

Epileptic Dogs Can Live Normally

Informed care and holistic methods help epileptic dogs live normally

By **Maureen Finn** - Published: April 12, 2004 Updated: July 29, 2019



EPILEPSY IN DOGS: OVERVIEW

1. If your dog displays any behavior that resemble seizures described below, immediately make an appointment with a veterinarian who has clinical experience with epilepsy for an examination and testing.

2. If your dog's seizures are severe or frequent, he should be medicated as soon as possible. This does not preclude exploration of complementary care. Keep your vet informed of all your treatments, as they may affect medication dosage.

Pleasantly slumbering in the early morning hours of a November day with my dogs cozy and warm next to me, I began shaking, and I was jiggled half awake. Assuming my dogs must be scratching an ear in bed, I mumbled a barely conscious "Stop scratching!" But the jiggling continued. I must be chasing bunnies in a doggie dream. I sat up to wake the dreamer.

It turned out to be my male, Cutter, paddling at the end of the bed. He didn't wake up when I touched him and gave him a little shake, raising my voice to rouse him. I realized something was wrong when his neck arched and he began choking, or so I thought. About the time my sleep-foggy brain figured out that what I was observing was not a dream, but a [seizure](#), it was over. He lay quiet on his side for a few moments, then got up and leaped off the bed as if nothing had happened. This was a literal rude awakening into the world of canine epilepsy.



Types of Epileptic Seizures in Dogs

Seizures can occur for a variety of reasons across the whole range of ages, and are the most neurological disorder found in dogs. Making the diagnosis of canine epilepsy is a process of determining if the seizures are caused by a structural abnormality, such as a lesion or brain tumor, they are called "secondary." Those caused by injury are called "reactive." Seizures whose cause cannot be determined are called "primary" or "idiopathic" (which means without cause), and this type, unfortunately, is common.

Idiopathic epilepsy in dogs usually occurs between one and five years of age. It affects virtually all breeds and is found regularly in mixed breeds as well. Genetic inheritance is a known contributor to the incidence of this disease. Epileptic dogs should never be bred, and responsible breeders will eliminate epileptic progenitors of epileptic puppies from the breeding plan.

Epileptic seizures range from mild, even barely noticeable "focal" or "partial" seizures to generalized tonic clonic or "grand mal" seizures. Behaviors commonly seen with focal seizures include facial twitching or blinking (often affecting only one side of the face), "fly biting," muscle tremors, and partial loss of control with one or more limbs buckling and an inability to coordinate movement. Focal seizures last for a few seconds to several minutes duration.

Classic generalized tonic clonic seizures can occur at any time, though they frequently happen when the dog is relaxed and quiet. (As I learned, waking up to a seizure in the middle of the night is not unusual for owners of epileptic dogs.) If the dog is awake and moving about, the tonic phase will begin with the dog falling to his side, his legs stiffened, body rigid, and neck stretched out with the head back. At the end of the tonic phase, the dog is not conscious, though in general the eyes will be open. There may be facial twitching, involuntary vocalization, excessive drooling, and the dog will frequently void its bladder, bowels, and glands.

From here the seizure usually moves into the clonic stage, with rhythmic movements such as jaw clenching and paddling or jerking of the limbs. The dog may also grimace and appear to be choking. The dog does not breathe for a short time. While the dog's tongue and mouth may become blue from lack of oxygen, it is imperative that you do not insert your hand into the dog's mouth, as the animal is not conscious and you risk being badly bitten as the seizure progresses.

The typical tonic clonic seizure lasts from one to three minutes. (If your dog experiences a seizure that lasts longer than four minutes, contact your vet or emergency clinic immediately.)

Experts say that dogs don't experience what are known as "absence" or "petite mal" seizures. These seizures occur as a temporary loss of contact without losing full consciousness. A dog experiencing an absence seizure may stare blankly and blink for a short period of time, but it is not believed that, in dogs, what resemble "petite mal" seizures are actually focal seizures.

