

PAROXYSMAL DYSKINESIA



What is paroxysmal dyskinesia?

Paroxysmal dyskinesia (PD) is the term used to describe a group of episodic and self-limiting movement disorders that occur in dogs and, less frequently, in cats. This group of disorders is characterised by an episodic involuntary abnormal movement of the limbs and/or trunk, generally associated with an inability to walk and increased muscle tone. The episodes may last for a variable length of time, from minutes to hours, but typically lasting between 5 to 20 minutes. Occasionally they can be associated with vomiting or subtle salivation, either before or during the episode.

What causes paroxysmal dyskinesia?

It is generally believed that PD is associated with a temporary dysfunction of an area of the brain called the basal nuclei, however the true cause for these episodes is unclear in most cases. In some breeds there is high suspicion of an underlying cause for the PD episodes, which may include:

- + known genetic factors such as episodic falling syndrome in the Cavalier King Charles Spaniel, or movement disorders in Soft-Coated Wheaten Terrier and Shetland Sheepdog
- + presumed hereditary, for example, "Scotty Cramp" in Scottish Terriers and paroxysmal dyskinesia in Labradors, Jack Russel Terriers, Chinooks and German Short-haired Pointers
- + secondary to drug administration, for instance phenobarbitone or propofol
- + dietary factors like gluten-sensitive dyskinesia in Border Terriers (well described) or other breeds
- + secondary to structural brain lesions.

How do we differentiate paroxysmal dyskinesia from epileptic seizures?

It is not always easy to distinguish between PD and epilepsy. The main features include:

- + consciousness: animals with PD remain responsive to the environment during the episode, whilst pets during an epileptic seizure generally are not responsive

- + autonomic signs: profuse salivation (mostly frothing), urination and/or defecation that are commonly seen during an epileptic seizure are less common for movement disorders
- + post-ictal (post-seizure) signs: pets with PD generally return to normal, occasionally slightly tired; epilepsy patients show a period, ranging from minutes to a few hours, where they are confused, restless, wobbly and/or bumping into things.

It is important to rule out other conditions including muscle cramps or seizure-mimic diseases. Your primary veterinary surgeon and veterinary neurologist will help you to achieve this.

How do we investigate it?

Paroxysmal dyskinesia is diagnosed in dogs with compatible history and video footage. As an important part of the investigation, a neurological examination will be performed by the veterinary neurologist. Following this, extensive blood tests (including gluten sensitivity testing), magnetic resonance imaging (MRI) and spinal fluid collection will be conducted.

What treatment is required?

Typically, pets with PD do not require treatment, and in most cases these episodes will remain static or even become less frequent over time. There are several reports of different medications

reported depending on breed; however, these have shown varied success, with little evidence that they may change the disease progression. If there is the suspicion that it is secondary to a medication, then an adequate substitute will need to be discussed with your vet. In dogs where a diet-related PD is suspected, a change to a gluten-free diet may be attempted.

What is the prognosis?

Generally, once a PD episode is suspected, these are believed to be benign episodes and the prognosis is usually good. However, it is important for the pet to be evaluated by a veterinary neurologist and the diagnosis supported by normal blood tests, MRI and spinal fluid tap.

In some patients, the episodes may improve or completely resolve without any treatment. In others, particularly if the episodes are becoming more frequent and impacting their quality of life, then different medications may be trialled. In dogs with gluten-sensitive PD, a reduction in frequency of episodes will be seen following a change to a strict gluten-free diet.

Your primary veterinary surgeon and veterinary neurologist will be able to discuss in more detail with you should there be a suspicion that your dog is suffering from PD.

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