

# Intervertebral Disk Disease: Surgical Management

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## Surgical Management

### 1. Cervical disk disease

Dogs with cervical disk disease may respond well to corticosteroid-based medical management. Patients with poor response to the medical management, repeated episodes of neck pain and quadriparesis will benefit from surgery. Surgical techniques include ventral slot procedure, cervical dorsal laminectomy and hemilaminectomy. The advantages and disadvantages of these techniques are listed below.

#### a. Ventral slot technique

Advantages : Less invasive with minimal disruption of cervical muscles

Allows rapid recovery if extruded disk material (nucleus pulposus and annulus fibrosus) is completely removed

Disadvantages : Limited access to the caudally-located cervical intervertebral spaces (C5-C6, C6-C7)

Not suitable for multiple cervical disk herniation

Possible postoperative complications such as respiratory muscle paralysis

#### b. Dorsal laminectomy

Advantages : Accessible to the caudal cervical vertebrae

Applicable also for multiple cervical disk herniation

Fewer risks

Disadvantages : More invasive with disruption of cervical muscles

#### c. Hemilaminectomy

Advantages : Allows complete removal of laterally herniated disk material

Disadvantages : More invasive with disruption of cervical muscles

## 2. Thoracolumbar disk disease

Patients with thoracolumbar disk disease of grade III to V, based on the neurological examination results, are surgical candidates. However, the disease grade and the degree of spinal cord compression (the amount of herniated disk material and size of hematoma) are not always related. Patients with grade III disease are not immediate surgical candidates and may recover with conservative therapy, if neurological signs are not progressive and remain in the criteria for grade III. Surgical techniques include hemilaminectomy and dorsal laminectomy. The advantages and disadvantages of these techniques are listed below.

### a. Hemilaminectomy

Advantages : Allows complete removal of laterally herniated disk material

Disadvantages : Not accessible to ventrally extruded  
(located just ventral to the spinal cord) disk material

### b. Dorsal laminectomy

Advantages: Allows spinal cord decompression even when herniated disk material is  
in the ventral aspect of the vertebral canal

Disadvantages: Does not allow removal of herniated disk material  
Dented back skin due to removal of the dorsal spinous process

## In Closing

Accurate diagnosis and timely treatment are essential in the management of IVDD. Pet owners naturally feel a deep sense of gratitude toward a veterinarian who strives to help their dog—a family member—when it is in pain or having difficulty walking. This feeling of appreciation in turn builds trust and confidence in the veterinarian, creating a bond that will last as long as the dog lives. That is when I most keenly experience the joy and fulfillment of being a veterinarian.

