

Pure Dog Talk 502 – Seizures in Dogs-Causes, Treatments and Considerations

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Laura Reeves:

Welcome to Pure Dog Talk. I am your host, Laura Reeves, and I have with us, again today, one of everyone's favorite guests, not just mine, everybody out there loves Dr. Marty Greer. And we are going to talk about seizures. This is a big topic. It's a tough one. They are painful for everyone involved. So, we're going to give you as much good information as we can. So, welcome, Marty.

Dr. Marty Greer:

Thank you. Absolutely. And it is a complicated topic, so there's a lot of little rabbit holes we can go down.

Laura Reeves:

We're going to try to keep it to-

Dr. Marty Greer:

I'll try.

Laura Reeves:

... a minimum of squirrels that we're chasing, but let's start with, because I know there's many different types of seizures, and everybody thinks grand mal as the big seizure, but there's other types of seizures as well. Can we run through that, just to give ourselves a baseline of what we're talking about?

Dr. Marty Greer:

Sure. Most people think of a grand mal seizure where the dog flops over on their side, they go into a typical tonic-clonic seizure. Tonic means when they're stiff, clonic is when they're jerking. So, we can see both that kind of a seizure. The dog usually urinates, has a stool, is disoriented for a period of time following the seizure. But there's also probably some other kinds of seizures, the petit mal or [inaudible 00:03:23] mal seizures, where dogs may have other kinds of symptoms. In kids, they see kids in the classroom staring off into space and dogs will see things like fly snapping. So, there'll be snapping in something in the air, and you look, and you're like, "There is nothing." Probably some other kinds of seizures where the dogs incessantly will be licking, and licking, and licking, and doing some other weird kinds of episodes.

So, that's where it gets to be a little bit hard is to figure out whether what you're seeing is a seizure or not. Some of the things that we see that look like seizures probably really aren't seizures. So, I encourage people able to program into their DNA, if your dog has a seizure, especially after the first one that you witness, that you grab your cell phone and you video what goes on so that the veterinary staff, the veterinarian, can see the episode that you're describing. It's much easier for us to look at it than it is for us to have you describe it. And it's a little hard to keep your act together the first time you see a seizure, because you're totally freaked out by it. But remember, dogs very rarely will die in the actual

episode of a seizure. It's the aftermath of if they're seizing for a long period of time and their body temperature goes up and their oxygenation goes down, that we can see that happen. But rarely does a short seizure cause immediate and difficult outcomes for the dog. So, grab your cell phone, get some video.

Now, I've seen dogs with things like low blood sugar have seizure activity. We had a dog that came to the practice years ago that was in an episode where her heart stopped beating intermittently. It was sick sinus syndrome in a schnauzer, but it was actually a cocker spaniel. We can see it in other breeds as well, where her heart would stop. I had her hooked up to an EKG, and for all the world, I swore what I was looking at was a seizure. Because she would go over on her side, get stiff, go through the whole tonic-clonic episode. Her heart would flatline. We could see it on the EKG, flatlining for 40 seconds at a time. And then, her heart would start to beat again, and she'd sit back up and look like she was done with the seizure until the next one hit. And they became closer and closer together over the course of only an hour or so. So, she was a candidate for a pacemaker that would fix her problem. Not everything that looks like a seizure is epilepsy or even a seizure. That's where it started off being complicated.

Laura Reeves:

Yeah. That's, as you say, this is such a complicated topic. And that is what you're just talking about, definitely new information for me. And I've been around this. Let's talk about some of the things that actually cause seizure activity. Let's just go with the basic brain synapse thing.

Dr. Marty Greer:

Sure. So seizures can be seizures. They can be actually epilepsy, which has probably got a genetic component to it, where the dog has an epileptic tendency. Typically, those are going to be seen in certain breed of dogs, golden retrievers, standard poodles, certain breeds of dogs. And they typically happen between two and four years of age for the first seizure. If we're seeing seizures, or seizure type activity, or episodes, in really young dogs, or dogs that are elderly, it's probably not primarily an epileptic situation. If it's a very young puppy, the first thing we look at is blood glucose. Because if their glucose drops, because they're not eating adequately, they don't have enough glycogen stores in their liver, and so they're weak and they're sick, they'll have a seizure type of activity.

