

# Degenerative Myelopathy

Degenerative myelopathy (DM) is a slowly progressive neurological disease of the spine in dogs. *Degeneration* means deterioration. *Myelopathy* is any problem with the spinal cord. So, *degenerative myelopathy* means deterioration of the spinal cord.

The spinal cord normally carries information from your dog's brain, down the neck, along the back, to the limbs and tail, and then back up to the brain. As a dog's spinal cord begins to deteriorate from DM, there is a reduction in nerve signals to the muscles, typically causing weakness of the back legs to be the first noticeable symptom.

## Signs

Degenerative myelopathy comes on slowly as a dog ages, often at around eight to ten years old. Since DM originates in the spinal cord of the back, we classically observe hind limb weakness and incoordination as primary symptoms.

Signs of degenerative myelopathy typically observed at the time of examination include:

- Slow onset and gradual progression
- Weak back legs that are wobbling, scuffing, or crisscrossing
- May be symmetrical or asymmetrical
- Strong front legs
- Ambulatory (able to walk)
- Normal reflexes
- No sign of pain

Unfortunately, dogs with DM will continue to become weaker over the next 12 months or so, until they can no longer walk, and the next stage will usually be urinary and fecal incontinence. Eventually, the front legs will be affected, and cranial nerve signs, such as difficulty swallowing, will develop. Soon after, difficulty breathing will arise, and ultimately, the disease will result in complete paralysis.

## Causes

It wasn't long ago that we didn't know what caused degenerative myelopathy, but we now recognize it as a genetic mutation due to a recessive gene.

DM tends to be more prevalent in large dogs, but it can affect a variety of breeds:

- German Shepherds
- Boxers
- Collies
- Siberian Huskies
- Wirehaired Fox Terriers
- Standard and Miniature Poodles
- Pembroke Welsh Corgis
- Bernese Mountain Dogs
- Kerry Blue Terriers
- Chesapeake Bay Retrievers

## Diagnosis

While there is a genetic test available, it only tells us if a dog is a carrier, at risk, or unlikely to be affected by degenerative myelopathy. It is not enough on its own to diagnose. The only way to definitively diagnose degenerative myelopathy is by performing a spinal cord biopsy, which is too risky in live dogs.

So instead, we treat DM as a diagnosis of exclusion, and MRI is the best way to rule out any other neurological possibilities.

These are the steps taken at SEVN to diagnose degenerative myelopathy:

1. **Signalment:** Is this dog the appropriate breed and age?
2. **History:** Is the story the owner tells us appropriate as far as onset?
3. **Neurological Exam:** Are the clinical signs indicative of a non-painful mid-back spinal cord problem?
4. **MRI and Spinal Fluid Analysis:** Is there any other possible cause?
5. **Genetic Test:** Does this dog have the potential to develop degenerative myelopathy?

## Treatment

Sadly, there is no cure for degenerative myelopathy. However, there are some things you can do to make your dog more comfortable while living with the disease. At Southeast Veterinary Neurology (SEVN), we strongly recommend physical therapy. Regular exercise can help reduce atrophy in weakened muscles and give you more time with your dog.

In the meantime, degenerative myelopathy can be managed with:

- Physical therapy
- Hydrotherapy
- Soft, padded bed to avoid pressure sores
- Slings to help you get your dog up
- Booties for traction to keep your dog from slipping
- Wheelchair to help your dog get around
- Wagon to help you transport your dog

## Prognosis

Degenerative myelopathy is not a painful condition, but it is progressive and irreversible. Without intervention, DM will prove fatal once it reaches the diaphragm, which controls breathing. Therefore, a peaceful, pain-free passing via humane euthanasia is recommended once a dog's quality of life is affected.



Learn more about  
Degenerative  
Myelopathy

