OVERVIEW:

Thoracic Decompression with or without fusion:
Thoracic disc herniation with or without nerve root compression is usually treated conservatively (non-surgically). A back brace may be worn to provide support and limit back motion. Injection of local anesthetic and steroids around the spinal nerve (spinal nerve blocks) may be effective in relieving radicular pain. As symptoms subside, activity is gradually increased. This may include physical therapy and/or a home exercise program. Preventive and maintenance measures (e.g., exercise, proper body mechanics) should be continued indefinitely. Job modification may be necessary to avoid aggravating activities.

Simple laminectomy is rarely used in the treatment of thoracic disc herniation because of the high risk of neurologic deterioration and paralysis. Excision of the disc (discectomy) may be performed via several different surgical approaches—anteriorly, laterally, or transpedicularly. Fusion should be performed only if surgery causes instability in the spinal column. Many newer techniques do not usually destabilize the thoracic spine.

INDICATIONS:
All requests for thoracic spine surgery will be reviewed on case-by-case basis. The following criteria must be met for consideration.

1. INDICATIONS FOR DECOMPRESSION SURGERY ONLY INCLUDE:

- Positive Clinical Findings of Myelopathy with evidence of progressive neurologic deficits consistent with worsening spinal cord compression—immediate surgical evaluation is indicated. Symptoms may include any of the following:
  - upper or lower extremity weakness
  - unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - disturbance with coordination
  - hyperreflexia
  - Hoffmann sign
  - positive Babinski sign
  - clonus

OR

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) or lower extremity weakness (0-3/5 on the strength scale) or paralysis with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images —
immediate surgical evaluation is indicated;

**OR**

*When ALL of the following criteria are met:*

- Persistent or recurrent symptoms/pain with functional limitations that are unresponsive to **at least 12 weeks of conservative treatment** concerted conservative treatment to include completed and appropriate therapy (including stabilization exercises and epidural steroid injections);

**AND**

- Imaging studies confirm the presence of spinal cord or spinal nerve root compression at the level corresponding with the clinical findings (MRI or CT).

### 2. INDICATIONS FOR THORACIC DECOMPRESSION WITH FUSION SURGERY INCLUDE:

- Deformity Cases—please refer to our *Deformity Spine Surgery (Adult) Guideline.*

**OR**

*For Myelopathy or radiculopathy secondary to cord or root compression (see criteria described below) satisfying the indications for decompressive surgery requiring extensive decompression that results in destabilization of the thoracic spine.*

- Positive Clinical Findings of Myelopathy with evidence of progressive neurologic deficits consistent with worsening **spinal cord compression**—immediate surgical evaluation is indicated. Symptoms may include:
  - upper extremity weakness
  - unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - impaired coordination
  - hyperreflexia
  - Hoffmann sign
  - positive Babinski sign
  - clonus

**OR**

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) or lower extremity weakness (0-3/5 on the strength scale) or paralysis with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images—immediate surgical evaluation is indicated;

**AND**

- Anticipated intra-operative destabilization due to extensive thoracic decompression surgery;

**OR**

*When ALL of the following criteria are met:*

- Persistent or recurrent symptoms/pain with functional limitations that are unresponsive to **at least 12 weeks of conservative treatment** concerted conservative treatment to include completed and appropriate therapy (including stabilization exercises and epidural steroid injections);

**AND**

- Imaging studies confirm the presence of spinal cord or spinal nerve root compression
commensurate with the clinical findings (MRI or CT);

**AND**
- Anticipated intra-operative destabilization due to extensive thoracic decompression surgery.

**NOTE:** There is no current evidence base to support fusion in the thoracic spine for degenerative disease without significant neurological compression or significant deformity as outlined above.

**CONTRAINDICATIONS FOR SPINE SURGERY**

- **Medical contraindications to surgery,** e.g., severe osteoporosis; infection of soft tissue adjacent to the spine, whether or not it has spread to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection.

- **Psychosocial risk factors.** It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention.

- **Active nicotine use prior to fusion surgery.** The patient must refrain from nicotine use for at least four weeks prior to surgery and during the period of fusion healing.

- **Morbid Obesity.** Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation.

**NOTE:** Cases of severe myelopathy and progressive neurological dysfunction may require surgery despite these general contraindications.
REFERENCES:


