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Shoulder Arthroplasty (Replacement) Rehabilitation

The following is a basic framework from which to work during rehabilitation following an anatomic total shoulder arthroplasty (replacement). Every patient is different, so the time points are just guidelines – the emphasis should be on achieving the goals of each phase prior to advancing to the next phase. Please feel free to communicate with our office with any questions or concerns.

Phase I – 0 to 6 weeks postoperative (passive range of motion)

Subscapularis safe zone

To perform a total shoulder replacement, the subscapularis tendon must be released and repaired during surgery. An important aspect of the first 6 weeks of rehabilitation is to protect the tendon repair and allow it to heal by avoiding positions that place excessive tension on the tendon. Below are the parameters that we recommend patients stay within:

- Can begin post-op day 1, but may require a few weeks to achieve depending on patient comfort
- Maximum forward flexion to 130°
- Maximum external rotation to 30°
- No abduction

Goals

- PROM - 130° of flexion, 30° of ER by the end of phase I (see above)
- Decrease pain, decrease muscle atrophy, education regarding joint protection
- Instruction on home exercises (last pages) 5 times per day

Precautions

- Stay within the safe zone (see above)
- Weeks 1-2
 - Sling with abduction at all times, remove only for home exercises (5x per day), showering, and dressing
- Weeks 3-6
 - Sling while out of home or in an uncontrolled environment, may remove at home and in safe environments, continue wearing for sleep
 - Okay to perform waist level activities with elbow at the side of the body and the hand in front of the body
 - Typing, writing, eating with utensils, washing face with elbow at the side
 - No lifting, reaching, or pulling anything heavier than cup of coffee with elbow at the 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 to 30 minute intervals, especially at the end of an exercise session
- Monitor for edema in forearm, hand, or finger



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Exercises

- Pendulum exercises
- Passive, supine, well-arm assisted forward flexion, in front of the scapular plane as pain allows, staying within safe zone (maximum 130°)
- Active scapular retraction, elevation in sitting or standing position
- Active elbow, wrist, hand ROM – grasping and gripping lightweight objects

Phase II – 6 to 12 weeks postoperative (active range of motion)

Goals

- Full ROM by the end of phase II
- After 6-week physician visit, patient and therapist can move beyond the safe zone as tolerated
- Emphasis on ROM 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, as tolerated 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 while supine using well-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 shoulder motion
- Add Theraband exercises or light dumbbell weights (2 lbs.) for flexion, extension, external rotation
- Scapulothoracic strengthening (prone extension, prone T, etc.)
- Aquatic therapy, if available, can begin no earlier than 6 weeks post-op after the physician visit and the wound is healed

Phase III – 12+ weeks postoperative (final strengthening)

Goals

- If acceptable motion has been achieved (greater than 160° FF, 60° ER, IR T12 or above), then maximize strength – otherwise continue with stretching program
- Improve neuromuscular control



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- Increase functional activities

Precautions

- No sudden, forceful resisted IR (i.e. golfing, wood splitting, swimming) until 3 months post-op

Teaching

- Continue home stretching program at least once a day to maintain full ROM

Exercises

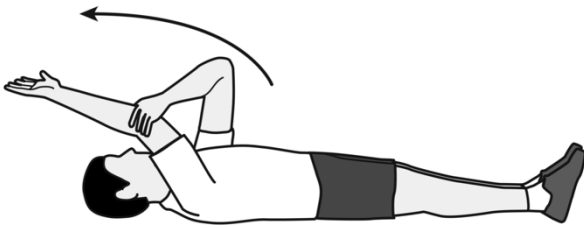
- Continue to increase resistance of Theraband and dumbbell exercises as tolerated
 - Must be light enough weight that at least 20 reps can be completed per set
- Continue aerobic training as tolerated, and modalities as appropriate
- Continue to progress home program

Notes

- With proper rehabilitation, improvements in motion, strength, and function can continue even after 1 year
- Complications after shoulder replacement include infection, fracture, heterotopic bone formation, instability, nerve injury, stiffness, and rotator cuff tear – please look for clinical signs, unusual symptoms, or lack of progress with therapy and report those to our office
- Please call Dr. Fu if you have any questions or concerns
- Recommended patient home exercise stretching program (critical for the first 12 weeks) attached

Home Range of Motion Exercises

- Perform passive, assisted forward flexion and external rotation (outward turning) exercises with the operative arm. Both exercises should be done with the non-operative arm used as the “therapist arm” while the operated arm remains completely relaxed.
- 10 reps of each exercise should be done 5 times daily, slowly working up to the maximum degrees



Forward Flexion – Maximum 130°

Lay flat on your back, and completely relax your operative arm like a wet noodle. Grasp the wrist of your operative arm with your opposite hand. Using the power of your non-operative arm, bring the operative arm up to the maximum 130°. For reference, your arm pointing straight up towards the ceiling is 90°. 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 throughout. Repeat this stretch 10 times and repeat the cycle 5 times per day.



External Rotation – Maximum 30°

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 operative shoulder out away from the body. Continue the rotation only to the maximum 30°. For reference, 0° indicates your hand pointing straight in front of you with your elbow bent at a right angle. Hold it for a count of 10 and repeat this exercise 10 times. Repeat the entire cycle 5 times per day.