

Rehabilitation Protocol

Post-operative treatment for total shoulder arthroplasty/hemiarthroplasty

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Rehabilitation

The rehabilitation program will be individually tailored by the therapist in close communication with the surgeon considering the extent of the injury, the quality of the surgical repair, and the functional outcome needed for the patient. This care path is a general guideline and will be tailored to meet the needs of each patient.

Phase I: Early Passive / Active Assisted Motion

Timeframe: post-op day 1 through 4-6 weeks

Goals:

- protect surgical repair
- prevent adhesion formation
- obtain early passive shoulder range of motion within appropriate limitations
- pain control
- patient education/independence in home exercise program

Precautions: Throughout all phases of therapy, shoulder extension and medial rotation should not be combined. For example, the patient should not focus on stretching the arm behind the back into medial rotation. This avoids putting stress onto the repaired structures. These movements usually return through normal activities and increased functional use of the arm.

Treatment techniques:

- pendulum exercises - especially circumduction
- active range of motion of elbow, wrist, and hand
- passive/active assisted shoulder flexion in scapular plane in supine, with assistance of family member. **Note: 130 degrees unless otherwise specified**
- passive/active assisted lateral rotation with cane or stick with shoulder abducted to 30 degrees in supine. (with towel roll under elbow) **Note: 30 degrees unless otherwise specified**
- pulleys – shoulder flexion, to be implemented by therapist after postoperative Week 1 visit with Dr. Armstrong/Dr. Lyons and clearance given (with emphasis on not substituting with upper trapezius, yet encouraging proper scapular upward rotation)
- home use of modalities as needed to assist in pain relief

Phase II: Active assistive/Active range of motion

Timeframe: begin approximately 6 weeks post-op

Goals:

- protect surgical repair
- obtain full painfree passive and active range of motion
- begin to restore proper scapulohumeral mechanics
- independent in ADL's
- gentle strengthening
- patient education/ independence in home exercise program

Treatment techniques:

- continue AAROM - especially shoulder elevation with cane, pulleys with increased active elevation, wall slides with emphasis on correct shoulder biomechanics
- progress to AROM as tolerated in painfree ranges (begin with gravity lessened positions as appropriate)
- add isometrics in painfree ranges (especially flexion, lateral rotation, and medial rotation) strengthen appropriate scapular muscles such as middle and lower trapezius. Progress carefully.
- patient education regarding home exercise program, posture, appropriate modification of activities

Phase III: Strengthening

Timeframe: begin approximately 8 - 12 weeks post-op

(Must check with the surgeon prior to starting resistive strengthening)

Goals:

- restore normal strength (rotator cuff, deltoid, scapular stabilizers)
- restore correct scapulohumeral biomechanics
- gradual return to activity
- patient education / independence in home exercise program

Treatment techniques:

- continue AAROM /AROM as needed
- improve scapulohumeral biomechanics
- scapular muscle strengthening (serratus and trapezius) in appropriate positions depending on strength (sidelying, prone or standing)
- more aggressive stretching if needed
- theraband - concentric and eccentric within painfree ranges, all planes (Note: keep elbow flexed to 90 degrees for flexion and elevate only to 90 degrees)
- light free weights, aquatherapy as needed

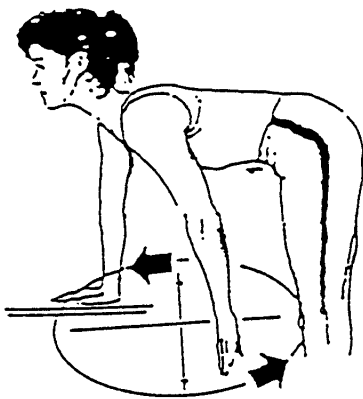
Home Exercises – Total Shoulder Arthroplasty/Hemiarthroplasty

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These exercises are intended to increase your range of motion. Only perform those exercises designated by your physical therapist or physician. You may apply ice (preferably crushed ice, gel pack or frozen vegetables) after exercising. You should not experience a significant increase in pain longer than 1-2 hours after exercising.

