



# TOTAL SHOULDER ARTHROPLASTY

## REGENMD REHABILITATION PROTOCOL

### REHABILITATION PROGRESSION

The following is a general guideline. Please consult Dr. Syal/Dr. Soswa if there is any uncertainty concerning advancement of a patient to the next phase of rehabilitation. Rehabilitation should be individualized according to patient status.

### PRECAUTIONS

- functional shoulder brace to be worn immediately post-op and continued for first 6 weeks
- DO NOT attempt to pick up heavy objects with the hand of the operative side
- DO NOT elevate surgical arm above 70° in any plane for the first 4 weeks post-op

### PHASE I (WEEK 1-6)

- allow healing of soft tissue & keep wound dry for 2 weeks
- arm is immobilized in neutral abduction & rotation for a period of 4 to 6 weeks
- weeks 0-3: active mobility of the hand, fingers and elbow is allowed, pendulum exercises begun
- week 4: passive abduction of the arm is permitted starting from a resting position of 30° abduction
- sling should be used for sleeping and removed gradually over the course of the 4 weeks, for periods throughout the day
- while lying supine a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension / anterior capsule / subscapularis stretch
- avoid shoulder active ROM & no lifting of objects
- ROM goals:
  - ▶ 90° PROM flexion
  - ▶ 90° PROM abduction
  - ▶ 45° PROM ER in scapular plane
  - ▶ 70° PROM IR in scapular plane (measured @ 30° abduction)
- 3 times daily elbow, hand and wrist ROM exercises to prevent stiffness
- cryotherapy for shoulder & modalities for inflammation as needed

### PHASE 2 (WEEKS 6-12)

- active rehabilitation is initiated emphasizing elevation and rotation
- physiotherapist 3 times per week – therapy exercises at home on days therapist not seen
- active mobility is permitted in elevation and internal rotation
- begin active forward flexion, internal rotation, external rotation, and abduction in supine position, in pain free ROM
- progress scapular strengthening exercises & stretching program
- wean from sling completely & begin isometrics of rotator cuff and periscapular muscles
- begin shoulder sub-maximal shoulder isometrics in neutral
- initiate glenohumeral (GH) & scapulothoracic (ST) rhythmic stabilization
- ROM goals:
  - ▶ 140° PROM flexion
  - ▶ 120° PROM abduction
  - ▶ 60° PROM ER in scapular plane
  - ▶ 70° PROM IR in scapular plane (measured @ 30° abduction)



### PHASE 3 (WEEKS 12-16)

- continue AAROM /AROM as needed, advance PROM to stretching
- improve scapulohumeral biomechanics
- scapular muscle strengthening (serratus and trapezius) in appropriate positions depending on strength (side-lying, prone or standing)
- more aggressive stretching if needed
- theraband - concentric and eccentric within pain-free ranges, all planes, light free weights, aquatherapy as needed
- progressive supine active elevation strengthening (anterior deltoid) with light weights (0.5-1.5 kg) at variable degrees of elevation
- ROM goals:
  - ▶ 140° PROM flexion supine
  - ▶ 120° PROM abduction supine
  - ▶ 60° PROM ER in scapular plane
  - ▶ 70° PROM IR in scapular plane (measured @ 30° abduction)
  - ▶ able to actively elevate shoulder against gravity to at least 120°

### PHASE 4 (WEEKS 16+)

- maintain non painful AROM
- enhance functional use of upper extremity
- patient on a home exercise program by this point to be performed 3 to 4 times per week
- gradually progress strengthening program
- gradual return to moderately challenging functional activities
- patient is on a home exercise program by this point to be performed 3 to 4 times per week
- gradually progress strengthening program
- gradual return to moderately challenging functional activities
- return to recreational hobbies/sports: i.e. gardening, golf, doubles tennis

#### SOURCES:

- Wilcox RB, Arslanian LE, Millet PJ.. Rehabilitation Following Total Shoulder Arthroplasty. J Orthop Sports Physical Therapy 2005;35:821-836
- Boudreau S, et al. Rehabilitation Following Reverse Total Shoulder Arthroplasty. J Orthop Sports Physical Therapy 2007;37:734-743