

# Total Shoulder Arthroplasty (Anatomic, Muscle-Sparing Technique)

## Physical Therapy Protocol

### Phase I – Immediate Post-Op (0–3 Weeks)

#### Goals:

- Protect surgical site and minimize inflammation
- Reduce pain and swelling
- Maintain elbow, wrist, and hand mobility
- Gradually increase shoulder PROM
- Minimize muscle inhibition
- Educate patient

#### Precautions / Restrictions:

- Sling for comfort only (most patients use for 1–2 weeks to minimize soreness and swelling)
- OK for immediate light use but no lifting >1 lb
- No reaching behind back or excessive internal rotation
- Avoid excessive external rotation or abduction
- No pushing, pulling, or weight-bearing through arms
- Place pillow/towel under elbow when lying on back

#### Therapeutic Exercises:

- **PROM:**
  - ER  $\leq 30^\circ$  (scapular plane)
  - IR to beltline
  - Flexion/scaption to tolerance
  - Abduction  $\leq 90^\circ$

- Pendulums, table slides
- **AAROM:** Active-assisted flexion
- **AROM:** Elbow, wrist, hand
- **Periscapular Strengthening (Week 2):**
  - Scapular retraction, prone retraction, supported setting, inferior glide, low rows
- Ball squeezes

**Criteria to Progress:**

- PROM flexion/scaption  $\geq 50\%$  of opposite side
- Abduction PROM  $\leq 90^\circ$
- ER PROM  $\leq 30^\circ$
- IR PROM  $\geq 70^\circ$
- Pain  $< 4/10$ , no complications

**Phase II – Intermediate Post-Op (Weeks 4–6)**

**Goals:**

- Continue protecting repair and restoring PROM
- Begin gradual use of affected arm
- Improve scapular control and RTC activation
- Begin gentle light ADLs

**Precautions / Restrictions:**

- Wean off sling fully if still using
- Progress bearing weight as tolerated at 4 weeks
- Avoid excessive abduction or ER

**Therapeutic Exercises:**

- Continue Phase I exercises
- **PROM:** Full ROM except ER  $\leq 30^\circ$ , ABD  $\leq 90^\circ$
- **AAROM:** Cane flexion/ER, washcloth press, cane elevation

- **AROM:** Supine flexion, salutes, supine punches
- **Strengthening:** ER isometrics, ball rows, serratus punches, biceps curls and triceps (light resistance)
- **Motor Control:** Rhythmic stabilization (ER/flex 90–125°)
- **Stretching:** Sidelying horizontal adduction

**Criteria to Progress:**

- PROM ≥75% of contralateral side
- ER PROM = 30°, ABD PROM = 90°
- AROM elevation ≥100°
- Minimal substitution patterns
- Pain < 4/10

**Phase III – Controlled Strengthening (Weeks 7–8)**

**Goals:**

- Minimize pain
- Maintain full PROM
- Progress WBAT and strengthening
- Advance AROM and scapular control
- Begin early functional tasks

**Precautions:**

- No lifting >10 lbs
- Begin WBAT progression as tolerated starting at 4 weeks

**Therapeutic Exercises:**

- Continue all prior interventions
- **ROM:** Full AROM/AAROM in all planes
- **Strengthening:**
  - Band ER/IR, side-lying ER, scapular retraction, lawn mowers
- **Motor Control:**

- Quadruped stabilization, PNF D1/D2 lifts
- **Stretching:** IR with towel, sidelying horizontal adduction, sleeper stretch

**Criteria to Progress:**

- Good scapular mechanics with AROM
- Pain < 4/10

## Phase IV – Transitional Phase (Weeks 9–11)

**Goals:**

- Maintain pain-free motion
- Progress functional strength and endurance
- Normalize use of arm for light activity and ADLs

**Precautions:**

- Avoid ER >80° abduction
- No heavy overhead lifting

**Therapeutic Exercises:**

- Continue previous activities
- **Strengthening:** Band Ws, dynamic hug, push-up plus (knees), tripod holds
- **Motor Control:** Wall slides with resistance, PNF with resistance

**Criteria to Progress:**

- Supine AROM: Flex  $\geq 140^\circ$ , ABD  $\geq 120^\circ$ , ER  $\geq 60^\circ$ , IR  $\geq 70^\circ$
- Pain < 2/10
- AROM shoulder elevation to  $\geq 120^\circ$  with good mechanics

## Phase V – Advanced Strengthening (Weeks 12–16)

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**Goals:**

- Maintain full, pain-free ROM
- Restore strength, stability, and endurance
- Return to normal daily and light recreational activities

**Therapeutic Exercises:**

- Continue prior interventions
- **Strengthening:**
  - ER/IR at 90°, T/Y exercises, wall/floor push-ups
- **Motor Control:**
  - Overhead rhythmic stabilization, alternating isometrics

**Criteria for Full Return:**

- Clearance from surgeon
- Functional, pain-free ROM
- Scapular symmetry with movement
- Strength ≥85% of contralateral side

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