Needless to say, witnessing a generalized seizure in your pet can be somewhat traumatic for most seasoned dog owner. It is important to remain calm and not to exacerbate the seizure emotions.

A dog experiencing a tonic clonic does not experience pain, though he may be anxious and upon regaining consciousness. The post-seizure period, known as "post ictal," can also include marked ataxia (weakness and uncoordinated gait), pacing, restlessness, and even temporary blindness. The dog may also be ravenous at this point; often, a small snack to raise his blood sugar will resolve the post ictal period.

Some dogs do not experience any noticeable post ictal period at all, others for only a few minutes, and some for several hours. The variations in seizure activity are basically as varied as the dogs themselves; no two are alike, even in the same dog.

Is Your Dog Predisposed to Epilepsy?

Epilepsy can occur in any breed, and in mixed breeds as well, but isn't it mostly a purebred thing? Breeds affected include many of the most popular breeds, and in a 1997 survey of American national breed "Parent Clubs," 22 breeds reported that epilepsy was one of their top five health problems. In a collective ranking of 80 diseases, epilepsy came in third.

In a white paper from a symposium on canine epilepsy conducted at the 1997 AKC's Canine Foundation Canine Health Conference, it was noted that "approximately one to six percent of dogs has a seizure problem and most of this epilepsy seems to be genetic. The incidence of epilepsy varies tremendously by breed, with a very large number of breeds, at least 20, having a high hereditary epilepsy."

Breeds with an established genetic basis for epilepsy include the Beagle, Belgian Tervuren, Border Collie, Shepherd, Keeshond, Labrador Retriever, Golden Retriever, Collie, and Welsh Springer Spaniel. Breeds with high numbers of epilepsy that is undoubtedly genetic in nature, but have not been studied in depth, include the Poodle (all three types), Boxer, Cocker Spaniel, Dachshund, Irish Setter, Miniature Schnauzer, Saint Bernard, Siberian Husky, and Wire Fox Terrier. The white paper from the 1997 Symposium on Canine Epilepsy states that "Whenever enough data have been collected for a breed, the inheritance pattern has to be most compatible with recessive inheritance."

Other breeds known to have a higher than average incidence of epilepsy include the Australian Shepherd, English Springer Spaniel, Boston Terrier, Shetland Sheepdog, and Border Collie.

But while we could find no studies that tracked incidence of canine epilepsy in mixed breed dogs, veterinarians in an equally mixed practice (ratio of purebreds to mixed breed patients) reported

mixed breeds being nearly as prevalent as their purebred epileptics. One clinic reported that 60 percent of their epileptic patients are mixed breeds, while another said the majority of their epileptics were mixed breed dogs. Obviously these figures are anecdotal and subjective in nature. However, it does hold true that mixed-breed dogs who have one or more parents of breeds known to have higher incidences of epilepsy will themselves suffer increased risk of epilepsy (i.e., German Shepherd mix, etc.).

[The Canine Epilepsy Project](#) is a collaborative study into the causes of epilepsy in dogs. It is supported by grants from the AKC Canine Health Foundation, National Institutes of Health, individual breeders, and private donations. Researchers are from the University of Missouri, University of Minnesota, University of California, and the Animal Health Trust in Great Britain, who are working together to discover mutations (or markers) responsible for hereditary epilepsy in many breeds of dogs.

Participation by the owners of affected dogs and their relatives is essential to the success of the project. Researchers need DNA samples from dogs who have experienced seizures, and immediate relatives who are normal and affected. Specifically, samples from all available siblings, parents, and grandparents are needed. If the affected dog has been bred, all offspring and mates should be sampled as well. Participation in this research project is confidential; the names of individual owners or dogs are not revealed.

Diagnosing Epilepsy in Dogs

The first step in determining a cause for a dog's seizures involves a physical examination and laboratory tests. Serum chemistry and complete blood count tests are run to rule out medical issues like diabetes, hypoglycemia, and electrolyte disorders.

