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Total Shoulder Replacement

You have undergone a shoulder replacement procedure. The performance of the procedure is complete, but for the most optimal outcome, it is vital that you follow your post operative rehabilitation protocol. The intent of this protocol is to provide the patient and therapist with a guideline for post-operative rehabilitation of a shoulder replacement.

Sling

It is very important to continue to use your sling for the entire 6 weeks in order to protect the portion of the rotator cuff that has to be taken down and then repaired in order to perform the procedure. Failure to allow this tendon to heal will severely affect your outcome.

Phase 1 – Immediate Post Surgical Phase: WEEKS 0-6

Goals:

- Allow healing of soft tissue
- Obtain early ROM with passive exercise
- **Protect the subscapularis (rotator cuff)**
- Maintain integrity of replaced joint
- Gradually increase passive range of motion (PROM) of shoulder; 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 6 weeks

- For Weeks 0-6 while lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension which will stretch anterior capsule and subscapularis.

- **Avoid Active Range of Motion (AROM) of SHOULDER**

- 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 3 weeks)

- No driving for 3 weeks

Post-Operative Day (POD) #1 (in hospital):

- Passive forward flexion in supine to tolerance

- Gentle ER in scapular plane to available PROM (as documented in operative note) – usually around 30°
  (IMPORTANT: DO NOT produce undue stress on the anterior joint capsule, particularly with shoulder in extension)

- Passive IR to chest

- Active distal extremity exercise (elbow, wrist, hand)
- Pendulum exercises
- Frequent cryotherapy for pain, swelling, and inflammation management
- Patient education regarding proper positioning and joint protection techniques

Early Phase 1: WEEKS 0 TO 4

- Continue above exercises
- Begin scapula musculature isometrics and scapular clocks
- Continue active elbow ROM
- Continue cryotherapy as much as able for pain and inflammation management

Late Phase 1: WEEKS 5-6

- Continue to progress PROM of shoulder as motion allows
    - Goal of 90 Degrees PROM forward elevation
    - 70 degrees of IR in 30 degrees of abduction
    - 45 degrees of ER by 6 weeks
- Begin active-assisted flexion, elevation in the plane of the scapula, ER, IR in the scapular plane
- Progress active distal extremity exercise to strengthening as appropriate

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Phase 2 – Early Strengthening Phase - WEEKS 7-12

Goals:

- Restore full passive ROM
- Gradually restore active motion
- Control pain and inflammation
- Do not over stress healing tissue
- Establish proper shoulder kinematics

Precautions:

- Sling should only be used for sleeping and removed gradually over the course of the next 2 weeks and then discarded
- While lying supine a small pillow or towel should be placed behind the elbow to avoid shoulder hyperextension and anterior capsule stretch
- In the presence of poor shoulder mechanics, avoid repetitive shoulder AROM exercises or activity against gravity in standing position
- No heavy lifting of objects (no heavier than coffee cup)
- No supporting of body weight by hand on involved side

Phase 2: Exercises

- Continue with PROM, active assisted range of motion (AAROM)
- Begin active elevation in scapular plain, IR, ER encouraging free ROM

- AAROM pulleys (flexion and elevation in the plane of the scapula) – as long as greater than 90° of PROM
- Scapular strengthening exercises as appropriate
- Progress distal extremity exercises with light resistance as appropriate
- Gentle glenohumeral and scapulothoracic joint mobilizations as indicated
- Initiate glenohumeral and scapulothoracic rhythmic stabilization
- Continue use of cryotherapy for pain and inflammation.

Phase 3 – Light strengthening: WEEKS 13 to 20

Goals:

- Gradual restoration of shoulder strength, power, and endurance
- Optimize neuromuscular control
- Gradual return to functional activities with involved upper extremity

Precautions:

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

Phase 3:

- Progress AROM exercise / activity as appropriate

- Advance PROM to closed chain stretching using controlled body weight stretches (hand on table/wall)
- Continue PROM as needed to maintain ROM
- Initiate assisted shoulder IR behind back stretch
- Resisted shoulder IR, ER in scapular plane
- Resisted elevation with 1-3 pounds or light resistance band (must emphasize physiologic motion)
- Begin light functional activities

Phase 4 - Advanced Strengthening WEEKS 21+

Criteria for progressing to Phase 4:

- Tolerates AAROM/AROM/strengthening
- Has achieved at least 120° active forward elevation in the scapular plane with proper mechanics
- Has achieved at least 45° active ER in plane of scapula supine
- Has achieved at least 70° AROM IR in plane of scapula supine in 30° of abduction

Goals:

- Maintain non-painful AROM
- Enhance functional use of upper extremity
- Improve muscular strength, power, and endurance
- Gradual return to more advanced functional activities

- Progress weight bearing exercises as appropriate

- Progress to Home Exercise program to include ROM/stretching exercise daily and strengthening exercises 3 to 4 times/day

Phase 4 Exercises

- Progress resistance exercises for rotator cuff, periscapular and general upper extremity strengthening as tolerated

- Functional training for chosen activities

- Maintain low weight/resistance and high repetitions indefinitely

Criteria for discharge from skilled therapy:

- Patient able to maintain non-painful AROM

- Maximized functional use of upper extremity

- Maximized muscular strength, power, and endurance

- Patient has returned to advanced functional activities