So, the first thing we do in anything that's really young or really old is we'll reach for some kind of glucose. You can reach for Karo syrup. You can reach for honey. If you have caramels and the dog is capable of chewing them, that's great. You can give those. Sweetened condensed milk now, made by Eagle, comes in a bottle now, and that's another way that you can keep access to that kind of a liquid product. And glucose can be absorbed right through the gums. So, the dog doesn't actually have to swallow the glucose, the honey, the syrup, whatever you happen to have, maple syrup, whatever you have at home. The dog doesn't have to swallow it to get the effect of bringing up their glucose. So, we start with glucose as a immediate therapy.

Laura Reeves:

Do you see more of the hypoglycemic type of situation in toy breeds? Because, that's one of the places I've experienced it.

Dr. Marty Greer:

You can. And most people report that it's more common in toy breeds. But there's so many other things that can happen in toy breeds, open fontanelles, hydrocephalus, all those associated, other things, that you can't exclusively say that it's going to be a toy breed issue. So, if you have a young puppy that's seizing, the first thing I do is reach for glucose.

Laura Reeves:

Okay.

Dr. Marty Greer:

What other things can happen in young puppies? We can see neospora from feeding a raw meat diet or dogs eating neospora, or toxoplasmosis cysts when they're very young or passing it through from the placenta to the puppies. We can see neospora and toxo cause that. We can see open fontanelles related to hydrocephalus. Now, not every dog with

hydrocephalus has an open fontanelle, but many times that's a correlation. So, there's a number of different things that we can see that can cause epileptic type of activity or seizure type activity in a really young dog. And so, we go down a different path, if the dog is under six months of age, and especially if they're under six or eight weeks of age, we're going to go down a different path diagnostically than if we have a dog that's older.

Laura Reeves:

Okay, good. So baby puppies. And then, now let's talk about older dogs, so past the two to four where we expect to see epilepsy pop up, particularly in breeds where it is known, many of the herding breeds, all that kind of thing. So, what are we looking for when we see an older dog with a presentation?

Dr. Marty Greer:

We would look for drug toxicities, other kinds of toxicities, low glucose for a variety of different reasons, and we can circle back to that, brain tumors, and other metabolic diseases. So, there's a whole array of other things that we're in a diagnostically go down a different path. If you have an older dog, the first thing to do is gets some initial blood work. That's easy to do. You can check calcium, you can check glucose, it's easiest and most effective to check it very close to the time of the event. I have some clients that have the ability to check glucose at home. If they have a diabetic family member or their diabetic themselves, they can grab a glucometer and just stick the bottom of a foot pad with a lancet and get a glucose on the dog.

Glucose can go down for multiple reasons. I've seen it go down during severe pregnancy toxicosis. I've seen it go down because dogs have eaten xylitol, sugarless gum and candy. And I've seen it go down because dogs have insulinomas, which is a tumor in the pancreas. And those are functional tumors that create so much insulin that the dog's blood glucose drops precipitously. And anytime your glucose is too low, you can have a seizure. I've also seen it go down in Addison's disease. So, I personally had a dog with Addison's that I woke up one morning to a seizure, had no indication she was sick before that, and her blood glucose was 18. Not good. You should not have a glucose of 18. You should have a glucose in the normal range, like people, of around 80 to 100. That's normal.

So, it's easy to check on a newborn, it's easy to check on an adult dog, if you have a glucometer. If you don't have a glucometer, you need to get to the vet or talk to your vet about how you can arrange for borrowing or purchasing a glucometer. And they're not expensive. They're under \$50. So, they can be a pretty useful tool, especially if it turns out your dog does have an insulinoma.

So, first of all, you get a history. Did the dog eat sugarless gum or sugarless candy that would cause their glucose to drop? If they didn't, then you're going to be looking for... Of course, a pregnancy is generally pretty obvious, because it tends to be late-term pregnancy. And if you don't see either of those things, you're going to be looking at trying to determine if the dog has an insulinoma, which is a pancreatic tumor.

