



Total Shoulder Arthroplasty

Phase I – Immediate Post-Surgical (Week 1-4)

Goals:

- Allow healing of soft tissue
- Maintain integrity of replaced joint
- Gradually increase passive range of motion (PROM) of shoulder
- Reduce pain and inflammation
- Reduce muscular inhibition
- Independent with activities of daily living (ADL) with modification while maintaining the integrity of the replaced joint

Precautions:

- Strict sling wear for 4 weeks
- Sleep with sling
- No supporting of body weight by hand on involved side
- While lying supine, a small pillow should be placed behind the elbow to avoid shoulder hyperextension (anterior capsular stretch, subscapularis stretch).
- Avoid shoulder active range of motion (AROM)
- No lifting of objects
- No excessive shoulder motion behind back
- No excessive stretching or sudden movements

Criteria for progression to Phase II

- Tolerates PROM program
- Has achieved at least 90 degrees of PROM forward flexion and elevation in the plane of the scapula
- Has achieved at least 30 degrees of PROM external rotation
- Has achieved at least 45 degrees of PROM internal rotation

In Patient Rehab (POD1-2):

- Passive forward flexion in supine to tolerance
- Gentle external rotation (ER) to 30 degrees
- Passive internal rotation (IR) to chest
- AROM of the elbow, wrist and hand as tolerated
- Pendulum exercises
- Frequent cryotherapy as needed
- Patient education regarding proper positioning and joint protection techniques

Week 1-2:

- Begin scapular stabilization musculature isometrics
- Continue active elbow ROM

Week 3-4:

- Progress PROM as tolerated, except no external rotation past 30 degrees
- Begin active assist range of motion (AAROM)
 - Flexion and extension in the plane of the scapula as tolerated
 - External rotation (up to 30 degrees) and internal rotation as tolerated
- Continue active elbow ROM



Phase II – Early Strengthening (Weeks 5-6)

Goals:

- Restore full PROM
- Gradually restore AROM
- Reestablish dynamic shoulder stability

Precautions:

- While lying supine, a small pillow should be placed behind the elbow to avoid shoulder hyperextension (anterior capsular stretch, subscapularis stretch)
- In the presence of poor shoulder mechanics, avoid repetitive shoulder AROM exercises against gravity
- No heavy lifting, no heavier than a cup of coffee
- No supporting of body weight by hand on involved side
- No sudden jerking motions

Criteria for progression to the next phase:

- Tolerates PROM and AAROM, isometric program
- Has achieved at least 135 degrees of PROM forward flexion and elevation in the plane of the scapula
- Has achieved at least 60 degrees of PROM external rotation
- Has achieved at least 60 degrees of PROM internal rotation
- Able to actively elevate shoulder against gravity with good mechanics to 100 degrees

Weeks 5-6

- Wean off sling use; after 4 weeks, the sling should only be used for sleeping; removed gradually over the course of the next 2 weeks
- Continue with PROM, AAROM
- Begin pain-free active flexion, IR, ER and elevation in the plane of the scapula
- AAROM pulleys (flexion and elevation in the plane of the scapula)
- Begin shoulder submaximal pain-free shoulder isometrics in neutral
- Scapular strengthening as tolerated
- Begin assisted horizontal adduction
- Gentle glenohumeral and scapulothoracic joint mobilization as indicated
- Initiate glenohumeral and scapulothoracic rhythmic stabilization

Phase III – Moderate Strengthening (Week 7-12)

Goals:

- Gradual restoration of shoulder strength, power and endurance
- Optimize neuromuscular control
- Gradual return to functional activities with involved upper extremity

Precautions:

- No heavy lifting or carrying with operative upper extremity (no heavier than 10 pounds)
- No sudden lifting or pushing activities
- No sudden jerking motions

Criteria for progression to Phase IV:

- Tolerates AROM, AAROM and strengthening



- Able to actively elevate shoulder against gravity with good mechanics to 120 degrees

Weeks 7-10

- Progress AROM exercise, activity as tolerated
- Advance PROM to stretching as tolerated
- Initiate assisted shoulder IR behind back stretch
- Start resisted shoulder IR and ER
- Begin light functional activities
- Begin progressive supine active elevation strengthening (anterior deltoid) with light weights (1-5 pounds) at variable degrees of elevation (lawnchair)

Week 11-12

- Resisted flexion, elevation and extension (theraband)
- Continue progressing IR and ER strengthening
- Progress IR stretch behind back from AAROM to AROM as tolerated

Phase IV – Advanced Strengthening (Week 13+)

Goals:

- Maintain non-painful AROM
- Enhance functional use of upper extremity
- Improve muscular strength, power and endurance
- Gradual return to more advanced functional activities
- Progress weight bearing exercises as appropriate

Precautions:

- Avoid exercises and functional activities that put stress on the anterior capsule and surrounding structures
- No combined ER and abduction above 80 degrees of abduction
- Ensure GRADUAL progression of strengthening

Weeks 13+

- Home program
- Gradually progress strengthening program
- Gradual return to moderately challenging functional activities

Criteria to Return to Light Activity

- Non-painful AROM
- Maximized functional use of upper extremity
- Maximized muscular strength, power and endurance
- Returned to advanced functional activities