

FACT SHEET

Epilepsy

Epilepsy is a condition that does occur in dogs as well as humans. The cause of epilepsy is not completely understood but is known to fall into two types:

Idiopathic Epilepsy

This type of epilepsy is where there is no known cause and it is assumed it may be an inherited condition. Sodium, potassium, and calcium serve the brain as ions and produce electric charges that must fire regularly in order for a steady current to pass from one nerve cell to another. If the channels that carry them are genetically damaged, an imbalance occurs that can cause seizures.

Secondary Epilepsy

This diagnosis is used when a specific cause for the seizures can be found. A veterinarian will normally run a variety of tests to rule out possible physiological or toxic causes before diagnosing the dog as having the idiopathic version.

The symptoms

There are several types of seizures that are seen in dogs and there are many times an owner isn't even aware of the problem. An epileptic seizure is the clinical manifestation of abnormal brain activity in the cerebral cortex.

These abnormalities can create seizures that vary from the mild "petit mal" to the generalized, full body "grand mal."

An epileptic seizure itself can be broken down into four stages.

The Prodrome stage can last from minutes to hours or even days before the manifestation of the actual seizure activity. This stage is typically characterized by changes in the dog's mood or behaviour.

The Aura stage is when owners first notice the initial signs. Some dogs will begin pacing, licking, salivating, trembling, vomiting, wandering aimlessly, hiding, whining or urinating. Other dogs may exhibit stranger activities such as excessive barking and attempts to get an owner's attention.

The Ictus stage is the actual seizure itself. It is a period of abnormal activity in which the most common symptoms are that the dog may lose consciousness, gnash their teeth or appear to be chewing the cud, thrashing about with their head and legs, drooling excessively, crying, paddling their feet as if running as well as losing control of their bladders and bowels.

There are stranger types of seizures though. Some dogs will frantically run in circles, others will just chew the cud, some suddenly go blank and stare into space and then there are the ones that only have partial seizures in which the twitching is localized in one area. This could be in the face, one leg, in the shoulder or over the hips.

The Postictic or Ictal stage occurs immediately after a seizure. Owners often report the dog acts drunk, doped, blind or deaf. Other dogs will show signs of pacing endlessly or drinking large amounts of water. Some will seem to pass out and just sleep.

Some of the physiological reasons a dog may have secondary epilepsy are:

- Liver disease is a degenerative inflammatory disease that results in the hardening and scarring of liver cells. The liver becomes unable to function properly due to the scarred tissue, which prevents the normal passage of blood through the liver.
- Hypoglycaemia or low blood sugar bringing on feelings of fatigue and stress, may be a factor in triggering seizures. Scientists have estimated that between 50-90% of all epileptics suffer from low blood sugar, and 70% have abnormal glucose tolerance levels.
- Severe worm infestation. Parasites release toxins that have an adverse affect on the central nervous system. Severe cases of intestinal worms, end stage heartworms or even anaemia from fleas and ticks can cause seizures.
- Hypothyroidism. This condition is caused by the thyroid functioning inadequately.

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- Lead, chemicals, additives and poisoning. Toxic metals such as lead, copper, mercury, and aluminium have also been known to cause seizures. Some pets are very sensitive to such metals, and exposure is common through aluminium cookware, auto exhaust, industrial pollution, household cleaners and copper water pipes. Flea sprays, collars and yard sprays can also be toxic to pets.
- Vitamin deficiencies. Research points to vitamin and mineral deficiencies as possible causes of epilepsy. The key nutrients that appear deficient in epileptics are vitamin B6, vitamin A, folic acid, vitamin D, zinc, Taurine, magnesium, and calcium. It is worth noting that a deficiency does not necessarily mean the diet is not balanced, the dog may have a metabolic disorder preventing complete assimilation of the given vitamins and minerals.
- Vaccinations. Because vaccines may contain proteins and/or organisms, they may produce an allergic encephalitis inflammation of the brain.
- Brain Tumours. This is the most common cause of seizures that begin after the age of 5. Both cancerous and non-cancerous brain tumours can cause seizures.
- Head Trauma. A blow to the head such as being hit by a car, bat, kicked or a fall can lead to life-long seizures.
- Renal Kidney Failure. The role of the kidneys is to remove toxins and excess fluid. When the kidneys become diseased or damaged, they may lose their ability to perform these functions, causing a toxic build-up in the body. A toxic build-up can lead to a seizure disorder.
- Hydrocephalus. The accumulation of excess cerebrospinal fluid (CSF) within the brain.
- Eclampsia. This occurs when a lactating female's calcium levels drop to dangerous levels.