Now, the pancreatic tumor, there's a blood test for that. And you check a parallel of glucose and insulin levels, and that's done at a diagnostic lab that's a referral center or a referral lab. So, your vet would draw the sample and send those off to the diagnostic lab, and then come back with a diagnosis. And if it turns out the dog does have an insulinoma, they can sometimes be managed medically for a short period of time with just some steroids, just prednisone. But ultimately, you're probably going to end up taking the dog to surgery if you can, A, afford it, and B, justify it to remove that pancreatic tumor. And we've seen dogs do very, very well, live for sometimes two to three years after that diagnosis and that surgery, if it's diagnosed appropriately. Now, not everybody can spend the money, not everybody is willing to do that if you have a 15-year-old dog with heart disease and kidney disease, and it's also got an insulinoma, probably not a good candidate for that. But if it's a dog that's otherwise pretty healthy, then that might be something to think about.

So again, this is going to be something that's typically done by having a radiologist ultrasound to look for the tumor. And then, a surgeon go in. This is beyond the scope of what most veterinarians are surgically going to be comfortable in doing, because surgery on the pancreas is a very delicate and difficult procedure. So, that's glucose.

Laura Reeves:

Okay.

Dr. Marty Greer:

If we see it during pregnancy, of course we supplement glucose and we try and get the pregnancy to end as promptly as we can and still save the mother and the puppies. So, that's glucose.

Laura Reeves:

Okay.

Dr. Marty Greer:

Calcium. We can see low calcium in dogs that are... Large litters in small breed dogs, their calcium can drop, and we can see seizure type of activity. I've also seen low calcium in dogs with parathyroid tumors. The parathyroid gland is in the neck near the thyroid gland, and it can produce too much hormone, and it can cause the parathyroid hormone to go out of whack, and drop the blood calcium too low.

There's actually a syndrome that we know about now in Yorkies that they do this. So, if you have a Yorkie that's doing seizure type of activity, make sure your veterinarian is checking that out. I didn't know it was a problem in Yorkies until relatively recently. And I treated a Yorkie 30 years ago, before we knew that that was the case, we knew it was calcium, but we didn't know what the cause was. But there's a syndrome in Yorkies.

I've also had one dog that came to us with inflammatory bowel disease. Started off just looking like your garden, variety diarrhea, but the dog's absorption of calcium, because of the inflammatory bowel disease, became so low that his calcium dropped, and he would go into a seizure type of activity. And even though we knew that's what was going on, when he would have an episode and she would go to the emergency clinic with this boy, the emergency clinic doctors would want to continue to treat him for epilepsy. And I'm like, "No, no, no, no. This is a calcium issue. We need to supplement his calcium."

Sometimes these metabolic things can be very difficult to sort out and difficult to manage. If you know that there's something going on, you need to have that medical record, have a copy of the lab work with you when you trot into the emergency clinic, so you have some kind of documentation that they'll rely on. It's not an easy diagnosis to make, and it's not common. And especially if it's the middle of the night, and they've got a hit by car, a bleeding spleen, your dog is seizing, and they've got a pregnant dog needing a C-section, it's a little hard for them to focus on all the nuances that it takes to really accurately diagnose what's going on with your dog.

So, when you go into the emergency clinic, take the paperwork that you have. And if they're initiating something new, make sure that the records, you get the copy of the lab report, that they don't just send a summary to your veterinarian, that they actually give you the copy of the results. Because sometimes, those get overlooked, assuming that they've made a diagnosis. But you need to make sure your veterinarian is looking line by line, through every single parameter on that lab work to look for Addison's, to look for hypocalcemia, to look for inflammatory bowel disease, to look for all those different metabolic disorders that we can see.

Laura Reeves:

Thyroid.

Dr. Marty Greer:

Thyroid. Yeah. All that stuff.

Laura Reeves:

Yeah. I mean, I've seen it with low thyroid.

Dr. Marty Greer:

Yeah. Yeah. You can get some really funky metabolic disorders going on with those kinds of things. So, you want to be sure that you're comprehensive and complete on what's going on with the dog before you jump to any conclusions.

And then there's always the toxins. So xylitol we've talked about as a possible toxin. But there are some rat poisons and some other neurotoxins that we can see, not the vitamin K type of rat poison, but bromethalin can cause seizure activity. And there's a lot of other nasty toxins that are out there that dogs can sometimes get into. And sometimes our pharmaceutical medications can cause that as well. So, appetite suppressants can cause it. There are a number of different drugs on the market that can cause seizure type of activities. So, it's really important that we get a good history on these dogs, what they might have gotten into, what you might have found around the house.

