

# COMMONWEALTH OF MASSACHUSETTS

## DEPARTMENT OF INDUSTRIAL ACCIDENTS

### Single Lumbar Spinal Nerve Root Entrapment Surgical Treatment Guideline

Effective July 1, 1993

---

#### I. **Background:**

- A. Compression of a lumbar nerve root causes inflammation, vascular compromise, and leg pain. Causes include disk herniation, burst fractures or fracture dislocations, spondylolisthesis or other malalignments, congenital or degenerative narrowing of the spinal canal or foramina, and abnormal bone formation after spinal fusion or with Paget's disease or fluorosis.
- B. This guideline is meant to cover the usage of a vast majority of tests and treatments, but it is expected that approximately 10% of cases will fall outside this guideline and thus require a review. It is expected that a strong majority of these outliers should be accepted as management within acceptable, although not average, standards of care.

#### II. **Diagnostic Criteria:**

- A. Symptoms - must meet one of the following:
  - 1. Radicular pain (sharp, shooting) within nerve root distribution with or without back pain
  - 2. Weakness or sensory disturbance in limb
  - 3. Bowel or bladder dysfunction
  - 4. Inability to control pain on an outpatient basis
  - 5. Inability to maintain activity required for outpatient status 2° non-supportive home situation
- B. Objective Physical Findings: (One required to be positive in order to proceed with diagnostic tests)
  - 1. Atrophy of calf or thigh
  - 2. Segmental motor loss
  - 3. Femoral stretch test positive
  - 4. Knee or ankle reflex (including posterior tibial) decrease
  - 5. Sensory loss in distribution of nerve root pattern
  - 6. Positive straight or reversed straight leg raising producing leg pain confirmed in 2 anatomic positions (sitting and supine)
- C. Appropriate Diagnostic Test: (Maximum of 3 if results negative)
  - 1. Low back x-rays if not done since injury
  - 2. CT scan
  - 3. MRI
  - 4. Myelogram/CT
  - 5. Bone scan (not as only diagnostic test)
  - 6. EMG (not as sole diagnostic test or under 21 days from onset of symptoms)
  - 7. Laboratory testing if metabolic or oncologic diagnosis suspected
- D. Not allowed under this guideline:
  - 1. Myeloscopy
  - 2. Discography
  - 3. Somatosensory evoked potentials
  - 4. Thermography
  - 5. Evoked potentials

**COMMONWEALTH OF MASSACHUSETTS**  
**DEPARTMENT OF INDUSTRIAL ACCIDENTS**

**Single Lumbar Spinal Nerve Root Entrapment Surgical Treatment Guideline**  
Effective July 1, 1993

---

PAGE TWO

**III. Inpatient Treatment:**

**A. Operative Care:**

**1. Surgical Options:**

**a.** Laminectomy, Laminotomy, Discectomy, Micro-discectomy, Foraminotomy, Foraminal decompression, Spinal fusion

**2. Indications: (All must be present)**

**a.** Radiating (radicular) leg pain greater than back pain

**b.** Objective evidence of significant or progressive neurologic deficit in the distribution of a single spinal nerve as indicated by any one of the following objective signs:

- 1.** Motor deficit (e.g., foot drop or quadriceps weakness)
- 2.** Sensory deficit
- 3.** Reflex changes
- 4.** Positive EMG

Documented (MRI, CT scan or myelogram) evidence of nerve root compression

**B. Length of Stay: 0-5 days post-operative - (7 days for spinal fusion)**

**C. Physical Therapy: Allowed**

**D. Indications for Discharge:**

- 1.** No complication requiring hospitalization (wound infection, spinal fluid leak, DVT, etc.)
- 2.** Ambulatory status consistent with home care (home health care may be needed)

**COMMONWEALTH OF MASSACHUSETTS**  
**DEPARTMENT OF INDUSTRIAL ACCIDENTS**

**Single Lumbar Spinal Nerve Root Entrapment Surgical Treatment Guideline**  
Effective July 1, 1993

---

PAGE THREE

**E. Post Hospital Treatment:**

1. Maximum duration of recovery 4 months from time of surgery (1 year for spinal fusion)
2. Office visits - 5 in first 4 months
3. Physical therapy treatment session maximum 24 visits
4. Chiropractic treatment sessions maximum 24 visits
5. Occupational therapy maximum 6 visits
6. Non-narcotic analgesics, muscle relaxants, non-steroidal anti-inflammatory agents - Allowed
7. Activity - formal employer contact for transitional modified work availability \_ Encouraged
8. Rehabilitation referral (education, aerobic and job specific exercises, vocational rehabilitation, functional capacity test) - Allowed
9. Physical agents (heat.cold, electrical stimulation, biofeedback, iontophoresis/phonophoresis, ultrasound, flouri-methane) maximum of 1 allowed per treatment session - Not allowed if only treatment - generally de-emphasized
10. Therapeutic and aquatic exercises – Encouraged
11. Patient education and activities of daily living, joint protection techniques, and back pain recovery and prevention - Encouraged
12. Vocational rehabilitation - Allowed

**F. For patients treated by more than one discipline (physical therapy, occupational therapy, allopathic medicine, and chiropractic), similar services should not be duplicated.**