A thorough physical exam is necessary to rule out contributors to seizure activity or potential complications for treatment, including heart disease, liver disease, lung disease, etc. Tick-borne diseases and viral or bacterial infections are also of concern and should be addressed with this exam. Your veterinarian can perform the initial exam and discuss the general protocol for seizure control.

Generally, if a dog experiences fewer than one seizure every four to six weeks, it's considered "occasional" and "watch" without putting the dog on medication to control the seizures. Complementary therapy may be of great benefit in these cases. If, though, a dog experiences seizures more frequently than once every six months or experiences cluster seizures (more than one seizure in 24 hours) or "status epilepticus," a life-threatening generalized seizure that doesn't stop, anti-seizure drugs are prescribed.

An examination by a veterinary neurologist is prudent at this time as well. A neurologist can help assist in determining the presence or likelihood of brain tumors or lesions, with an MRI and CT scan being two of the most useful procedures for definitive diagnosis.

Epileptic Triggers for Dogs

Toxins and environmental triggers can be a factor, but don't expect your veterinarian to ask this avenue of inquiry is largely up to the pet owner. Many owners of epileptic dogs report that heartworm preventatives, vaccine boosters, and flea control products lower the seizure threshold in sensitive dogs.

Household cleaners and insecticides, paints and solvents, lawn and garden chemicals, and essential oils and fresheners and aromatic herbs can also trigger seizures in susceptible animals. Keeping a diary of each seizure episode witnessed, with recent activities and environmental exposures noted, is an important tool to help determine patterns and begin to gain control.

Conventional Epilepsy Medication for Dogs

For dogs who experience seizures more often than once a month, conventional veterinary practitioners generally recommend starting the animal on one of two drugs. Phenobarbital is the most commonly used, though potassium bromide is becoming more prevalent.

Phenobarbital and potassium bromide are not FDA-approved for use in dogs and cats, but they are accepted treatments for seizure control. Unfortunately, each comes with its own set of side effects. It is important, though, to reduce the occurrence of seizures, so it's wise to at least initially medicate with these drugs as you continue to research and look into other improvements in order to help gain control.

Phenobarbital is a long-acting barbiturate that depresses the central nervous system and blood pressure activity. The drug must be administered at 12-hour intervals, and since physical drug dependence is common, it must never be discontinued abruptly.

Initial side effects of phenobarbital include sedation, ataxia, lethargy, and increased thirst and appetite. These generally diminish over time, though the increased appetite tends to remain. More serious side effects can include liver damage and liver failure, anemia, and profound depression.

It is critical to perform regular blood tests on medicated dogs to monitor their liver function and blood counts for anemia. Bile acid testing is recommended along with blood serum chemistry and CBC to detect liver disease. A blood test to monitor phenobarbital levels in the blood is also recommended and is usually done two weeks after starting or changing dosage of the medication, and then routinely at monthly intervals to be sure the concentrations remain in the intended range.

Many holistic veterinarians will recommend that dogs taking phenobarbital also take natural liver protective herbs like milk thistle or dandelion to assist in protecting the liver from damage.

Potassium bromide (KBr) is frequently used alone or in conjunction with phenobarbital for dogs whose seizures aren't controlled with phenobarbital alone. It is the bromide that inhibits seizure activity by reducing excitability of nerve cells in the brain where seizures begin. Because it has no effect on the liver, it is often chosen for dogs with liver damage. It must be obtained through a chemical supply or a compounding pharmacy.

It may take as long as four to five months for the blood levels of potassium bromide to stabilize. It takes several months for the full effect of a dose change to occur, though antiseizure activity occurs before blood levels are completely stable. Side effects can include temporary sedation and ataxia for several weeks. A dog adjusts to the medication (especially with dogs who are also given phenobarbital or any other sedative medication), loss of appetite, and vomiting.

