

Ask the Vet: Seizures are Scary, Hopefully Manageable

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Seizures are probably the most unnerving event that a person can experience, regardless of whether you are an observer, medical attendant, or the one who is actually having the seizure. The same is true in veterinary medicine as the unfortunate pet experiences just how scary a seizure can be. While the cause of a seizure in pets is not always easy to define, diagnostic physical exam and lab tests will pinpoint or at least narrow the possible causes. Fortunately, we do have both direct and symptomatic treatments available to provide help and relief.

Neurologically, our pets' brains function just like ours. There is a balance between the excitatory and the inhibitory neurons, and when in balance all things are normal. This balance can be upset from a variety of causes, increasing the risk of seizures to occur. When a seizure occurs, the neurologic activity in the brain is like an electrical storm, and the specific location within the brain defines the character or severity of the seizure.

A generalized seizure will affect the whole body. In contrast, a partial or focal seizure affects a portion of the body or causes a transient behavior change. All seizures are abnormal, but even an otherwise normal brain can develop seizure activity if excessively stimulated.

Often just before a seizure occurs, there may be observed a short period when the pet behaves oddly or very anxiously. Identifying this may help you predict that a seizure is about to occur. As for the actual seizure, safety for all is very important. It will be a very scary and unpredictable moment, so making sure both your pet and you don't get hurt is critical. Providing calm and soothing reassurance is often beneficial; most seizures run their course in a period of less than a few minutes – the duration is variable depending on the cause.

Afterwards, a period that consists of drowsiness and confusion is common. Continuing to provide a calm, safe environment helps the pet to relax and recover quietly.

In veterinary medicine, our challenge with any illness is trying to clearly define the problem at hand, as our patients can't specifically tell us all the details. Seizures are no different, as we try to pull together important clues. Details from your observation of a seizure event are very helpful to improve our understanding. You should note the duration, severity, time of day, and what activity preceded the occurrence.

Events that might be confused with seizures include cardiovascular collapse, syncope or fainting, or episodes of weakness. Using accurate details from your observations, physical examination, considerations of age and breed, and some basic laboratory testing, your veterinarian's understanding of the seizure and its cause can be focused.

Events that can lead to seizures include, but are not limited to, trauma, lack of oxygen, low blood sugar, toxin exposure, hyperthermia (heat stroke), metabolic disease, cancer, and brain inflammation. The brain inflammation may come from infection (viruses and bacteria) and even parasites. There are also hereditary and developmental conditions, present at birth that can cause seizures to develop early in life.

If an underlying cause is found, then treatment of that abnormality is the priority. Liver disease, for example, can cause a buildup of toxins in the blood and may lead to seizures. An insulin secreting tumor of the pancreas causes dangerously low blood sugar with weakness and seizures as a result. If the underlying disease can be treated effectively, then the seizures should go away also. Many times, though, a specific cause is not clearly determined.

By definition, seizure activity that recurs over weeks or months is termed epilepsy. The good news is that epileptic seizures can usually be managed to reduce their frequency and severity. Control over the excitatory neurons is attempted through medication, to prevent that neurologic imbalance. The ideal goal is to prevent all future seizures, but more often veterinarians hope for a great reduction in the number, frequency and intensity of the seizures. If seizures go untreated, the risk of irreversible damage to brain tissue is greater.

For pets being treated, a balance is always sought between seizure control and side effects of the medications. Often a combination of different medications is used for better control and to minimize side effects.

The most important aspect of therapy is a strong patient-owner-veterinary relationship. Keeping your veterinary team updated to any changes is always important to tailoring individual treatment plans. Periodic blood monitoring for both metabolic screening and medication blood levels is critical for understanding the effects and safety of any medications. Periodic physical exams are essential to allow your veterinarian to provide the best of care.

Any type of seizure in a pet is a critical health concern. By working closely with your veterinary team, management of any identified underlying cause and subsequent treatments can improve the quality of life for your pet.