

### **DEGENERATIVE MYELOPATHY IN DOGS**

Skye is a 10-year-old German shepherd whose DNA was tested for degenerative myelopathy (DM) after she stumbled and fell as she walked down the steps outside her home—an early warning sign of the disease. Soon after, Skye’s family noticed that her back legs were wobbly and slipping out from under her on a regular basis. Her family’s fears were confirmed when Skye’s DM test results indicated she was at the highest risk level for developing the disease.



#### **What is degenerative myelopathy?**

A progressive disease of the spinal cord that leaves once-healthy dogs paralyzed and ends their lives prematurely, DM is similar to ALS (Lou Gehrig’s disease) in humans. It begins in the spine, when the outer coating (myelin) dies off and stops protecting the inner white matter that sends messages from the brain to control movement of a dog’s legs.

DM is seen most often in German Shepherd dogs between the ages of 8 and 10. Recently, the disease has been identified in several other breeds, including American Eskimo, Bernese Mountain, Borzoi, Boxer, Cardigan Welsh Corgi, Chesapeake Bay Retriever, Golden Retriever, Great Pyrenees, Kerry Blue Terrier, Pembroke Welsh Corgi, French Poodle, Pug, Rhodesian Ridgeback, Shetland Sheepdog, Soft-Coated Wheaten Terrier, and Wirehaired Fox Terrier.

#### **Early Warning Signs Of DM Include:**

- Progressive weakness in the hind legs
- Nails on the rear paws that wear down unevenly
- Stumbling or crisscrossing of back legs
- Knuckling of the rear feet
- Scuffing rear feet while walking
- As DM progresses, the signs become more pronounced:
- Urinary and bowel incontinence
- Front leg weakness
- Inability to stand or sit up
- Pneumonia
- Organ Failure

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A team of researchers at the Broad Institute at MIT and Harvard have developed a DNA test that dog owners can administer at home and mail in for results. They found that dogs with two copies of the mutation are at greatest risk of developing the disease.

The test returns one of three possible results: normal, at risk, or carrier. The home DNA testing kit can be ordered through the **Orthopedic Foundation for Animals**.

Skye has been lucky; her disease has progressed slowly, and her family has been able to take care of her needs 24 hours per day. Now, 2 years after that first fall, Skye's hind legs are completely paralyzed, she is incontinent, and she's having trouble sitting up on her own. She has gone from using a dog wheelchair and keeping her body strong by swimming regularly to enjoying daily walks in a dog stroller. Despite her handicap, Skye's family says she is still happy and full of life—and they're happy to give her the care and love she needs.