Potassium bromide should be used with caution in dogs with renal insufficiency. Though rare, an increased incidence of pancreatitis has been noted in dogs medicated with potassium bromide. Any dose change must be made very slowly, and even an occasional treat must be considered carefully. Any changes in the amount of salt in the diet can drastically alter the effects of the medication. An increase in dietary salt may decrease the drug's effects, and a decrease in salt can increase its effects.

There are several other antiseizure drugs being used in dogs, usually in severe, hard-to-control cases. These include zonisamide, gabapentin, felbamate, clorazepate, valproic acid, and Keppra. All are considered add-on medications to conventional canine anti-epilepsy drugs. These crossover from the treatment of human epileptic seizures are generally not as effective due to their slow elimination in canines. For example, the elimination half-life of Keppra in dogs is 3.5 hours, compared to 7 hours in people.

Hypothyroid a Possible Factor

One often-ignored aspect of seizure activity is the presence of hypothyroidism, or underactive thyroid function. The "classic" hypothyroid dog is typically presented to his veterinarian with skin and coat problems, behavior concerns, or reproductive problems, but there are many other indicators of hypothyroidism, not all of them immediately noticeable.

One of the many symptoms of an underactive thyroid gland is seizures. In a report at the 1998 American Holistic Veterinary Association's annual conference, W. Jean Dodds, DVM, and Linda P. Aronson reported that an independent study of 634 dogs with abnormal behaviors (including 189 seizures) found that 77 percent of the dogs experiencing seizures were hypothyroid.

When testing thyroid function in an epileptic dog, it's important to perform a full panel thyroid test, not opposed to testing only the T4 and/or TSH, as is common. Evaluation of all six aspects of thy-

is essential to the whole picture of the dog's thyroid health.

Where a T4 alone may not indicate any abnormalities, the additional information provided by Free T4, T3, Free T3, as well as the T3 and T4 autoantibodies, can help a knowledgeable veterinarian determine whether or not the thyroid gland is functioning normally.

Dogs with low thyroid function should be supplemented with thyroid replacement hormone in six to eight weeks.

Note: Antiseizure medications like phenobarbital are known to cause low thyroid values, this should be taken into account by the veterinarian when evaluating test results. Thyroid replacement therapy is not recommended in these cases. Once optimum levels are achieved, rechecking a year is adequate.

According to Dr. Dodds, 80 percent of epileptic dogs found to be low thyroid and subsequently with thyroid supplement see a decline in seizures, with three quarters of these seeing a major and even elimination of seizure behavior.

The other one-quarter of this 80 percent experience lengthened intervals between seizures and reduction in the severity of the seizures. No significant changes to seizure activity was seen in thyroid-supplemented epileptic dogs.

Holistic Epilepsy Treatment for Dogs

What about natural treatments? Holistic care of epileptic dogs is very effective for those dogs where seizures occur infrequently, or to augment conventional medical treatment. With complementary treatments many dogs are able to maintain a lower incidence of seizures on a reduced (or, in some cases, eliminated) dosage of conventional drugs. Complementary treatments, however, should never be considered a substitute for conventional medical care, and seizures must be kept to an absolute minimum.

That said, an examination and consultation with a holistic veterinarian can open up new avenues for improved seizure control and bring about improved health in an epileptic dog. Acupuncture, chiropractic, Chinese herbs (especially for liver "wind"), and Western herbs have all been used by owners of epileptic dogs to improve health and achieve a successful balance in care.

Of particular note is the use of "gold bead therapy," in which magnetized gold beads are percutaneously inserted at acupuncture points by an experienced practitioner. This bizarre-sounding treatment is known to reduce and even eliminate regular seizures in some epileptic dogs. Donna Kelleher, a holistic practitioner in Seattle, has had success with this procedure and chronicles one case

epileptic patient in her book, *Last Chance Dog*.

Diet and Epilepsy Link

Environmental control is a significant element in gaining better management of your dog's seizures with what goes into him. Feeding a home-prepared diet, cooked or raw, can make all the difference for some dogs. Though there are virtually no studies to determine whether there is a relationship between diet and seizure activity, many holistic veterinarians report anecdotal evidence that a top-quality home-prepared diet can play a large part in management of seizures.