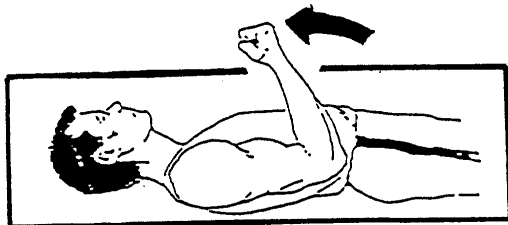
PENDULUMS



Position: standing with your arm supported on a stable surface. Bend forward and allow your affected arm to hang loosely.

Action: slowly swing your arm forward, backward, clockwise, and counterclockwise 30 times in each direction, 5 times per day.

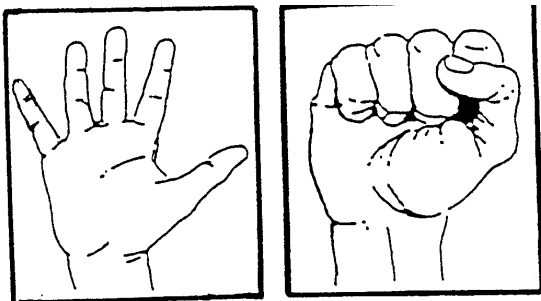
BICEP CURL



Position: this can be done lying, sitting or standing. Start with your arm at your side.

Action: bend your elbow, bringing your hand toward your same shoulder. Return to the starting position and repeat 15 times, 5 times per day.

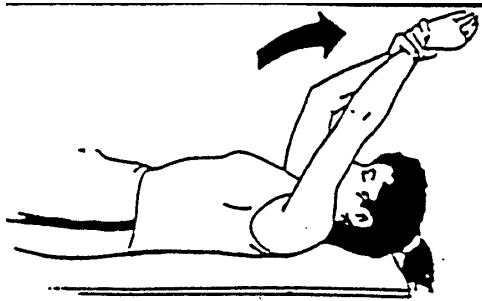
MAKING A FIST



Position: holding a rubber ball, gauze roll, small towel roll, or nothing at all.

Action: curl your fingers and make a fist. Squeeze and hold for 5 seconds. Release grip then repeat 10 times, 5 times per day.

ACTIVE ASSISTED FORWARD ELEVATION WITH OPPOSITE HAND



Position: lying on back, grasp your affected arm at the wrist with your unaffected hand.

Action: allow your affected arm to relax while your unaffected arm raises it over your head. Take it to a comfortable stretch and hold it for 10 seconds. Return to neutral position and repeat 15 times, 5 times per day.

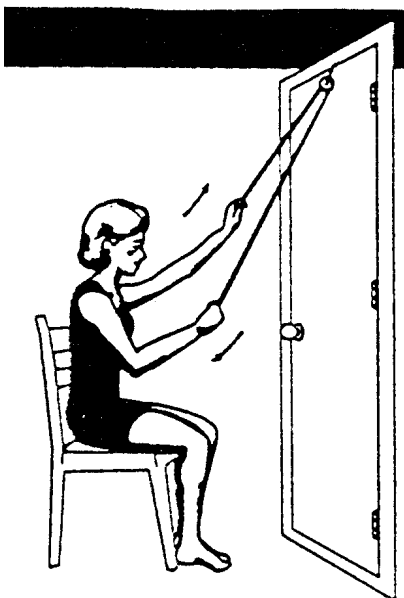
EXTERNAL ROTATION



Position: lying on back with your affected arm resting on a pillow 6 inches away from your side. Bend your elbows to 90 degrees. Hold a stick or cane in both hands.

Action: with your unaffected arm and the stick, slowly rotate your affected arm away from your body. Hold it at a comfortable stretch position for 10 seconds. Repeat 15 times, 5 times per day.

PULLEYS



Position: sitting on a chair or stool facing the door. Your toes should be 8 - 10 inches away from the door. Hold one hand of the pulleys in each hand.

Action: Pull the rope back and forth with your unaffected arm, as far as your operated shoulder will allow without pain.