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Post-Operative Rehabilitation Guidelines for Anatomic Shoulder Arthroplasty

Subscapularis Safe Zones established intraoperatively by the surgeon

- These ranges can start on Post-op day 1, but may require a few weeks to achieve depending on patient comfort
- Supine, passive, well-arm assisted:
 - 140 /40 Program: Max. forward flexion to 140°; Max. External rotation to 40°
 - 130 /30 Program: Max. forward flexion to 130°; Max. External rotation to 30°
- No abduction

Phase I: Passive Motion – 0-6 weeks post-op

Goals:

- PROM – 140 /130 degrees of flexion, ER of 40 /30 by the end of week 6 (see above)
 - Decrease pain, Decrease muscle atrophy, Educate regarding joint protection
 - Provide the patient with instructions for home exercises (last pages) 5 x per day

Precautions:

- Stay within safe zone determined at surgery (see above)
- Week 1-2: Sling with abduction pillow at all times, removed only for 5x /day exercises, showering, and dressing
- Week 3-6: Sling while out of home /uncontrolled environment, continue wearing during sleep if patient is an active sleeper.
 - Ok to perform waist level activities WITH ELBOW AT SIDE in front of the body
 - Typing, eating utensils, combing hair and washing face with elbow at side
 - No lifting, reaching or pulling heavier than coffee cup with elbow at side

Teaching:

- Emphasize home, supine, passive well-arm assisted PROM (FF and ER as above)
- Instruct in regular icing techniques or cold therapy device (use as much as possible out of 24 hours for 8-10 days)
- Ice packs for 20 - 30 minutes intervals, especially at the end of an exercise session
- Monitor for edema in forearm, hand, or finger

Exercises:

- Pendulum exercises
 - With the arm hanging, the patient gently swings the hand forward and backward, then side-to-side, and then clockwise and counterclockwise
- Passive, supine well-arm assisted forward flexion, in front of the plane of the scapula as pain allows per safe zone above (140 /40 or 130 /30)
 - Active scapular retraction, elevation in sitting or standing

- Active elbow, wrist, hand ROM – Grasping and gripping lightweight objects

Phase II: Active Range of Motion (6–10 weeks post-op)

Goals:

- Full range of motion by end of week 10. After 6 week physician visit, patient and therapist can move beyond the safe zones as pain allows.
- Emphasis should on range of motion before strengthening.
- Improve strength, Decrease pain, Increase functional activities, Scapular stabilization

Precautions:

- No sling use
- No resisted internal rotation until 10 weeks post-op

Teaching:

- Encourage continued stretching at home. Limited only by pain
- Ice after exercise.

Exercises:

- Encourage patient to use smooth, natural movement patterns
- Continue to work on Passive ROM as in Phase I
- Begin AROM and AAROM (using a cane), progressively, to full range of motion
- Assisted forward flexion supine using uninvolved arm to assist – progressing to active motion in a reclined position and then to sitting
- Side lying ER against gravity
- Encourage normal scapular mechanics with active motion
- Add Theraband exercises or light dumbbell weights (2lbs) for flexion, extension, external rotation
- Scapulothoracic strengthening (prone extension, prone T, etc.)
- Aquatic therapy, if available, can begin no earlier than 1 month post op if wound is completely healed
 - Week 1–6: Stay within established safe zone listed above. Passive motion only
 - Week 6+: Shoulder fully submerged – slow, active motions for flexion, elevation, ER/IR and horizontal abduction/adduction out to scapular plane, range of motion limited by pain only.

Phase III: Final Strengthening – 10+ weeks

Goals:

- If acceptable motion has been achieved (>160 FF, >60 ER, IR T12 or above), then Maximize strength—otherwise continue with stretching program
- Improve neuromuscular control
- Increase functional activities

Precautions:

- No sudden, forceful resisted IR (e.g. golfing, tennis, swimming) until >3 months post-op

Teaching:

- Continue home stretching minimum 1x per day to maintain full range of motion

Exercises:

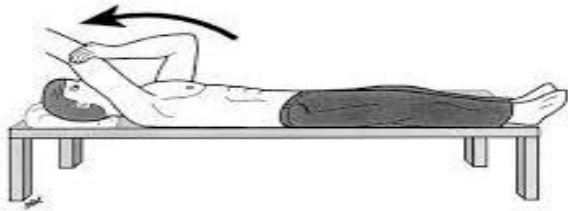
- Continue to increase difficulty of theraband and dumbbell exercises as tolerated
- Increase resistance exercises – must be light enough weight that >20 reps are achieved per set
- Continue aerobic training as tolerated, and modalities as appropriate
- Continue to progress home program

NOTES:

1. With proper exercise, motion, strength, and function continue to improve even after one year.
2. The complication rate after surgery is 5 – 8%. Complications include infection, fracture, heterotopic bone formation, nerve injury, instability, rotator cuff tear, and tuberosity nonunion. Look for clinical signs, unusual symptoms, or lack of progress with therapy and report those to the surgeon.
3. The therapy plan above only serves as a guide. Please be aware of specific individualized patient instructions as written on the prescription or through discussions with the surgeon.
4. Please call Dr. Swindell if you have any specific questions or concerns 718-246-8700. The patient's "Home exercise stretching program" (critical for first 10 weeks) is attached.

Home Range of Motion Exercises

- Perform passive, assisted forward flexion and external rotation (outward turning) exercises with the operative arm. You were taught these exercises prior to discharge. Both exercises should be done with the non-operative arm used as the "therapist arm" while the operative arm remains completely relaxed.
- 10 of each exercise should be done 5 times daily, work up to the max degrees



Forward Flexion Maximum: _____ deg. (if not specified, default is 140^o)

Lay flat on your back, completely relax your operative arm like a wet noodle, and grasp the wrist of the operative shoulder with your opposite hand. Using the power in your opposite arm, bring the stiff arm up only to the maximum indicated above (90 degrees indicates your arm pointed straight ahead). Start holding it for ten seconds and then work up to where you can hold it for a count of 30. Breathe slowly and deeply while the arm is moved. Repeat this stretch ten times. Repeat the entire cycle 5 times per day.



External rotation Maximum: _____ deg. (if not specified, default is 40^o)

External rotation is turning the arm out to the side while your elbow stays close to your body. It is best stretched while you are lying on your back. Hold a cane, yardstick, broom handle, or golf club in both hands. Bend both elbows to a right angle. With your operative arm completely relaxed, use steady, gentle force from your normal arm to rotate the hand of the stiff shoulder out away from your body. Continue the rotation only to the maximum indicated above (90 degrees indicates your arm pointed straight ahead). Holding it there for a count of 10. Repeat this exercise ten times. Repeat the entire cycle 5 times per day.