Allergy testing for grain and protein sensitivities is another tool you can use to identify and eliminate potential seizure triggers.

Dr. Kelleher also advocates the use of taurine supplementation for epileptic dogs at a dose of 500 milligrams per 40 pounds body weight daily. Taurine supplementation is especially important for dogs who eat commercial and grain-based diets. This amino acid is found in the central nervous system, heart, skeletal muscle and is concentrated in the brain and heart. It's unknown whether that has a relationship with the fact that taurine supplementation can reduce seizure activity, especially in those dogs who are experiencing tremors or noise triggered seizures. Discuss this or any other supplement with your veterinarian.

If feeding a home-prepared diet isn't possible, find the highest-quality commercial dog food. Treats, including dog biscuits, should be kept to a minimum.

Keep in mind that many commercial dog foods include rosemary extract and sage, both of which are known to be seizure triggers in some sensitive dogs. Processed treats like rawhide chews and jerky should also be avoided with epileptics. Sharing human food containing MSG or cured products with dogs and luncheon meats is also not recommended. Many human takeout foods, instant, rice, and convenience foods also contain chemical ingredients that can be adverse to the health of a seizure-prone dog. Cleaning up your dog's diet is good incentive to do the same with your own.

Frequent, small meals are helpful in managing epilepsy, as keeping the blood sugar stabilized can help. Hypoglycemia can contribute to seizure activity, especially in smaller breeds where the digestive tract and his meals are proportionately smaller. Grain products are especially suspect for dogs who have seizures regularly. Feeding frequent, small meals is also helpful for coping with the hunger experienced by dogs who are given phenobarbital. Snacks such as fresh or steamed fruit pieces are great low calorie treats that can keep your dog satisfied and increase his seizure threshold.

Other Canine Epilepsy Triggers

Despite the changes in recommended vaccine protocols recommended by most of the major based veterinary medical schools, many veterinarians continue to recommend annual vaccines for their patients. In a seizure-prone dog, a vaccine booster can trigger seizure activity for at least a few days. This is one reason that Dr. Dodds recommends avoiding routine vaccination for canine epilepsy.

Many owners of epileptic dogs ask their veterinarians to test their dogs' vaccine titer levels to ensure the animals have adequate antibodies to protect them from disease. If the results indicate the dog does not have adequate immune protection for a particular disease, the appropriate vaccine is administered individually, rather than in a "5 in 1" vaccine combination.

Regular rabies vaccines are required in each state by law. These vaccines can be especially risky for epileptics; owners of epileptic dogs have lots of anecdotal evidence of this. Check with your municipality to see if proof of adequate vaccine titer test results are acceptable in place of a vaccine. Have your epileptic dog vaccinated annually. Many towns and cities will accept documented titer tests as proof of vaccination.

Since exposure to many chemicals can trigger seizures in sensitive dogs, it should not come as a surprise that many heartworm and flea preventative treatments that are systemically administered can be disastrous for many epileptic dogs. While elimination of these treatments is not always possible, great care must be taken with a seizure-prone dog when preventing heartworm infestation. Several of the popular heartworm preventatives actually list tremors or convulsions as rare side effects, and are contraindicated with a dog that is given daily phenobarbital.

Flea products containing insect growth regulators can cause twitching and muscle weakness if the animal is overexposed. Keep in mind these cautions are given for the normal canine population, but an epileptic dog is commonly more sensitive to these products and great care must be taken when protecting against heartworm and flea infestation.

Epilepsy Management Techniques

The most important thing to remember about dealing with a seizing dog is to keep calm. Seizures are known to be triggered by stress and loud noises. Household or family tensions can wreak havoc on an epileptic dog. Worrying about and coddling an epileptic can make them more anxious and seizure-prone. Sudden stimulation or excitement can also trigger seizures.

