

# Fibrocartilaginous Embolism

A relatively common cause of difficulty walking in larger dog breeds (and rarely cats) is a fibrocartilaginous embolism, or FCE. FCE occurs when blood flow to the spinal cord is obstructed, causing a stroke to the spinal cord. This is also known as a spinal stroke. Fortunately, this condition is not progressive, does not typically recur, and the prognosis is generally excellent.

## Signs

Signs of a fibrocartilaginous embolism tend to come on suddenly, usually while a pet is being active and usually affecting one side of the body more than the other. Since FCEs often occur mid-back, it is quite common for only one back leg to be affected.

Although your pet may yelp in pain when it happens, the condition is not painful after the initial injury to the spinal cord. FCE can occur in any pet, but is more frequently seen in middle-age, large-breed dogs, as well as Miniature Schnauzers.

### **Trademark characteristics of a fibrocartilaginous embolism are:**

- Sudden severe pain that can make your dog yelp, usually during activity
- Sudden lameness or weakness after activity, usually on one side of the body
- Lessening pain after a few minutes or hours
- Symptoms do not worsen after the first 24 hours
- Most common in middle-age, large-breed dogs
- Common in Miniature Schnauzers

## Causes

A fibrocartilaginous embolism usually occurs during exercise or mild trauma when a piece of fibrocartilage from an intervertebral disc breaks out into the bloodstream and lodges itself in a blood vessel, interrupting blood flow to the spinal cord. When the spinal cord does not receive a constant blood supply, it cannot function properly, causing neurological symptoms of weakness or inability to use the limbs.

## Diagnosis

It is important to note that there are many other spinal cord conditions that can look similar to a fibrocartilaginous embolism, but are treated quite differently and carry various prognoses. While some conditions may get better on their own, others can get much worse without treatment. For this reason, it is imperative to make an accurate diagnosis.

Typically, MRI is needed to definitively diagnose FCE and rule out other possible causes of symptoms. MRI allows our neurologists to see inside the spinal cord and distinguish between things like obstruction and compression. MRI can also help predict a more accurate prognosis based on the size of the area affected by a spinal stroke. These are all things that other diagnostic tools cannot do.

## Treatment

Fortunately, your pet will not have to undergo surgery if diagnosed with a fibrocartilaginous embolism. In fact, there are no specific therapies to treat FCE in pets, as we do not have a way to remove the fibrocartilage from the blood vessels in the spinal cord. Instead, we depend on time to allow the spinal cord to make new blood vessels or to open up the obstructed vessel.

That said, studies show that physical rehabilitation initiated immediately after the diagnosis is critical to maximizing the likelihood of a functional recovery.

### Physical rehabilitation can include:

- Underwater treadmill
- Wobble board
- Acupuncture
- Laser therapy
- Neuromuscular electrical stimulation
- Passive range of motion exercises
- Massage
- Walking through weave poles and over cavaletti poles

## Prognosis

Prognosis of a fibrocartilaginous embolism depends on the severity of clinical signs, as well as certain aspects of the MRI. Regaining the ability to walk may take a few weeks to a few months, but it is absolutely possible for your dog to fully recover. With a prompt and accurate diagnosis and physical rehabilitation, the vast majority of pets go on to lead happy, normal lives, and FCE is something that is unlikely to recur.



Learn more about  
Fibrocartilaginous  
Embolism

