

# Total Shoulder Arthroplasty (Traditional)

## Postoperative Rehabilitation Protocol

### General Considerations

#### Surgical Overview

Total Shoulder Arthroplasty (TSA) with traditional **subscapularis tenotomy** requires **protecting the tendon** to ensure proper healing. **Early mobilization is encouraged** with appropriate precautions.

#### Primary Goals

- Protect the **subscapularis tendon** during recovery.
- Minimize **pain and swelling**.
- Gradually restore **range of motion (ROM)** and **strength**.

#### Precautions

- Avoid **internal rotation (IR)** and **extension** for the first **6 weeks**.
- **No lifting heavier than 5 lbs** until cleared by the physician.

## Phase I: Immediate Post-Operative Protection (Weeks 0–6)

#### Key Focus and Precautions

- **Full-time sling use**, including during sleep.
- No active **internal rotation (IR)** or **extension beyond neutral**.

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## Interventions

- **Pain Management:** Cryotherapy and proper positioning.
- **Hand/Wrist/Elbow Active Range of Motion (AROM):** Gentle mobility exercises.
- **Scapular Exercises:** Gentle scapular retraction and elevation.
- **Passive Range of Motion (PROM) – Performed by Therapist:**
  - Forward elevation: **0°–90°**.
  - External rotation (ER): **0°–20°**.

## Criteria to Progress

- Pain and swelling are controlled.
- **PROM:** Forward elevation  $\geq 90^\circ$ , ER  $\geq 20^\circ$ .

## Phase II: Active-Assisted Range of Motion (Weeks 6–12)

### Key Focus and Precautions

- Initiate **Active-Assisted Range of Motion (AAROM)** while avoiding **IR** and **extension**.
- No lifting **>5 lbs**.

## Interventions

- **AAROM:** Supine forward elevation and ER with gentle assistance.
- **Strengthening:** Begin **isometric deltoid exercises** (flexion, abduction) without resistance.

## Criteria to Progress

- **AAROM without compensations.**
- **PROM:** Forward elevation  $\geq 120^\circ$ , ER  $\geq 30^\circ$ .

## Phase III: Active Range of Motion and Strengthening (Weeks 12–16)

### Key Focus and Precautions

- Gradually increase **Active Range of Motion (AROM)** while protecting the **subscapularis tendon**.
- Avoid **overhead activities** until **16 weeks**.

### Interventions

- **AROM Progression:** Forward flexion, abduction, and ER to full ROM.
- **Strengthening:** Light resistance training for **deltoid and scapular stabilizers**.
- **Functional Movements:** Begin **light functional tasks** such as dressing and lifting small objects.

### Criteria to Progress

- **Full AROM without pain.**
- **Strength  $\geq 4/5$**  in deltoid and scapular stabilizers.

## Phase IV: Strengthening and Functional Progression (Weeks 16–24)

### Key Focus and Precautions

- Strengthen the **shoulder muscles** for **functional activities**.
- Avoid **high-stress overhead motions**.

### Interventions

- **Strengthening:** Progressive resistance exercises with **light weights**.

- **Functional Training:** Start activities such as **lifting and carrying light bags**.

### Criteria to Progress

- **Full pain-free ROM.**
- **Strength sufficient for ADLs** (activities of daily living).

## Phase V: Advanced Strengthening and Return to Activity (Weeks 24–36+)

### Key Focus and Precautions

- Return to **higher-level activities**.
- Gradual return to **overhead motions** once **strength and stability** are achieved.

### Interventions

- **Advanced Strengthening:** Continue **progressive resistance** training for deltoid and scapular muscles.
- **Sports-Specific Training:** Light activities such as **golf, swimming, and gentle lifting**.

### Criteria for Full Return

- **Pain-free function** in ADLs and recreational activities.
- **Shoulder strength**  $\geq 85\%$  of the contralateral side.

## Key Notes for Progression

- **Patient Education:**
  - Gentle use of the shoulder is encouraged for **daily tasks**.

- Avoid **lifting** or **overhead activity** until cleared by the physician.
- **Criteria for Advancement:**
  - **Strength**  $\geq 4/5$
  - **AROM**  $\geq 90\%$  of the contralateral side
  - **Pain-free function**
- **Red Flags:**
  - Increased **pain**
  - **Swelling**
  - Difficulty with **ROM**
  - These should prompt **immediate reassessment** by the healthcare provider.

## Final Considerations

- **Follow all precautions** to ensure a **smooth recovery**.
- **Gradual strengthening** and **controlled movement** will maximize **surgical success**.
- **Reach out to your healthcare provider** if you experience concerns or setbacks.

## How to Use This Guide

- **Adhere** to the outlined **progression phases**.
- **Monitor** pain and ROM improvements.
- **Communicate** any concerns to your surgeon or therapist.

## Additional Recovery Tips

- **Avoid sudden movements or jerking motions** in the early weeks.
- **Use pain and function as a guide for progression**.
- **Stay consistent with exercises to optimize recovery**.