

5 Natural Ways to Help Control Your Dog's Seizures

The FDA has granted conditional approval to potassium bromide for the treatment of canine seizure disorders, but often even a multi-modal approach to treating epilepsy isn't effective at controlling seizures in refractory patients.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- After decades of use, earlier this year the FDA granted conditional approval to potassium bromide for treatment of canine seizure disorder
- The drug, called KBroVet-CA1, is manufactured by Pegasus Laboratories, which under the conditional grant has up to five years to collect efficacy data
- Many dogs' seizures aren't well controlled with potassium bromide and phenobarbital, all of which carry potential adverse side effects; it's important to note that the FDA's conditional approval of potassium bromide doesn't change this reality
- Fortunately, there are nutritional interventions and potentially beneficial adjunctive therapies for seizure disorders in dogs, including a well-formulated ketogenic diet and CBD, that can also prove very successful in managing epilepsy in dogs

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According to the Journal of the American Veterinary Medical Association (JAVMA), a drug that has been used for decades to manage epilepsy in dogs gained its first FDA approval earlier this year.

Epilepsy is characterized by seizures. A seizure is an event during which there is unanticipated, unprovoked, abnormal electrical activity in the brain. There are two types of electrical impulses in the brain: excitatory and inhibitory. In a normal animal, there's a constant and proper ratio of excitatory to inhibitory impulses.

However, in a seizing pet, the excitatory impulses temporarily overwhelm the inhibitory impulses. Whether your pet has a minor twitch, or a grand mal seizure depends on what part of the brain is involved and how many excitatory impulses are generated.

The point at which excitatory impulses overtake inhibitory impulses is called the seizure threshold. In a healthy pet the seizure threshold is high, meaning the potential for a seizure is low. There are several things that can influence a dog's seizure threshold, including genetics, head trauma, infection, and exposure to toxins. There are also several types of seizures:

- A **petit mal seizure** is the mildest type of seizure and can be as insignificant as an abnormal eye movement.
- A **grand mal seizure** is the other extreme and affects both sides of the brain and the body.

- **Status epilepticus** is a grand mal seizure that doesn't resolve. This is a medical emergency in which breathing ceases and the animal can die. If your pet is experiencing a grand mal seizure and isn't coming out of it, it's critical you get her to an emergency veterinary hospital right away to save her life.
- Cats and small dogs more commonly have **focal motor seizures** involving only a part of the body. These seizures can be hard to identify, as they often look like nothing more than a twitch, tremor, or cramp.
- **Cluster seizures** are events that occur several times a day. Many cluster seizures are urgent care situations. If your pet has had more than one seizure in a day, I recommend you make an appointment with your veterinarian. This type of seizure can lead to continual seizing and/or progressively more intense seizures.

Generally speaking, the younger the affected pet, the more severe the seizure disorder will be. It's important to recognize that epilepsy is categorized as seizures from unknown origin, or "unprovoked seizures". But what about provoked seizures (e.g., from substances in the environment).

Often, known seizure-causing triggers aren't ruled out (or even identified) prior to a diagnosis of epilepsy, including ongoing seizure disorders triggered by neurotoxic substances, specifically isoxazoline pesticides.

Just this past summer I was referred three cases of "idiopathic epilepsy," with the animals' first seizure occurring immediately after the application of popular flea and tick medications containing this **known neurotoxin**. Yet, these chemicals weren't considered when the patients' regular veterinarians diagnosed their seizure disorders, highlighting the need for a thorough medical history when evaluating epilepsy in pets.

Potassium Bromide Receives FDA Conditional Approval

The drug the FDA gave conditional approval to is called KBroVet-CA1, a chewable potassium bromide tablet for the treatment of idiopathic (no known cause) canine epilepsy.¹ From a February 2021 JAVMA news release:

*"Conditional approval allows a company to sell a drug while collecting efficacy data, as long as the company first provides evidence the drug is safe. The company has up to five years to collect the remaining data for approval but needs to show progress each year."*²

Potassium bromide has been used for decades as a sedative and an anticonvulsant, so rather than conduct its own testing in dogs, the manufacturer of KBroVet-CA1, Pegasus Laboratories Inc., used safety data collected in a 2012 FDA review of scientific literature published from 1938-2011 on the safety of potassium bromide in dogs, covering 111 sources. (This approach avoids the need for animal testing by the manufacturer.)

Potassium bromide is a slow-acting salt with a long half-life. The drug can take up to two months to start controlling seizures and three months to provide consistent control. Because the medication itself is a salt, to prevent the risk of organ damage, dog owners must closely control their pets' diets and avoid fluctuations in salt intake that may occur through indiscriminate eating or drinking (e.g., saltwater).

According to Dr. Sheila Carrera-Justiz, a clinical veterinary neurologist and neurosurgeon in the Department of Small Animal Clinical Sciences at the University of Florida College of Veterinary Medicine, when owners control for those factors, they can avoid the risk of organ damage. Potassium bromide is a good option for dogs with liver disease, but a poor one for dogs with kidney disease³ or pancreatitis.

