

Daniel Elkin, MD
Orthopedic Sports Medicine and Shoulder Surgery

Total Shoulder Replacement Post-Operative Rehabilitation Program

The goal of the rehabilitation process is to provide greater mobility to the patient then before the surgery. In addition, stability of the shoulder is vital and essential to normal non-painful shoulder function. The key to the success of the rehabilitation following total shoulder replacement is compliance to your exercise program.

Precautions:

1. In hospital use immobilizer.
2. Discontinue immobilizer at Day 1-3 and use sling for 1 month
3. No forceful internal rotation or passive external rotation past 20 for 6 weeks for fear of disrupting subscapularis repair.

Physician appointments:

- 1 week after surgery
- 4 weeks after surgery
- 8 weeks after surgery
- 12 weeks after surgery

I. PHASE I - Healing phase (Weeks 0-4) - [1 visit per week]

Goals:

Decrease shoulder pain and inflammation
Allow for subscapularis healing
Retard muscular atrophy and prevent RTC inhibition

Precautions:

- Use sling continuously except while doing therapy or light, protected activities – such as desk work, for 4 weeks
- Wear sling while sleeping for 6 weeks
- No active shoulder motion for 4 weeks, all planes
- No active internal rotation for 6 weeks
- External rotation range of motion limited to 20 degrees
- Relative rest to reduce inflammation

Exercises:

- Sling at all times: may come out for elbow/wrist/hand ROM
- Exercises:
- Elbow/Wrist ROM

- Gripping Exercise for Hand
- Ice & Modalities
- Elbow flexors
- Electrical Muscle Stimulation (if needed)
- Passive and active assistive range of motion for shoulder flexion and abduction to patient tolerance
- Codmans/Pendulum exercises
- Painfree submax isometrics for shoulder flexion, abduction, extension and external rotation

Cardiovascular Fitness

- Walking and/or stationary bike with sling on
- *CAUTION: Do not stressfully actively IR arm against resistance for possibility of pulling subscapularis repair for 4-6 weeks

II. PHASE TWO - MOTION PHASE (Week 5-8) [1-2 visit per week]

Goals:

- Controlled restoration of passive and active assistive range of motion
- Activate shoulder and scapular stabilizers in a protected position of 0 degrees to 30 degrees of shoulder abduction)
- Correct postural dysfunctions
- Decrease pain/inflammation Increase Functional Activities

Precautions:

- Wean out of the sling slowly based on the safety of the environment during weeks 5 and 6. Discontinue use of the sling by the end of week 6
- Wear sling while sleeping for 6 weeks
- No active internal rotation for 6 weeks
- External rotation range of motion limited to 30 degrees weeks 5 and 6, then to 45 degrees for weeks 7 and 8

Exercises:

- Passive and active assistive range of motion for the shoulder in all cardinal planes (shoulder internal rotation should be passive only until 6 weeks)
- Pain free, progressive, low resistance shoulder isotonic
- Gentle, low velocity rhythmic stabilizations to patient tolerance
- Gentle shoulder mobilizations as needed
- Scapular strengthening with the arm in neutral
- Cervical spine and scapular active range of motion
- Postural exercises
- Core strengthening
- Biceps/triceps
- Isometrics for deltoid

Cardiovascular Fitness

- Walking and stationary bike
- No treadmill or stairmaster

- Avoid running and jumping due to forces that can occur at landing

III. PHASE THREE – Strengthening PHASE (WEEKS 9-12) [1 visit per week]

Goals:

- Functional shoulder active range of motion in all planes
- Normal (rated 5/5) strength for shoulder
- Correct any postural dysfunction

Precautions:

- As functional ability allows

Exercises:

- Shoulder internal rotation and external rotation with theraband or weights that begin at 0 degrees of shoulder abduction - gradually increase shoulder abduction as strength improves
- Open kinetic chain shoulder rhythmic stabilizations in supine (eg. stars or alphabet exercises)
- Gentle closed kinetic chain shoulder and scapular stabilization drills – wall ball circles and patterns
- Proprioceptive neuromuscular facilitation patterns
- Side lying shoulder flexion
- Scapular strengthening
- Active, active assistive, and passive range of motion at the shoulder as needed
- Core strengthening
- Begin trunk and hip mobility exercises

Cardiovascular Fitness

- Walking and stationary bike (No treadmill, stairmaster or swimming)
- Avoid running and jumping until the athlete has full rotator cuff strength in a neutral position due to forces that can occur at landing

IV. PHASE Four – Return to Activities PHASE (WEEKS 13-16) [1 visit every week]

Goals:

- Normal (rated 5/5) rotator cuff strength and endurance at 90 degrees of shoulder abduction and scaption
- Advance proprioceptive and dynamic neuromuscular control retraining
- Achieve maximal shoulder external rotation (no limitations)
- Correct postural dysfunctions with work and sport specific tasks
- Develop strength and control for movements required for work or sport

Precautions:

- Post-rehabilitation soreness should alleviate within 12 hours of the activities

Exercises:

- Multi-plane shoulder active range of motion with a gradual increase in the velocity of movement while making sure to assess scapular rhythm
- Shoulder mobilizations as needed

- Rotator cuff strengthening in 90 degrees of shoulder abduction, and overhead (beyond 90 degrees of shoulder abduction)
- Scapular strengthening and dynamic neuromuscular control in open kinetic chain and closed kinetic chain positions
- Core and lower body strengthening
- Work and Sport specific strengthening
- Work specific program, golf program, swimming program or overhead racquet program as needed

Cardiovascular Fitness

- Walking, stationary bike, and stairmaster
- May begin light jogging and running if the patient has normal (rated 5/5) rotator cuff strength in neutral and normal shoulder active range of motion

** Full return to sports and work will occur with the approval of both the physician and therapist**