



PHYSICAL THERAPY PROTOCOL AFTER TOTAL SHOULDER REPLACEMENT:

The intent of this protocol is to provide the clinician with a guideline of the postoperative rehabilitation course of a patient that has undergone a total shoulder replacement. It is no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam/findings, individual progress, and/or the presence of postoperative complications. If a clinician requires assistance in the progression of a postoperative patient, they should consult with the referring Surgeon.

Depending on the intraoperative findings, the surgeon defines in the operative report when pendulum exercises, passive range of motion (PROM) therapy may be started. Accordingly, the treatment in the first 4 to 8 weeks is defined individually for each patient by the surgeon and recorded in the operation report.

It is important that the patient and/or physical therapist refer to the operative report in order to guide the patient's rehabilitation.

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

Goals:

- PROTECT repair of the subscapularis tendon using the abduction brace or pillow or sling. The decision if abduction brace/pillow or sling is necessary depends on the surgeon's intraoperative findings and patient's body habitus.
- Independent with ACTIVITIES OF DAILY LIFE (ADLs) with modifications while maintaining the integrity of the repair.
- Gradually start passive range of motion. Passive Range of motion (PROM): PROM for all patients having undergone a TSA should be defined as ROM that is provided by and external source (therapist, instructed family member, or other qualified personnel)

Precautions:

- No active range of motion (AROM) of Shoulder
- Maintain arm in sling, remove only for exercise for elbow, wrist and fingers
- No lifting of objects
- No shoulder motion behind back
- No excessive stretching or sudden movements
- No supporting of body weight by hands
- Keep incision clean and dry

Phase I (1 to 4 weeks)

Immediate Post Surgical Phase (In-hospital):

Goals:

- Allow healing of soft tissue
- Maintain integrity of replaced joint
- Begin Pendulum Exercises
- No PROM of shoulder except for pendulum exercises; restore active range of motion (AROM) of elbow/wrist/hand

- Reduce pain and inflammation
- Reduce muscular inhibition
- Independent with activities of daily living (ADLs) with modifications while maintaining the integrity of the replaced joint.

Precautions:

- Sling should be worn continuously for 3-4 weeks
- While lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension / anterior capsule stretch / subscapularis stretch. (When lying supine patient should be instructed to always be able to visualize their elbow. This ensures they are not extending their shoulder past neutral.) – This should be maintained for 4 weeks post-surgically.
- Avoid shoulder AROM.
- No lifting of objects
- No excessive shoulder motion behind back, especially into internal rotation (IR)
- No excessive stretching or sudden movements (particularly external rotation (ER))
- No supporting of body weight by hand on involved side
- Keep incision clean and dry (no soaking for 2 weeks)
- No driving for 4 weeks; until patient is out of sling.

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Early Phase I: (out of hospital)

- Continue above exercises
- Begin scapula musculature isometrics / sets (primarily retraction)
- Continue active elbow ROM
- Continue cryotherapy as much as able for pain and inflammation management

Late Phase I:

- Continue previous exercises
- Continue to progress PROM as motion allows
- Limite ER PROM as dictated by Operative Report
- Begin assisted flexion, elevation in the plane of the scapula, ER, IR in the scapular plane
- Progress active distal extremity exercise to strengthening as appropriate

Phase II – Protection Phase (Week 4-8 weeks):

Goals:

- Do not overstress healing tissue
- Gradually start active range of motion
- Discontinue brace / sling at end of week 4
- Initiate active assisted range of motion (AAROM) under guidance of physical therapy:

Precautions:

- No lifting
- No sudden jerking motions
- No supporting of body weight by hands and arms
- No excessive behind the back movements

Start active ROM (AROM): The AROM exercises should be supervised by the physiotherapist during the first session. In addition, the PROM home exercises should be trained by the physiotherapist. (Start of active ROM is defined by the surgeon in the OR report. Do not start AROM exercises if the operation report states that AROM exercises should be started later). In patients with minor ruptures, strengthening is occasionally started in this phase, otherwise strengthening starts in Phase III.

Exercises:

1. [flexion in supine position](#)
2. [sitting assisted forward reach \(elevation\)](#)
3. [standing wall-assisted forward flexion](#)
4. Cane-Assisted External Rotation at [20 degrees](#), [45 degrees](#) and [90 degrees](#)
[Abduction](#)
5. [Doorway Standing External Rotation](#)
6. [Scapular plane Abduction to Tolerance](#)
7. [Active Range of Motion Forward Flexion in the Scapular Plane](#)
8. Active Range Of Motion External Rotation in Multiple Positions: [Side-Lying](#)
or [Sitting](#)

Phase III – Intermediate phase (week 8-12 weeks):**Goal:**

- Maintain Full AROM and Maintain Full PROM
- Gradual restoration of shoulder strength, power, and endurance (Elastic bands)
- Gradual return to functional activities

Precautions:

- No heavy lifting of objects (no heavier than 5 lbs.)
- No sudden lifting or pushing activities
- No sudden jerking motions
- No heavy lifting of objects (no heavier than 5 lbs.)
- No sudden lifting or pushing activities
- No sudden jerking motions

Start of strengthening with Thera-bands and light weights is defined by the surgeon in the OR report. Do not start strengthening if the operation report states that strengthening should be started later. In patients with minor ruptures, strengthening is occasionally started earlier (Phase II). In patients with big rotator cuff tears strengthening starts in Phase III.

Exercises:

1. [Active Range of Motion External Rotation with Band Strengthening](#)
2. [Active Range of Motion Internal Rotation with Band Strengthening](#)
3. [Row with Resistance Band](#)
4. [Towel/Hand-assisted Internal Rotation Stretch](#)
5. [Side lying Internal Rotation Stretch at 70 and 90 Degrees](#)
6. [Cross-Body Stretch](#)
7. Water (pool) therapy Standing in water with float under arm, lower body into water to help stretch into flexion
8. Standing in water with float under arm, lower body to side to help with external rotation

Phase IV Advanced strengthening phase (>12 weeks):

Goals:

- Maintain full non-painful active ROM
- Advance conditioning exercises for Enhanced functional use of UE
- Improve muscular strength, power, and endurance (light weights)
- Gradual return to full functional activities
- Continue to perform ROM stretching, if motion is not complete

Exercises:

- [Side-lying External Rotation with Towel](#)
- [Full Can in the Scapular Plane](#)
- [Prone Scaption](#)
- [Diagonal](#)
- [Dynamic Hug](#)
- [Internal Rotation at 90 Degrees Abduction](#)
- [Forward Band Punch](#)
- [Sitting Supported External Rotation at 90 Degrees](#)
- [Standing Unsupported External Rotation at 90 Degrees](#)
- [Biceps Curl](#)

Phase V – Return to activity phase (week 18):

Goals:

- Gradual return to strenuous work activities
- Gradual return to recreational activities
- Gradual return to sport activities
- Continue strengthening and stretching
- Continue stretching, if motion is tight
- May initiate interval sport program