Although rare, dog parents also need to watch for signs of bromide intoxication, including stumbling, stupor, hind limb weakness, behavior changes, dilated pupils, loss of consciousness and coma. Potassium bromide is most often used in combination with other anti-seizure drugs, usually phenobarbital or levetiracetam (Keppra™, which I prefer over phenobarbital because of fewer side effects) when potassium bromide alone isn't effective at controlling seizures.

If your pet is having more than one seizure a month, is experiencing cluster seizures (several at one time), or if you suspect there may be an underlying provocation (i.e. neurotoxicity), the seizure disorder is considered not medically controlled. This means you have more work to do in terms of finding a management protocol. Thankfully, functional medicine veterinarians can offer lots of options.

Adjunctive Therapies for Seizure Disorders

Sadly, seizure disorders are common in dogs, and some don't do well on traditional epilepsy drugs like phenobarbital and potassium bromide, and virtually all these drugs produce adverse side effects and long-term consequences that should be concurrently managed. The FDA's conditional approval of potassium bromide doesn't alter that reality.

The good news is there are several natural adjunctive therapies available that can help increase a dog's seizure threshold. One or more of the following can be used in conjunction with nutrition and conventional medications to decrease seizure potential, including:

- Chiropractic and acupuncture
- Traditional Chinese medicinals (TCM)
- Herbal formulas (including cannabis extracts)

In a successful pilot study published recently in the Journal of the American Veterinary Medical Association,⁴ a CBD (cannabidiol) product derived from a hemp plant significantly reduced seizure frequency in 89% of epileptic dogs. (Hemp-based CBD typically contains 0.3% or less of the psychoactive component of cannabis, THC.)

The study involved 16 family dogs who received either the treatment (CBD-infused oil) or a placebo for 12 weeks. All the dogs remained on standard anticonvulsant drugs throughout the study.

The researchers found that 89% of dogs who received CBD experienced a significant reduction (median change of 33%) in the frequency of seizures. The research team also noticed an important correlation between the degree of seizure reduction and the amount of CBD concentration in the dogs' blood.

In mild cases of canine seizure disorder, natural treatments plus a dietary change (more about this shortly) are often all that is needed to successfully manage the condition. For animals with frequent grand mal seizures, I typically create an integrative protocol of natural therapies and drug therapy.

I always ask pet parents to keep a log of the dates, times, and intensity of seizures. Often there are links between seizures and a particular time of month or year. If we identify a cycle, we can develop a plan to control the episodes using the safest effective treatment options available.

Animals with seizures should be titered, not automatically re-vaccinated, and should never receive chemical pesticide application.

Dietary Management of Seizure Disorders

A very important consideration if your dog has a seizure disorder is that nutritionally related health issues can cause or exacerbate the situation. One problem is food allergies, which can cause a systemic inflammatory response that can decrease your dog's seizure threshold.

Another issue is that most commercially available ultraprocessed pet food contains synthetic chemicals, chemical dyes, preservatives, emulsifiers, and other ingredients that can also cause systemic inflammation and decrease seizure thresholds. In some cases, the potentially seizure-inducing contaminants in pet food are many times higher than the legal human limits.⁵

If done correctly, achieving the metabolic state of nutritional ketosis with a ketogenic diet has proven very successful in managing epilepsy in pets, and in fact, it's the standard of care for human pediatric epilepsy.⁶

Thankfully, the veterinary community is also recognizing the neuro-metabolic benefits of reducing dietary starch (sugar) and increasing brain-friendly fats (specifically medium chain triglycerides, MCTs), which are increasingly being used in veterinary nutrition protocols (and "prescription diets") to decrease seizure potential.

This way of feeding respects your dog's evolutionary biology, and in addition, other symptoms may also improve on this diet, including a reduction in inflammatory disease. By keeping net carbs low, the body's level of insulin is reset to a much healthier, lower level, which reduces metabolic stress on every cell in the body.

In my 2017 documentary with Rodney Habib we discussed the benefits of a ketogenic diet as a means of controlling cancer, but this diet has also been used to control epilepsy in many dogs. You can read about **Sasha**, a little dog with seizures who was put on a ketogenic diet in 2014.

While seizures can be a very serious and truly frightening condition in pets, the best way to care for your dog is to arm yourself with knowledge about what to expect and how to react, along with designing a proactive preventive protocol with the help of an integrative veterinarian.

Sources and References

^{1, 2, 3} [JAVMA News, March 1, 2021](#)

⁴ [Journal of the American Veterinary Medical Association, June 1, 2019, Vol. 254, No. 11, Pages 1301-1308](#)

⁵ [TruthAboutPetFood.com](#)

⁶ [The Charlie Foundation](#)
