

Cervical Arthroplasty Post-Operative Rehabilitation Guidelines

- No driving while on narcotics
- NSAIDs are okay to help with pain and inflammation, start at 2 weeks
- No Tobacco!
- +/- C-Collar per surgeon
- Initiate PT 1-6 weeks status-post surgery
- Sedentary occupation- return 1-4 weeks Post-Op
- Manual labor occupation- restricted activity between 6-16 weeks Post-Op
- Progress as appropriate

Phase 1 (POD 1 - 3 weeks post-op)

Goals:

- Wound healing (<5- 8 lb lifting limit, NSAIDs are okay)
- Performing ADLs correctly
 - Don/doff shoes, correctly picking items off ground, etc
- Sitting no greater than 30 minutes at a time
- Appropriate sitting posture- suggest using a lumbar roll and cervical/thoracic retracted positioning
- Walking program (goal 30 minutes twice per day)
- Correct usage of assistive device as indicated

Phase 2 (3-6 weeks post-op)

- Begin regimented PT program (2-3x/week) for recommended 6-8 weeks (12-24 visits)
 - NDI at initial evaluation
 - Education on precautions, prognosis

Goals:

- Pain control (modalities, manual therapy soft tissue mobilization as needed)
- Wound healing (<5-8 lb lifting limit, increasing 5# every other week)
- Begin gentle overhead reaching no sooner than 4 weeks
- Improve endurance
 - Maintain erect posture throughout the day
 - Encourage position changes, limit sitting to 30 minutes
 - Appropriate body mechanics with ADLs (<5-8 lb weight limit, increasing 5# every other week)
 - Reestablish neuromuscular control of cervical and scapulothoracic muscle stabilizers
 - Improve UE and cervical mobility, wean collar usage
 - Continue progressive walking program

Suggested Interventions:



- Ambulation/endurance
 - Progress toward discontinuing assistive devices
 - Initiate aerobic conditioning
 - UBE no resistance/treadmill/recumbent bike
- Cervical/Upper Extremity/Core conditioning
 - Cervical retractions
 - Scapular retractions, shoulder shrugs, scapular clocks
 - Biceps/triceps/shoulder ER/IR/Flex/EXT
 - Fine motor function with hands
 - Core: tra/multifidi/glute med/max isometrics
- Flexibility, mobility
 - Soft tissue mobilization for hypertonic paraspinal muscles
 - Light/gentle cervical AROM with neutral spine
 - Encourage movement
 - Avoid sitting for prolonged periods of time (30-45 mins)
- Balance, POSTURE, gait training
 - Heels together, semi-tandem, tandem, SL stance with eyes open/closed
 - Functional activities
 - Functional movements
 - Bend with knees to reach towards floor
 - Lift close to body
- + / - pool therapy based upon wound healing
- Control pain, inflammation
 - Ice/modalities for pain/inflammation
- Facilitate healing of incision (watch for redness, drainage, swelling, etc)

Avoid:

- Lifting, push/pulling (yardwork, chores) >20 lbs up to 3 months post-op
- End range cervical stretching/movements
- Overhead lifting

Other Considerations/Precautions:

- Consult doctor for return to driving, returning to work
 - Return to work may be shorter for sedentary jobs
- Sitting
 - No longer than 30-45 minutes
 - Good work/home ergonomics
- Avoid lotion/cream, submerging incision underwater until fully healed

Phase 3 (6 weeks - 3 months post-op)



Goals:

- Return to baseline standing/walking duration and distance
- Achieve functional cervical/shoulder AROM
- Improve UE/cervical strength (<20 lbs through 8 weeks)
- Demonstrate proper posture, ergonomics and work simulation
- Continue progressive walking program
- Independent with home exercise program

Suggested Interventions:

- Progress strength, endurance
 - Aerobic conditioning
 - UBE, treadmill, upright/recumbent bicycle
 - Muscle conditioning of cervical and scapulothoracic spine
 - Cervical isometrics in neutral
 - Incorporate resistance bands/light weights/pulley system including in standing/side-lying/prone including: mid back rows, lat pull downs, high rows, PNF D1/D2 pattern, shoulder ER/IR, shoulder ADD/ABD
 - Dynamic core co-contraction conditioning (2-3x x 10 → 15 → 20)
 - Hook-lying pelvic neutral (hip at 90°): marches → SL heel slide → leg lift c knee ext, dead bugs
 - Bridges with postural cuing
 - Quadruped isometric, unilateral shoulder flexion, bird dogs
 - Prone and side-lying planks (on knees: 5-10 sec)
 - Can trial >2 months post-op
 - LE strengthening with neutral spine (progress with resistance band, 2-3x 10 → 15 → 20)
 - Stability ball wall squats
 - Standing hip abduction, extension
 - Side stepping, sidestep with shoulder abduction
 - Lunges (forward, lateral, posterior), lunges with military press
 - Mobility/flexibility
 - BUE pectoralis major/minor stretching (supine/standing)
 - Cervical AROM 30 sec x 3 exercises
 - Balance
 - DL → DL, EO → EC, no UE movement, stable → unstable surface, dynamic movements
 - Initiate simulated work activities
 - Pain modulation
 - Ice/modalities as needed for pain management

Avoid:



- Lifting >20 lbs up to 2 months post-op

Phase 4 (3+ months post-op)

- NDI at discharge
- Can begin gradual progression back to run/jog/contact sports: discuss with surgeon
- Released to do most anything
 - Gradual progression with lifting and strengthening 5 lbs. per week

Goals:

- Proper sitting/standing posture
- Minimal to no pain with all or most activities
- Return to work/prior level of function or greater
- Within normal limits of cervical AROM and shoulder AROM
- Independent with home exercise program
- Achieve MCID on the Neck Disability Index outcome measure questionnaire

Suggested Interventions:

- Muscle endurance of cervical and scapulothoracic stabilizers
 - UBE (fwd/retro standing), standing cervical retractions, prone off end of table cervical retractions, prone superman's, prone on stability ball Y, T, W, push up plus, rhythmic stabilization training (Thera band/body blade) and medicine ball wall circles.
- Trunk and LE strengthening - 2-4x 10 → 15 → 20
 - Stabilization exercises
 - Bridges
 - Planks
 - Upward/downward chops (cable column)
 - Prone and side-lying planks (5-30 sec)
 - Walkouts/rollouts on stability ball
 - Cable column resistance walking (close to body → away from body or OH)
 - Loaded carries (farmers walks, 90/90 bottoms up, kettle-bell carries)
 - Paloff Press
- Full duty work simulation

Recommendations for return to work based on physical demand:

Work Type:	Return to Work:
Sedentary (<10lbs) or Light (frequently 10lbs)	Within 1-6 weeks



<p>Moderate (frequently 20lbs, occasionally 50lbs)</p>	<p>1-6 weeks restrictive duty (less than 10 lbs)</p> <p>8-12 weeks restricted to less than 40 lbs</p> <p>12-14+ weeks, return to moderate to full duties</p>
<p>Heavy (frequently 50lbs, occasionally 100lbs)</p>	<p>1-8 weeks, patient may return to light duty if available – no lifting >10 lbs the first 6 weeks and no greater than 20lbs up until 8 weeks</p> <p>At 8-12 weeks, moderate duty – no lifting >40lbs</p> <p>At 12-14+ weeks, return to moderate to full duty</p>

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