I had one client that called one day and she said, "My dog just started stumbling around the house. He was fine a few minutes ago, and he's stumbling around the house," and she was on her cell phone. And I said, "Okay, you need to walk back into the room where the dog was when this episode started," because it didn't start in the room with her. And as she's walking through the house, she found the package of sugarless candy that the dog had gotten into.

So, you sometimes have to do some pretty good detective work, because these dogs are pretty sneaky about what they're finding, and what they're getting into and eating. And they may have hauled it off and hidden it somewhere. Or they may have eaten the entire package. In her case, the dog had chewed up the package pretty badly, and it was hard to read what the label said. So, she put the dog, her husband, and son in one car, sent them to us, while she stopped at the store and bought a package of the same sugarless candy, so we could read the label. So, she was five minutes behind him in the second vehicle. Brilliant, very brilliant way for her to handle this problem. I did not give her those instructions. But very brilliantly was able to put that together. So, that was really helpful. The other thing are some of the prescription medications that our dogs are routinely put on can cause seizure activity. Too much metronidazole can cause seizures.

Laura Reeves:

I have lived that one.

Dr. Marty Greer:

Yeah. And that's ugly.

Laura Reeves:

Well, and in my instance, it was my Ibizan Hound who had acquired an anaerobic infection in his lungs. And the treatment was metronidazole.

Dr. Marty Greer:

Long-course, yep.

Laura Reeves:

Long-course metronidazole. And by the time we got to the end of it, he was having seizure activity. And I took him off the metronidazole. He's been fine ever since. I've lived it. I know that one exists.

Dr. Marty Greer:

Right. And if you think there's a metronidazole toxicity, it's usually because of either too high a dose or too long a course. And of course, it's going to be more of a problem in the MDR1 dogs than it is other dogs, so collie, Shelties, that kind of stuff. But any breed can have it if it's too high a dose. I've seen it in a Samoyed. I've seen it in a poodle. I've seen it in a collie. But the really cool trick is you can cut the length of time that the toxicity occurs from 30 hours to 13 hours by giving Valium. So, there is basically an antidote to that, if you are aware that that's the situation. So, if your dog's on medication or recently finished medication...

And that's where I'm almost missed one, one night. Because the dog came to us, they'd been going to another clinic. It was 9:00 at night. They came in with a dog that was having weird episodes of neurologic disease, not quite seizures. But the dog came in and it was walking really funny. And we said, "Was he on a new medication?" They said no. So, we assumed that it was some kind of seizure activity. And as they were turning around to leave, they said, "We just finished metronidazole. Could it be..." I'm like, "Oh whoa-

Laura Reeves:

Oh, yeah.

Dr. Marty Greer:

Come on back in." So, get a really good history. Don't forget to tell anything to your veterinarian or the veterinary professional that you're seeing.

Hang tight, guys. Got a little bit of information for you. We'll be right back to the podcast in a minute.

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Dr. Marty Greer:

The other thing to know is that the new class of oral flea and tick medications, which are Bravecto, Simparica, NexGard, and Credelio, those can cause neurologic disease, tremors that can also include seizures in seizure prone dogs. So, a normal dog won't seize, or at least they don't believe that they'll seize in that drug class, the isoxo drugs. But we can see it relating to some of those drugs. So, if your dog recently had a dose of that, typically within 24 hours, you need to include that too. So, you need to go through the list of anything that's possible, anything that the dog was given deliberately or not deliberately, so that we are not missing any information that could potentially be a problem. Portosystemic shunts can cause seizure activity, because the ammonia goes so high. So, if your dog has other symptoms, you need to know that.

Laura Reeves:

I see that in puppies.

Dr. Marty Greer:

Yes.

Laura Reeves:

Liver shunts and puppies.

Dr. Marty Greer:

Yeah, but every now and then we'll diagnose it in a three or four-year-old dog, and it's like a slap in the forehead.

Laura Reeves:

Really?

Dr. Marty Greer:

How the heck? Oh yeah. I have a long story about that, that I will avoid telling today.

Laura Reeves:

Okay.

Dr. Marty Greer:

But we can see shunts sometimes at a much later time than the typical nine to 12 weeks. So, some breeds of dogs do routine screening before the puppies are sold, like the Irish Wolfhound will do a pre and postprandial, meaning pre and post meal bile acid test to make sure that they don't have evidence of it. And portosystemic shunts are usually just a random event, generally not a typically inherited autosomal recessive, where 25% of the puppies would be affected. But if there's any question, a bile acid is a simple test to run. You can run it either as a standalone, but more effectively as a paired, where you draw the blood, feed a meal, two hours later, draw a second sample, and you can see if the bile acid level went too high.

