KANSAS JOINT & SPINE SPECIALISTS
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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 by 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 and 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 operative 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 (WEEKS 1–4)

Goals:

- PROTECT repair of the subscapularis tendon using the abduction brace, pillow, or sling. The decision to use an abduction brace/pillow or sling depends on the surgeon's intraoperative findings and patient's body habitus.
- Independent with Activities of Daily Living (ADLs) with modifications while maintaining the integrity of the repair.
- Gradually start passive range of motion. PROM for all patients having undergone a TSA should be defined as ROM that is provided by an 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 elbow, wrist, and finger exercises.
- 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 — 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 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, patients should be instructed to always be able to visualize their elbow, which 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 or until patient is out of sling.

PHASE I — EARLY (OUT OF HOSPITAL)

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

PHASE I — LATE

- Continue previous exercises.
- Continue to progress PROM as motion allows.
- Limited ER PROM as dictated by operative report.
- Begin assisted flexion, elevation in the plane of the scapula, ER, and IR in the scapular plane.
- Progress active distal extremity exercise to strengthen as appropriate.

PHASE II — PROTECTION PHASE (WEEKS 4–8)

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 physical therapist during the first session. Home PROM exercises should also be trained by the physical therapist. Start of active ROM is defined by the surgeon in the operative report — do not begin AROM exercises if the operative report specifies a later start date. In patients with minor ruptures, strengthening is occasionally initiated in this phase; otherwise, strengthening begins in Phase III.

Exercises:

1. Flexion in the supine position
2. Sitting-assisted forward reach (elevation)
3. Standing wall-assisted forward flexion
4. Cane-assisted external rotation at 20, 45, and 90 degrees abduction
5. Doorway standing external rotation
6. Scapular plane abduction to tolerance
7. Active ROM forward flexion in the scapular plane
8. Active ROM external rotation in multiple positions: side-lying or sitting

PHASE III — INTERMEDIATE PHASE (WEEKS 8–12)

Goals:

- 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 (nothing 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 operative report. Do not begin strengthening if the operative report specifies a later start date. In patients with minor ruptures, strengthening may begin earlier (Phase II). In patients with large rotator cuff tears, strengthening begins in Phase III.

Exercises:

1. Active ROM external rotation with band strengthening
2. Active ROM 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 assist stretch into flexion
8. Standing in water with float under arm, lower body to side to assist with external rotation

PHASE IV — ADVANCED STRENGTHENING PHASE (WEEK 12+)

Goals:

- Maintain full, non-painful active ROM.
- Advance conditioning exercises for enhanced functional use of upper extremity.
- Improve muscular strength, power, and endurance (light weights).
- Gradual return to full functional activities.
- Continue ROM stretching if motion is not yet 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.
- May initiate interval sport program.