengthening
  - Progression of deltoid strengthening exercises
  - Progression wrist/hand/elbow exercises with resistance
    - Maintain high volume and gradually increase intensity levels
- Modalities: continue PRN

Discharge Criteria

- Patients to complete HEP 3 to 4x a week
- Painless AROM to be grossly WNL’s compared contralaterally
- MMT grade grossly 4/5 with flexion, abduction strength minimally, ideally 4+ to 5/5

Return to Activity:

- Sedentary job – 4 to 6 weeks
- Stationary bike for exercise – 3 weeks
- Treadmill/walking aggressive for exercise – 9 weeks
- Driving – as early as 6 to 9 weeks
- Swimming – breaststroke 9 weeks, depending on progress
- Tennis, golf 12 weeks, depending on progress
- Running at 12 weeks