



Epilepsy in Pets

Epilepsy is a neurological condition where your pet experiences recurrent, unprovoked seizures. It's similar to electrical "storms" in the brain. These seizures can look like anything from unusual repetitive behaviors (like lip smacking or fly-biting) to more noticeable signs such as falling to the side, paddling legs, or even losing consciousness.

The cause of epilepsy is often unknown, and we refer to this as "idiopathic epilepsy." However, it tends to have a genetic component in some breeds. While witnessing a seizure can be distressing, many epileptic pets can lead a relatively normal and happy life with appropriate management and care. Regular consultations with your veterinarian are crucial to monitor the condition and adjust treatments as needed. It's always important for pet owners to recognize that epilepsy varies in severity and manifestation among pets, and what works for one animal might not work for another.

Things to know:

A seizure can be divided into 3 phases:

1. **Pre-ictus:** Abnormal behavior prior to the seizure lasting just a few minutes: acting clingy, staring off into space, hiding or acting scared, vomiting.
2. **Ictus:** Seizure. Jaw chomping, increased salivation, dilated pupils, stiffness on all 4 limbs with head arched back, rhythmic movements or paddling, non-responsive, urination, and defecation.
3. **Post-ictus:** after seizure and lasting for 5 minutes to several hours. Pacing and difficulty walking, bumping into things, not fully aware or responsive to noise, increased hunger and thirst.

Causes

Idiopathic Epilepsy: A common cause of recurrent seizures, especially in dogs, where no specific underlying brain abnormality or other cause can be identified. Additional causes include **Structural**

Brain Disease: This includes tumors, inflammation (encephalitis), trauma, or congenital abnormalities.

Metabolic Disorders: Low blood sugar (hypoglycemia), liver disease (hepatic encephalopathy), and electrolyte imbalances are examples.

Toxins: Ingestion of certain substances, such as chocolate, xylitol, lead, or certain medications, can induce seizures.

Infectious Causes: Certain infections can cause seizures, such as feline infectious peritonitis (FIP) in cats or distemper in dogs.

Testing

An **exam** and **routine lab work** are recommended to rule out metabolic causes and assess pets' overall health. Additional testing is available through neurologists at specialty centers. Additional tests performed at specialty centers include:

- **Imaging:** MRI or CT scans of the brain can identify structural problems like tumors or inflammation
- **Cerebrospinal Fluid Analysis:** This can help identify inflammatory or infectious diseases affecting the nervous system.

Treatment

Every seizure a pet has can make them more prone to have another. If a patient is having recurring seizures, treatment is recommended.

Treatment for epilepsy is most commonly recommended if a patient is:

- seizing more than once a month
- having clusters of seizures
- having seizures that last for more than 3 minutes
- experiencing long or severe post-ictal periods
- known to have a progressive cause - such as a brain tumor.

Treatment options include:

1. **Antiepileptic Drugs (AEDs):** These are medications like phenobarbital, levetiracetam, zonisamide, and others. They don't cure epilepsy but help control seizures. Anti-epileptic drugs are the mainstay of treatment for most patients.
 - a. Side effects of a medication are an unintended result of the medications. Two of the older and more common seizure medications, phenobarbital and potassium bromide, have some side effects that include increased drinking, urination, panting, eating, weight gain, looking drunk when walking, sedation, and restlessness. Less commonly, phenobarbital can cause liver and bone marrow changes and labwork is required every 6 months while on these medications.
 - b. It is now common practice to use newer medications such as zonisamide and levetiracetam due to their effectiveness, affordability, and reduced number of side effects. They are now our first choice in most situations. Labwork monitoring may be recommended.
2. **Dietary Therapy:** Some specific diets have been shown to help reduce the frequency of seizures.
3. **Surgery:** In cases where a structural brain abnormality is the cause, surgery may be an option.
4. **Treatment of Underlying Cause:** For metabolic disorders, toxins, or infections; addressing the root cause can resolve the seizures.

Prognosis: Prognosis varies depending on the underlying cause.

Idiopathic Epilepsy: Many dogs and cats with idiopathic epilepsy can have a good quality of life with appropriate management, though they may still experience occasional seizures.

Structural Brain Disease: The prognosis can vary widely depending on the specific cause. For example, a treatable brain inflammation might have a better prognosis than an aggressive tumor.

Metabolic Disorders or Toxins: If the underlying issue can be effectively treated or the toxin removed, the prognosis can be quite good.

Infectious Causes: The outcome varies depending on the specific infection and its severity.