

Degenerative Myelopathy in Dogs



What is Degenerative Myelopathy?

This disease, also known as German shepherd degenerative myelopathy or chronic degenerative radiculomyelopathy (CDRM), is a disease affecting the spinal cord, resulting in slowly progressive hind limb weakness and paralysis. The symptoms result from degeneration of the white matter of the spinal cord. The exact cause is unknown. In its early stages, the symptoms of CDRM resemble those of osteoarthritis (arthritis), which often occurs secondary to hip dysplasia.

"The progressive weakness and ataxia (wobbling, stumbling) distinguish it from osteoarthritis."

In later stages of the disease, the progressive weakness and ataxia (wobbling, stumbling) distinguish it from osteoarthritis of the hip joints. Other considerations for this condition include spinal injuries, lumbosacral stenosis, myasthenia gravis and discospondylitis.

What are the clinical signs?

Early clinical signs include:

- The hind paws "knuckle" or turn under so that the dog walks on its knuckles, especially when turning.
- The dog's hindquarters appear to sway when standing still



- The dog falls over easily when pushed from the side.
- The hind feet seem to scrape the ground when walking and sometimes the dorsal (top) surface of the feet become hairless and irritated from repeated trauma.
- The dog has difficulty getting up from a lying position

As the condition progresses and the spinal cord deteriorates, these symptoms worsen, eventually progressing to paralysis of the hind end

Does it only affect German shepherds?

This is predominantly a disease of middle aged to older German shepherds, German shepherd crosses, Siberian huskies and collies.

At what age does it occur?

The condition is most common in middle-aged to older dogs, with a range from 4–14 years. It has been reported in young dogs on rare occasions.

What is causes it?

The cause of degenerative myelopathy is unknown.

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In spite of research efforts, no causative genetic, nutritional, or immune factors have been identified to date, although a genetic basis is presumed to occur based on the breed specificity. One recent study looked for evidence of vitamin B deficiency and found inconclusive evidence. Another study found lower than expected levels of vitamin E in seven affected German shepherds.

How is it diagnosed?

This disease will be suspected on the basis of breed, medical history and physical examination. X-rays and other imaging techniques will rule out other problems such as hip dysplasia and chronic arthritis. If one of these other problems is also present, it can contribute to the patient's loss of function of the hindquarters. Other tests that may be conducted include cerebrospinal fluid (CSF) analysis, tissue biopsies and neuromuscular tests such as spinal cord evoked potentials.

Are there bowel and bladder problems?

"Bladder and bowel function is generally normal in the initial stages."

Bladder and bowel function is generally normal in the initial stages of degenerative myelopathy. However, as the disease progresses to paralysis, the dog may develop urinary and fecal incontinence.



Is the condition painful?

Most affected dogs do not seem painful, just very weak. If the dog appears to be painful, there may be another condition such as arthritis complicating the condition.

Is treatment possible?

There is no effective treatment for degenerative myelopathy at present. Supplements or drugs, such as epsilon amino caproic acid, N-acetylcysteine and prednisone may be used in an attempt to slow the progression of the disease. Treatment of other concurrent problems such as arthritis or hip dysplasia may provide some relief. It is important to avoid obesity, so diet and exercise (walking and swimming) are vital components of treatment. The goal is to maintain the dog on its feet for as long as possible.

What is the prognosis?

"Degenerative myelopathy is a progressive, incurable disease."

Unfortunately, degenerative myelopathy is a progressive, incurable disease. Although bladder and bowel control is not affected initially, as the spinal cord continues to degenerate, the dog's mobility becomes severely restricted and it has more difficulty controlling urination and defecation. The nature and temperament of the affected dog determines whether or not a mobility aid such as a paraplegic cart will improve its quality of life in the short term. However, the inevitable progression of this degenerative condition means that the symptoms will worsen over time. Your veterinarian will assess your dog's circumstances and help you determine the most appropriate treatment options for your pet.

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