This is where herbs and natural treatments can be very helpful. "Nervines" like skullcap and lemon balm can help reduce anxiety and excitability. Skullcap, or *Scutellaria*, has been shown to affect the area of the brain where seizures are triggered, and regular dosing can help reduce the frequency and severity of seizures.

Valerian, or *Valeriana officinalis*, is indicated more for general anxiety and can be used with caution in dogs that experience prolonged post ictal periods of pacing and restlessness. A little goes a long way with Valerian.

valerian; don't give too much, as it can actually have the opposite of the desired effect, causing excitability in some dogs.

Tinctures are considered the easiest way to administer these herbs, with a dose of 10-20 drops for 20 pounds of body weight given up to three times a day. If your dog is currently receiving conventional medications to combat epilepsy, discuss these herbal remedies with your holistic veterinarian before using them.

Another excellent aid in calming your pet, and especially for post ictal recovery, is melatonin, an occurring hormone that is associated with the sleep cycle of mammals. It can be a wonderful aid for dogs who are noise-sensitive, fireworks- or thunder-phobic (see "Bring in 'Da Noise," WDJ March 2010). Melatonin has also been found to aid epileptic dogs.

Many dogs who typically have seizures at night or in the early morning can benefit from a small dose of melatonin before bedtime. The food helps to keep blood sugar stabilized and the melatonin helps in maintaining a regular sleep pattern. A dose of 1.5 mg of melatonin for dogs under 40 pounds and 3 mg for dogs 40-100 pounds is adequate. Dogs over 100 pounds can take up to 6 mg.

Another area where epileptic dog owners have found melatonin to be beneficial is during the recovery phase of a seizure. For dogs who have prolonged or profound post ictal symptoms, a dose of melatonin seems to aid in shorter and less intense symptoms. A very few dogs experience increased aggression when melatonin is given, and it may not work for every animal.

Rescue Remedy, a combination of five different flower essence remedies, is indicated for stress, anxiety, fear, and emergency situations. (Rescue Remedy is the name of the remedy made by Nelson Phillips, the original maker of these remedies; competing companies sell the same combination of remedies under different names, such as Ellon USA's "Calming Essence" and Healing Herbs' "Five Flower Essence".)

Some dog owners report that it works miracles; others say it just doesn't affect their dogs. Try it! It helps their dogs use a few drops in the mouth, applied inside the ear leather, or directly on the forehead of an actively seizing dog.

Rescue Remedy does not interact with any other medication and can be given as often as necessary. Many owners routinely put it in their dogs' water. Some dog owners find it helpful to put a few drops of Rescue Remedy on a teaspoon or two of an all-natural vanilla ice cream for a speedier post-seizure recovery. The ice cream helps to bring the blood sugar back to normal after the tremendous drop from epileptic convulsions.

Rescue Remedy is also a great stress-reliever for caretakers of epileptic dogs, and especially when combined with the all-natural vanilla ice cream!

Hope for Epileptic Dogs

There is no cure for epilepsy, but it can be managed in cases. The only constant that seems managing this disease is that no two dogs will respond the same way to the same treatment. Researching care for your epileptic dog you may learn about many supplements, aids, and treatments that have helped some dogs. These may or may not help your dog, however, and you should discuss them with your veterinarian before administering.

Finding a vet who has had clinical experience with epileptics is also important. Developing a nurturing relationship will be essential in the care and well-being of your dog. Epilepsy is managed, but only with a committed, cohesive team of doctor (or doctors, if you add a holistic practitioner to your healthcare team), owner, and patient.

Finally, while even the best care and management cannot always stop regular seizures, with conventional and holistic treatments, the frequency and severity of seizures can be reduced. There is hope, and the great likelihood that my dog Cutter and epileptic dogs like him will lead active, happy lives.

Maureen Finn is a freelance writer from Sammamish, WA. This is her first article for Whole Dog Journal.

Maureen Finn

FOLLOW US ON INSTAGRAM @[DOGSOFWHOLEDOGJOURNAL](https://www.instagram.com/dogsofwholedogjournal)

