Post-Operative Rehabilitation Protocol Following ANATOMIC TOTAL SHOULDER REPLACEMENT

This protocol is to provide the therapist and patient with guidelines for the post-operative rehabilitation course after anatomic total shoulder arthroplasty (aTSA). It should serve as a guideline based on the individual's physical exam/findings, progress to date, and the absence of post-operative complications. If the therapist requires assistance in the progression of a post-operative patient they should consult with the specific surgeon. Progression to the next phase is based on Clinical Criteria and/or Timeframes as appropriate.

Because aTSA requires takedown and repair of the subscapularis tendon for surgical exposure, protection of the subscapularis repair is the central precaution throughout early rehabilitation — this differs from reverse total shoulder arthroplasty (RTSA), where the deltoid, not a repaired tendon, is the primary constraint. No active internal or external rotation and no active use of the shoulder musculature is permitted until the surgeon clears subscapularis healing, typically at 6 weeks.

Phase I – Immediate Post-Surgical / Subscapularis Protection (Weeks 0–6):

Goals:

- Protect subscapularis repair integrity
- Maintain elbow/wrist/hand Active Range of Motion (AROM)
- Achieve passive ROM within surgeon-directed safe zone
- Diminish pain and inflammation
- Prevent muscular inhibition
- Independence with activities of daily living using the non-operative arm and modifications

Precautions:

- Sling at all times except for hygiene, dressing, and prescribed exercise
- NO active internal or external rotation of the shoulder
- NO active elevation/abduction of the shoulder — passive and active-assisted only, and only within the surgeon-specified range
- No lifting of objects
- No pushing up from a chair or bed with the operative arm
- No supporting of body weight through the operative arm
- No combined extension + external rotation (risk of anterior subscapularis failure)
- No excessive stretching or sudden/jerking movements
- Keep incision clean and dry

DAYS 1 TO 6:

- Sling at all times except exercise and hygiene – do not allow a stiff elbow. Encourage elbow motion often.
- Finger, wrist, and elbow AROM
- Begin cervical ROM
- Begin passive shoulder flexion and abduction only, within safe zone; passive ER only within surgeon-specified limit
- Pendulum exercises as tolerated (surgeon-dependent — confirm before initiating)
- Cold therapy for pain and inflammation
  - Day 1–2: as much as possible (20 minutes of every hour)
  - Day 3–6: post activity, or for pain
- Sleep in sling
- Patient education: posture, joint protection, positioning, hygiene, subscapularis precautions, etc.

DAYS 7 TO 42 (Week 6):

- Continue sling except for exercise and hygiene
- Continue elbow, wrist, and finger AROM/resisted as tolerated
- Continue passive-only shoulder flexion, abduction — no active shoulder motion
- Cryotherapy as needed for pain control and inflammation
- May resume general conditioning program not involving the operative arm — walking, stationary bike (lower body only), etc.
- Subscapularis precautions remain in effect until surgeon confirms healing, typically at the week 6 follow-up

Phase II – Active Range of Motion and Early Strengthening (Weeks 6–12):

Progression into this phase requires surgeon clearance confirming subscapularis healing. Do not advance to active motion or resistance without that clearance.

Goals:

- Discontinue sling per surgeon direction
- Initiate active-assisted and progress to active ROM
- Full passive ROM
- Restore dynamic shoulder stability
- Gradual restoration of shoulder strength, power, and endurance
- Optimize neuromuscular control
- Gradual return to functional activities

Precautions:

- No heavy lifting of objects
- No sudden lifting, pushing, or jerking motions
- No overhead lifting
- No resisted internal/external rotation until later in this phase and only with surgeon/therapist clearance
- Avoid upper extremity bike or upper extremity ergometer until active ROM and strength allow

WEEK 6–8:

- Discontinue sling per surgeon direction
- Begin active-assisted ROM in flexion, abduction, and rotation
- Progress passive ROM to full as tolerated
- Initiate gentle isometrics for internal/external rotation (submaximal, pain-free) once cleared
- Initiate scapular stabilization exercises

WEEK 8–12:

- Progress to active ROM in all planes as tolerated
- Initiate light isotonic strengthening for rotator cuff and deltoid, low resistance
- Initiate prone rowing to neutral arm position
- Continue periscapular strengthening
- Begin functional activity retraining

Phase III – Advanced Strengthening and Return to Function (Weeks 12+):

Goals:

- Full active and passive ROM
- Progressive resistance strengthening of rotator cuff, deltoid, and periscapular musculature
- Restore endurance for functional and occupational demands
- Gradual return to recreational activity as approved by surgeon

WEEK 12+:

- Progress resisted internal/external rotation strengthening
- Advance periscapular and rotator cuff strengthening program
- Initiate functional/sport-specific activity as appropriate and surgeon-approved

- Continue stretching and maintenance ROM program

This protocol is designed to be administered by a licensed physical therapist and/or certified athletic trainer. Please do not hesitate to contact our office should you have any questions concerning the rehabilitation process.