



# PALM BEACH ORTHOPAEDIC INSTITUTE

KYLE A. PETERSEN, M.D.

## **Cervical Disc Replacement Physical Therapy Prescription**

*The intent of this protocol is to provide guidelines for rehab. It's not intended as a substitute for clinical decision making.*

If any of the following occur, contact Dr. Petersen and hold off on physical therapy:

- Any signs of infection
- Worsening of radicular symptoms, including progressive weakness
- Unexpectedly high self-reports of pain in comparison to pre-surgical state

### **Phase I (0 to 2 Weeks): Protective Phase**

#### **Precautions**

- Avoid bending, twisting, lifting, pushing and pulling 25 pounds or more for six weeks
- No specific cervical exercises in first two weeks, cardio and scapular retractions only.
- Patient may or may not be in a brace for the first two weeks.

#### **Goals**

- Diminish pain/inflammation and minimize upper extremity radiating symptoms (ice, modalities as needed).
- Learn correct posture, body mechanics, transfers.
- Focus on cardio exercise program, increasing tolerance to 30 minutes, two times a day.

#### **Education**

- Postural Education: Sitting posture with lumbar roll at all times; frequent change in positions, avoid prolonged flexion (books, phones, iPads, etc.), sleeping positions
- Body Mechanics: Light lifting, transfers (include log rolling), positioning, etc.
- Driving: When off narcotic pain medicine

#### **Exercises**

- Cardio: Walking or stationary bike two times a day, 10 minutes each session to start
- Scapular Retractions: Emphasis on neuromuscular control (eliminate shrug), 10" isometrics
- Light Stretching: Pecs only (eg.: supine over towel)

### **Phase II (2 to 6 Weeks): Strengthening Phase**

#### **Therapy**

- Starting at week two, two to three times per week, four or more times a week

#### **Precautions**

- Keep spine in neutral and good posture for strengthening with a focus on proper neuromuscular control.
- Lifting, pushing and pulling less than 25 pounds until six weeks.
- Gentle active range of motion only (no passive stretching nor aggressive range of

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4215 BURNS RD, SUITE 100, PALM BEACH GARDENS, FL 33410 | 2055 MILITARY TR, SUITE 200, JUPITER, FL 33458  
1411 FLAGLER DR, SUITE 9800, WEST PALM BEACH, FL 33401 | 7701 SOUTHERN BLVD, SUITE 100, WEST PALM BEACH, FL 33411



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motion).

- No extension active range of motion until four weeks.

## Goals

- Patient to have proper neuromuscular control and posture with stabilization and strength exercises
- Initiate light strengthening and progress to independent with long term home exercise program
- Release soft tissue restrictions/muscle spasm/scar
- Body mechanics review
- Increase aerobic endurance to 30 minutes

## Flexibility

- **Cervical Active Range of Motion:** Emphasis on retractions, gentle range of motion only
- **Stretching:** Pecs, thoracic extensions
- **Neural Mobilization:** Performed as needed, gentle with caution not to flare up nerve roots

## Manual Therapy

- Sound assisted soft tissue mobilization for restriction and spasm

## Strength

*Only initiate these once patient can complete Phase I exercises. Then begin with light resistance and slowly progress. Emphasize good posture and correct muscle firing of scapula stabilizers during each exercise. (This is not a complete list.)*

- **Postural/Scapula Strengthening**
- Scapular retractions first (emphasis on neuromuscular control-eliminate shrug)
- Prone scapula strengthening
- Theraband rows, extensions, external rotation, horizontal abductions, etc.
- Transverse abdominis isometrics first, then progression
- Machine rows, lateral pull down (keep bar in front of the head), free motion machine, etc.

## Cervical Postural Strengthening

- Deep Cervical Flexors: Emphasis on correct neuromuscular control, 10" isometrics to start
- Prone on elbows, quadruped, modified plank position with 10" retraction isometrics
- Swiss Ball: Seated, quadruped stabilization exercises
- Seated retractions against Theraband
- Cervical isometrics (if needed)

## Cardio

- Should be continued to be done daily working up to at least 30 minutes per day (emphasis on walking or stationary bike to start).
- Time frames may vary per patient, consult with Dr. Petersen if you have questions (eg.: an avid cyclist with proper bike fit might start sooner).

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- Emphasize correct form and equipment setup (eg.: elliptical, bike, walking terrain, etc.).
- When initiating running and sports listed on the following page, slowly increase in the six to eight week time frame

## **Phase III (6+ Weeks): Return to Work/Work Conditioning/ Return to Sport**

- No lifting restrictions after six weeks.
- Continue to progress strengthening exercises from Phase II.
- Continue any manual therapy, stretching, etc. from Phase II as appropriate.
- Functional/sport/job drills may begin now with supervision. See time frames above for sport time frames.
- Possible referral to work reconditioning program

Activity:	No Earlier than:
Walking Progression	At least 30 minutes per day
Stationary Bike	Gradual increase in resistance over 4 weeks
Hiking	3 weeks
Outdoor Biking	4 weeks
Pilates (neutral spine)	4 weeks
Elliptical	5 weeks
Skiing	6 weeks
Yoga	6 weeks
Swimming	6 weeks (incision entirely healed)
Running	6 weeks
Golf	6 weeks
Soccer/Basketball	8 weeks

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