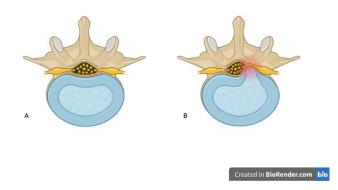
# Intervertebral disc disease

Intervertebral disc disease (IVDD) is the most common spinal condition in dogs and can occasionally affect cats.

The intervertebral discs act as a cushion between the bones of the spine, allowing flexibility and absorbing shock during movement. The illustration below shows (A) a healthy intervertebral disc (blue material) at the level of the vertebrae (back bones); (B) a degenerated disc which compresses on the nerves that are running out from the spinal cord.



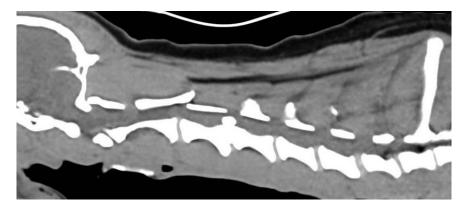
Over time, these discs can degenerate, transforming from a soft, jelly-like material into a more rigid, calcified disc. This reduces flexibility and increases the risk of disc rupture, where the calcified material presses against the spinal cord. This condition, also known as 'disc herniation' or 'disc extrusion' (Figure 1 B) can often cause pain, weakness, or even paralysis. IVDD most commonly affects the thoracolumbar spine (mid-back region) and the neck in in a smaller proportion of affected dogs.

## Diagnosis

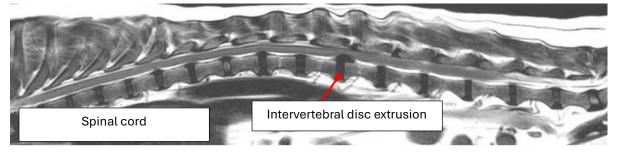
If your pet is showing signs of back pain, stiffness, or weakness, your veterinarian may suspect IVDD. In mild cases, pain relief and restricted activity may be enough for recovery. However, if symptoms persist or worsen—especially if paralysis occurs—a referral to a veterinary neurologist is recommended.

To confirm the diagnosis, advanced imaging techniques such as CT or MRI scan, or occasional X-rays may be needed. These tests help distinguish IVDD from other spinal conditions, such as infections, inflammation, or tumours. These images are usually interpreted in combination between the specialists from the Neurology and Diagnostic Imaging teams, usually whilst the patient is under anaesthesia so that decisions regarding surgery can be made without delay.





CT scan of the neck



MRI scan of the back (thoracolumbar spine)

#### Treatment

Mild to moderate cases of IVDD may be managed with pain relief and rest. However, severe cases often require surgery to relieve pressure on the spinal cord.

Spinal decompression surgery involves carefully removing a small section of bone to access and remove the herniated disc material.



After surgery, a strict recovery plan is necessary, which includes:

- Crate rest for 4-6 weeks
- Controlled exercise (5-10 minutes, 2-3 times daily)

- Assistance with urination, if needed
- Physiotherapy and hydrotherapy to rebuild strength and coordination

Some dogs may develop pressure sores due to prolonged rest, so frequent repositioning and monitoring are also essential.

### Prevention

There is no guaranteed way to prevent IVDD, but keeping your pet fit and avoiding high-impact activities, such as jumping on and off furniture, can help reduce the strain on their spine.

If your pet experiences back pain, stiffness, or difficulty walking, seek veterinary care as soon as possible. While surgery can be highly effective, relapses can still occur—especially in breeds like Dachshunds and French Bulldogs, where recurrence rates range from 30-50% at a different disc location.

Early diagnosis and appropriate treatment can significantly improve your pet's quality of life. If you have concerns about your pet's spinal health, don't hesitate to contact your veterinarian or a specialist for guidance.

#### Studies from the SATH Neurology team on this condition

- 1. Casado D, Fernandes R, Lourinho F, Gonçalves R, Clark R, Violini F, Carrera I (2022) Magnetic Resonance Imaging features of intradural/extramedullary intervertebral disc extrusion in seven cases. Front Vet Sci, Sep 14;9:1003042.
- 2. Pilkington EJ, De Decker S, Skovola E, Cloquell Miro A, Gutierrez Quintana A, Aguilera Padros A, Faller K, Goncalves R. (2024) Prevalence, clinical presentation and aetiology of myelopathies in 224 juvenile dogs. JVIM 38(2): 1598-1607.
- Oliveira M, Mcconnell JF, Maddox TW, Sanchez-Masian D, Gonçalves R (2018) Agreement between transverse T2W and 3D-CISS sequences in the evaluation of spinal cord disease in dogs. Vet Record, 182, 745
- 4. Bersan E, McConnell, JF, Monteiro R, Behr S, De Decker S, Volk HA, Gonçalves R (2015). Cervical intervertebral foraminal disc extrusion in dogs: clinical presentation, magnetic resonance imaging characteristics and outcome after medical management. Vet record 176, 597
- Gonçalves R, Platt SR, Llabres F, Rogers K, de Stefani A, Matiasek L, Adams V. (2009) Clinical and magnetic resonance imaging characteristics in 92 cats with clinical signs of spinal cord disease. J Feline Med Surg 11, 53-59