But yes, we had one in a dog that was apparently normal for three and a half years of his life. Came in with a little diarrhea. Suddenly developed fluid in his abdomen and ended up with a gigantic, it turned out, it was a gigantic liver shunt that somehow this dog was functioning as a service dog, normal, bright, smart service dog that had a seven centimeter in diameter shunt. So, we're not talking a little like-

Laura Reeves:

No, that's not small.

Dr. Marty Greer:

You could drive a truck up this shunt.

Laura Reeves:

Wow.

Dr. Marty Greer:

Sometimes, really weird stuff can happen. Remember, your veterinarian's going to say, "Well, we need a blood panel," so don't think badly of that. And like I said, be careful with raw meat diets, be careful with exposures to parasites, make sure that you're doing an appropriate job with deworming, and just make sure that you're really keeping an eye on all of the health preventives that your dog should be on. And that if the dog does get into something, you grab the package and take it along with you.

We had a dog a couple of years ago that ended up with what we think was probably in organophosphate toxicity. And organophosphates used to be flea and tick and other insecticides that have been off the market for a long time. But in this particular case, there had been some poured or spilled onto the floor of the barn, and the dog had been placed in the tack room where this was on the floor. And the dog was in contact with it and absorbed it through her skin. And she came in with some really weird symptoms, including seizure activity. So, weird stuff can happen.

Laura Reeves:

Weird stuff happens. And as I was telling you a story earlier, I have had it happen to me. So, head injury for a small breed dog that this is my Chihuahua that has caused her long term problems.

Dr. Marty Greer:

Yeah. There was a story told by a neurologist at a meeting that I went to and he said he was in the exam room with a client that had a small breed dog with an open fontanelle. And the family was in the exam room, the husband, the wife, and the child. And the veterinarian was talking to the family. And the little boy kept pulling on his mother's sleeve, and pulling on his mother's sleeve, and saying, "But, but, but." And they kept saying, "Honey, you need to be quiet, the doctor is talking." And he finally said, "No, I have something important to tell you." And they finally stopped and listened to the child. And he said, "You know what? When I put my finger here and wiggle it around, the puppy gets worse." Yeah. He was putting his finger into the open fontanelle of the puppy's head. And he didn't know that it was bad to do that. I mean, you and I would know not to put pressure on the brain.

Laura Reeves:

My eyes are now bugged out of my head.

Dr. Marty Greer:

Yes, yes. And so I'm like, "Okay. So, take the entire history and listen to everyone in the family, because sometimes even the four-year-old has an important contribution make." In fact, frequently the four-year-old has the most accurate assessment of the story, because they're going to tell exactly what they saw and not filter it the way that parents will. So, listen to the whole family, make sure. If you see this, take a video. If you see anything in the environment that seems weird, grab a picture of it. Just be really complete before you go to the veterinary clinic with the seizing dog that we need to know. And then, of course, in the older dog, there are structural abnormalities, like brain tumors. And they're not always malignant. We've actually had one client that went to the university of Minnesota. They did surgery on the dog's brain, took the tumor out, put the dog on long-term medication. The dog did fantastic. But of course, that's diagnosed with either a CT scan or an MRI, and it's complicated, and it's expensive, but it's also-

Laura Reeves:

Not every vet has the facility to do it.

Dr. Marty Greer:

No. And not every client has the capacity to do it. But we've also had them come back as benign brain tumors. So, not every brain tumor is a malignant reason to be in a panic either. So, depending on whether you have insurance and depending on whether the dog is otherwise in good condition, there may be some pretty extensive things that you can and choose to do just based on what your particular set of circumstances are. That's very complicated. There's a lot of things that makes dogs look like seizures, but it's not always epilepsy. Epilepsy is a diagnosis of exclusion. Typically, we diagnose it after everything has been ruled out. And if there's an EEG that shows that the dog has abnormal brain activity, then we call it epilepsy. Now, that being said, there's a lot of treatments for it, whether it's epilepsy or not epilepsy. So, we can go down the treatment path.