It has been proven that epilepsy often runs in bloodlines and new studies are showing that certain breeds are more likely to have the disorder. Some of the breeds it occurs in more often are Belgian Tervuerens, Beagles, Dachshunds, German Shepherds, Keeshonds, Boxers, Cocker Spaniels, Golden Retrievers, Irish Setters, Labrador Retrievers, Collies, Schnauzers, Poodles, Dalmatians and St. Bernards.

In some instances the seizure will be a one-time occurrence with no further episodes or after effects. In others dogs, epilepsy will be an ongoing battle for the owner and the dog, however, just because a dog is diagnosed with epilepsy doesn't mean he or she can't live a long, happy life.

There will be cases where the medications seem to have no affect and the seizures not only continue to occur but actually worsen. In most instances dogs that are kept on medications can lead pretty normal lives with few restrictions or changes in routine. Occasionally they will build up a resistance to some of the drugs and will need to change over to others.

Factors that may trigger a seizure

Below is a list of factors that most commonly trigger seizures. This does not mean your pet will have a seizure each time it comes in contact with one. Each pet is different and sensitive to certain things. This list does not apply to every pet. Some of these factors are impossible to avoid, but some of them are listed for your information:

- BHT. A preservative commonly used in dog foods.
- BHA. A preservative commonly used in dog foods
- Sodium Nitrate. Proven in research studies to cause severe seizures. Sodium nitrate is found in many foods we feed our pets. Read the ingredient labels carefully.
- Sugar. Sucrose, corn syrup, molasses, cane sugar
- Low quality commercial dog biscuits and treats
- Low quality dry food

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- Low quality canned food
- All toxic flea products - If the product states "Hazardous To Humans And Domestic Animals", it may be deemed hazardous to your pet
- Vaccinations
- Excessive exercise
- Vitamins with high sodium level
- Red food dye commonly used in dog foods
- Ethoxyquin commonly used in dog foods

Treatment

As with any disease or condition, your veterinarian is the best source for making a diagnosis, education and offering treatment options. If you suspect your dog may have either type of epilepsy and you see seizure-like activity, take note of the time, date, length and type of seizure as well as the way the dog acts after the seizure has ended. Keep a record of these things for each episode and discuss the problem as soon as possible with the veterinarian. Remember to follow up the conference with information as to any further episodes so he or she will be able to lay out a plan of action for both you and your dog for the best possible results.

Exercise

Exercise helps with muscle development, digestion and overall health. A well-conditioned body will work and perform better and increase the ability to carry blood and oxygen to muscles. Exercising burns fat and increases your pet's metabolism. Be sure your pet gets at least an hour of exercise everyday. However, age, health and weather should be taken into consideration.

How can Naturediet help?

Poor nutrition is a direct cause of many major and minor diseases. Therefore, a commitment to optimum health and longevity for your pet must include a high quality diet.

Research has shown that a low quality diet, meaning a diet loaded with chemicals, fillers, stabilisers, colourings, flavourings gelling agents, sodium nitrate and by-products commonly found in poor quality dog foods, can lead to common ailments such as allergies, nervousness, hypertension, diabetes, weight problems, dry skin, and of course epilepsy.

It is important to read the labels of any dog food you are considering feeding your dog and analyse the ingredients. At Naturediet we produce a high quality natural dog food with absolutely no colourings, preservatives, additives or gelling agents. Naturediet does not add salt to any of the products. The only salt contained in our diets is that found naturally in raw materials such as meat and carrots.

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