

POST-OPERATIVE SPINE REHABILITATION FOLLOWING LUMBAR LAMINECTOMY

Πύργος Αθηνών, Κτίριο Γ', 2^{ος} όροφος, Λεωφ. Μεσογείων 2-4, Αθήνα 115 27

Τηλ.: 210 7712792 | **Κινητό:** 697 20 999 11 | **E-mail:** cky@orthosurgery.gr

PHASE II OF SPINE REHABILITATION

Goals:

- Return to activities of daily living
- Functional dynamic lumbar stability
- Normalization of flexibility deficits in extremities
- Normalization of any gait deviations
- Patient education
- Improve positional tolerances for return to work

7 to 12 Days Post-Operative: Start outpatient physical therapy

Back Education Program

- Reinforce neutral spine positioning
- Anatomy, Pathology, & Biomechanics
- Performance of functional activities with neutral spine and protective positions

Exercises: All performed in neutral and protective positions

- Stabilization Program - Neuromuscular control of lumbar spine
 - Supine progression with abdominal brace
 - single leg slides
 - bent and straight leg raises
 - toe tapping
 - supported dying bug
 - curl-ups with lumbar spine in protected position
 - diagonal curl-ups with lumbar spine in protected position
 - Bridging progression
 - normal bridge with abdominal brace
 - with tiny steps
 - with leg extension
 - Prone progression with abdominal brace
 - single arm or leg lifts
 - contralateral arm and leg lifts
 - bilateral arm and leg lifts
 - modified push-ups with neutral spine
 - Quadruped progression
 - single arm or leg lifts
 - contralateral arm and leg lifts

PHASE III OF SPINE REHABILITATION

5 Weeks to Discharge

Goals:

- Restore lumbar motion
- Normalize upper & lower extremity strength
- Improve cardiovascular function
- Decrease soft tissue dysfunction
- Improve positional work tolerances for return to work

Functional Baseline Evaluation

Exercises

Muscle Strengthening Program: to restore any upper and lower extremity strength deficit

Dynamic Lumbar Stabilization: continue to progress with stabilization exercise as indicated

Flexibility: continue with flexibility exercises as indicated

- Flexibility Exercises - in neutral and protective positions
 - hamstrings
 - quadriceps
 - iliopsoas
 - gastroc-soleus complex
 - hip internal and external rotators
 - gluteals and hip adductors
 - iliotibial band
 - quad lumborum and paraspinals
 - upper extremity musculature, as needed

Aerobic Conditioning

- progressive walking, stairmaster
- swimming
- stationary bicycling, upper body ergometer

Aquatic Exercise Program - to normalize any gait deviations, and perform strengthening activities with decreased axial compression on the spine

- functional stabilization exercises
- pool walking - 4 directions

Standing Progression

- functional squats
- leg lunges

Work Tolerance Positioning and Simulation - To begin focus on return to work/daily activities and function. Functional Baseline Evaluation performed.

Soft Tissue Mobilization - For scar tissue management and areas of dysfunction

Modalities - utilized only as required to meet established goals

PHASE IV OF SPINE REHABILITATION - WORK HARDENING

Goals: Restore lumbar motion

Improve/normalize gait cycle

Improve cardiovascular function

Normalize upper and lower extremity strength

Increase positional tolerance to 3-5 continuous full days (7-8 hours of job simulation required of his/her occupation and demonstrates physical demands of the job utilizing proper body mechanics)

Job specific training

Work Hardening - Progression into work hardening as appropriate (12 weeks post-op)

Exercise: continue with flexibility, strengthening and cardiovascular exercises through a daily program

Work Tolerance: Increase patient's ability to perform a full day of activities

Work Simulation: Performance of work simulated tasks while reinforcing proper body Mechanics

Flexibility Exercises: Continue with flexibility exercises as indicated.

Aquatic Exercise Program: To continue to assist with normalizing gait cycle and perform strengthening activities.

Walking Program - progressive walking program

Use of modalities and/or hands-on treatment is discouraged during our Work Hardening Phase (Phase IV).