

# Pawsitive Steps Canine Rehab

Putting the pep back in your pup's step

### Fibrocartilaginous Embolis (FCE)

Dogs have discs in their spines, just like people. On rare occasions, a piece of fibrocartilage from within a disc can migrate into the bloodstream and lodge within a spinal artery, preventing blood flow to a section of the spinal cord. This is called a fibrocartilaginous embolism (FCE), also referred to as a spinal stroke. It causes immediate paralysis.

#### **Signs and Symptoms**

FCE is a sudden occurrence that can happen while running and playing, or simply walking. A dog with FCE will cry out in pain briefly and then show neurologic signs, which may include acute weakness, incoordination when walking, and paralysis. The dog may vocalize due to acute pain that subsides quickly (usually within minutes), collapse, have Weakness (paresis) of one or more limbs, become lame, demonstrate knuckling of one or more paws, start dragging of one or more legs due to the inability to feel and move the leg(s) (paralysis) and on rare occasions, lose bowel and bladder functions.

### How is it diagnosed?

A veterinarian will first perform a thorough physical exam. This will be followed by a neurological exam which will include assessing the dog's gait, checking for a pain response, and testing the dog's reflexes. Based on the neurological exam findings, the veterinarian can determine which section of the spine is affected. X-rays are typically normal. MRI is the gold standard for diagnosis, but limited availability and costs may be prohibitive.

#### What dogs are prone to FCE?

No dog is immune to FCE, but large and giant breed dogs, such as the German Shepard and Bernese Mountain Dog are more predisposed. In contrast, the Miniature Schnauzer, Yorkshire Terrier and Shetland Sheepdog have also been found to have a higher incidence of FCE even though they are small-breed dogs.

Most dogs that experience a FCE are middle-aged, usually 3 to 6 years old. A FCE is more common in dogs that play a high-intensity sport, like Frisbee®, or suffer from a traumatic injury. However, a dog who is merely walking can also develop an FCE.



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Recovery and Management

Surgery is not indicated for FCEs. There is no definitive treatment except physical therapy and supportive care. Recovery takes time. Generally, the loss of function does not progress after the initial injury.

#### What does rehab look like?

Rehabilitation plays a very important role in their recovery. Treatment will be based on how they present. It may include neurodevelopment sequencing techniques, which is teaching them how to effectively and efficiently move their body again, step by step. We focus on neuromuscular re-education which is getting the nerves to fire and muscles to "remember" how to move. Initially, it is a very hands-on phase, using electrical stimulation, balance, training, weight bearing and other modalities such as body weight support treadmill training, laser, and pulsed electromagnetic wave. We may use supportive devices such as harnesses and wheelchairs while working on gait training, or just work on small activities to work on balance and control. Each and every case is different, which is why a skilled practitioner is vital. I have specialized in human physical therapy for individuals with spinal cord injury for over 17 years and have seen great results with my canine clients. Even after an evaluation, we can help you determine what equipment and home modifications can be made to optimize your pup's recovery. During our evaluation, we determine what exercises should be done and walk you through the exercises. Within 48 hours of the evaluation, we will send you a link to a portal that has the prescribed pictures and videos for you to continue to do exercises at home. THE HOME EXERCISE PROGRAM IS THE BIGGEST COMPONENT OF SUCCESS. CARRYOVER IS ESSENTIAL. Some components, such as body weight support treadmill training and whole body vibration can only be performed at our clinic due to inability to transport.



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