



Seizures

Seizures can be a frightening experience for both the owner and the animal. With some understanding of what is occurring and the treatments available, you can begin to feel more at ease with your animal's condition.

A seizure is defined as uncontrolled electrical activity in the brain which can result in altered consciousness, muscle tone/activity, and often involuntary urination and defecation. There are three phases of seizure activity. The first, *pre-ictal* stage, is characterized by abnormal activity such as agitation, attention seeking or hiding. This is the phase most often overlooked by the owner. The second stage or the *ictal* phase is the actual seizure event in which the animal does not appear lucid and may/may not be paddling the limbs. This is also the phase where loss of bowels occurs. The final stage is the *post-ictal* phase where the animal appears disoriented, frightened or agitated. Some animals even experience temporary blindness or stumbling. Some animals will also exhibit clusters of seizures. This is when they have several small or short duration seizures one after another. This should stop within 30 minutes and then the animal will go through the post-ictal stage.

The most important tool for establishing a diagnosis for the seizure is the animal's history. This includes age at which the seizures began, duration of the seizure event, frequency of the seizures, and time between seizure events. When seizures occur early in life (<6 months) congenital causes are most common, whereas in geriatric patients cancer and metabolic diseases are common. By far the most common cause of seizures in dogs 6 months to 3 years old is *idiopathic* or unknown. Other causes of seizures include toxins, numerous metabolic disorders, inflammatory diseases, thiamine deficiency, and vascular diseases.

When your animal has a seizure, it is best to take it to the veterinarian for a thorough examination. This should include a general physical evaluation of your pet as well as an ophthalmic and neurologic evaluation. Your veterinarian may also want to run basic screening tests such as a Complete Blood Count (CBC), Biochemistry analysis and urinalysis. If your animal is geriatric, chest and abdominal X-rays may also be warranted. You should inform the doctor of any possible ingestion of toxic plants, paints or other household substances because additional testing may be required.

If no abnormalities are noted in the testing, it is generally assumed that the cause is idiopathic. This is where the owner's role is crucial. You should keep a log of all abnormal or seizure-like activity including: date, time, duration, pre/post ictal activity, and activity of the actual seizure event. Keep your veterinarian informed. When the seizures occur more than once a month it is time to start medication.

The two most common drugs used for anti-convulsant therapy are Phenobarbital and Potassium Bromide. These drugs potentially can cause damage to the liver. This is why the seizures are not treated until they occur more than once a month. The risks of the seizure have to outweigh the potential risks of the medication. Subsequently, when starting seizure medication, blood levels of the drugs must be monitored monthly initially until they are at an appropriate level, then they are monitored every 6 months as well a CBC and Biochemistry panel. This allows the veterinarian to monitor the liver and other organs.

Prognosis with treatment is usually good. Most seizure activity is decreased if not altogether stopped. The goal of treatment is not to cure the animal of the seizures but to regulate them and control them.

If your pet is experiencing a grand mal seizure of greater than 5 minutes duration or cluster seizures that last longer than 30 minutes, this is a medical emergency and requires immediate care from a veterinarian.