**Lumbar post-operative protocol after lumbar discectomy / laminectomy**

*Definition:*

* A discectomy is the surgical removal of herniated disc material that presses on a nerve root or the spinal cord. The procedure involves removing the central portion of an intervertebral disc, the nucleus pulposus, which causes pain by stressing the spinal cord or radiating nerves.
* A laminectomy is a surgical procedure that removes a portion of the vertebral bone called the lamina. At its most minimally invasive, the procedure requires only small skin incisions. The back muscles are pushed aside rather than cut and the parts of the vertebra adjacent to the lamina are left intact.

*Procedure:* Same day discharge

*Limitations:* no bending, twisting, lifting> 10 lbs \* 6 weeks

*Recovery:* Desk work 1-2 weeks, manual labor type jobs: up to 6 weeks / per MD discretion

Sports and recreational activities: gradual resumption at 6 weeks post-operative

*Goals:*

* Return to PLOF and recreational activities
* Restore flexibility
* Improve core strength and endurance
* Teach proper posture and body mechanics
* Teach self-management techniques and prevention strategies

*Baseline assessment:* L-spine ROM, neurological deficits, PLOF, CLOF

PHYSICAL THERAPY PROGRAM: starting at 4-6 weeks 3,4,5

*Education:*

* Posture: sitting, standing and sleeping
* Procedure: discectomy / laminectomy
* Therapy process: goals of PT and type of exercises. Expectations of PT.
* Body mechanics: squatting, bending, lifting, standing, cleaning, household ADL

*Exercises:*

**- Phase 1: week 1 - 2**

* Flexibility: slouch overcorrect: seated and quadruped, dural stretch: sciatic nerve / femoral nerve, prone on elbows, single knee to chest
* Core strength: pelvic tilt 1: prone and supine, with leg lift / kickout
* Endurance: walking at least 30 minutes daily

**- Phase 2: week 3 - 4**

* Flexibility: single knee to chest, partial extension in lying
* Core strength: 2 Bridges, swimmers: upper or lower extremities only, superman, bird dog, squats, standing ITY
* Endurance: walking at least 45 – 60 minutes daily, light walk / jog, swimming

**- Phase 3: week 4 - 8**

* Flexibility: double knee to chest, extension in lying
* Core strength: 3 Bridges with leg kickout, swimmers upper and lower extremities: fast / with weights, superman, planks, lunges, chops, stabilization exercises on ball: crunches, bridges, superman
* Sport specific / recreational activities: jogging, return to sport with specific drills as needed

Repetitions / sets: 10 – 20 repetitions, 2 – 3 sets

Progressions of exercises: as tolerated per patient’s symptoms.

*Discharge criteria:*

* No functional limitations.
* Able to return to PLOF
* Independent with HEP and self-management
* Maxed out PT benefits

*Discharge instructions:*

* Adherence to proper posture and body mechanics
* Maintenance program of core strength and flexibility exercises: at least 2 times per week
* Engage in physical activity 2 – 3 days a week for at least 30 minutes

*References:*

1. Filiz M, Cakmak A, Ozcan E. The effectiveness of exercise programmes after lumbar disc surgery: A randomized controlled study. *Clin Rehabil*. 2005;19(1):4-11.

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3. Kulig K, Beneck G, Selkowitz D, et al. An intensive, progressive exercise program reduces disability and improves functional performance in patients after single-level lumbar microdiskectomy. *Phys Ther*. 2009;89(11):1145-57.

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