Laura Reeves:

Yes. That where I was headed next. Of course, everybody thinks of barbits. Barb is pretty hard on dogs. It's not really easy for them.

Dr. Marty Greer:

No, it isn't. But it's one of many of the choices that we have. And it's still the old standby drug, and it's still a great drug to use for dogs with seizures. There's two kinds of treatments that we need to do. One is in the acute phase. If the dog goes into one seizure, and it ends, and it's short, and it's over, you don't have to do anything immediately. But if the dog goes into a long tonic-clonic seizure, or status epilepticus where the dog doesn't come out of a seizure, then you need immediate veterinary care. And that means going into the hospital and getting some kind of immediate treatment. Usually, it's an injection of phenobarb, of Pentasol, Keppra, of propofol. There's Valium. There's a number of different options.

Laura Reeves:

Valium, I was going to say is what I've had on hand.

Dr. Marty Greer:

Right. So, you can't give most of these drugs at home because they have to go IV, but Valium can be either given rectally or nasally. So, it's actually cool, because you can have that at home, if you do have a dog that tends to have seizures or breakthrough seizures in spite of medication, so that you have something you can do at home and not just stand there and watch the dog seize until you can get to the veterinary clinic. And of course, right now, getting into a vet clinic can be difficult. You don't want to be in the parking lot for six hours with a dog that seizing and not something that you can

do about it. Short term medication are going to be IV injections, or the intranasal or intrarectal Valium. To do the Valium rectally, we typically send home a syringe of it with a catheter that you can slip into the dog's rectum so that you can deliver the Valium high enough into the GI tract that the dog actually absorbs it and it controls their seizures. That's actually a cool thing that we can do.

Laura Reeves:

And having had to do that, I can say it makes all the difference in the world. And I highly recommend it for anyone that... I've lived it. And that has been the saving grace, so.

Dr. Marty Greer:

Right. So, unless it's calcium or unless it's a glucose issue, you're going to need to treat the seizure with some kind of an anti-seizure medication. And the toxins, oftentimes, there isn't a specific antidote for them. So, Valium, propofol, some of those other drugs are going to be the management of the seizures while you're giving supportive care and getting the dog through that toxicity. Long-term medication, yes, lots of dogs go on phenobarb. And we used to only have that as our drug that we had. There were some other drugs on the market, on the human side, that we tried giving. But things like Dilantin only lasted for an hour and a half on the dog. So, giving it every hour and a half wasn't a practical treatment. But now, we have things like Keppra, which you can use either three times a day with a regular Keppra, or twice day, if you use the extended release. And Keppra used to be very expensive. But now that it's a generic, it has made it very affordable for people to give.

Laura Reeves:

I'm going to tell you phenobarbital for a four-pound dog, her prescription costs more than mine and my partner's together.

Dr. Marty Greer:

Yeah, phenobarb used to be a very inexpensive drug. But for an unknown reason that I can't fully explain, the cost of phenobarb has gone up considerably. Partly, I think it's because they can. And partly it's because it's a lot of record keeping. So, many veterinary clinics are no longer keeping it on their shelf. And they're just sending people to a pharmacy with a prescription, because it's gotten to be difficult to manage some of these controlled substances.

Our other treatments are going to be... Well, I love Keppra. I think it's a great drug. And one of my favorites that I don't often see younger veterinarians using is potassium bromide. Potassium bromide is a really nice drug. The downside to it is that it takes a long time for it to take effect. The upside to it is it takes a very long time for it to take effect. So, on the downside, you have to do a loading dose to get it on board to the dog so that in a few days you get some kind of an effect. But if you accidentally miss a dose of phenobarb, your dog can have a seizure that was worse than the seizures it had before it was started. If you miss a dose of potassium bromide, it's not that dangerous, because that has a long blood half life. And so, it's going to stay in the dog's system for a period of time.

A lot of times, we're layering these drugs to get other, so I may have a dog on two or three medications. We may start them on one, and then we're going to add something else to it. So, we may start them on Keppra. And if that's not quite enough for phenobarb, and we don't want to put them on such a high dose of phenobarb that we trash their liver, then we can go ahead and add potassium bromide to it. And it does a great job of leveling things out.

The other thing that we use a lot of for dogs that we're not quite sure, do they have bad enough seizures to commit to long-term medication? Is this just one of those weird things that happened and it freaked the owner out, so they want something that they can do, but they don't necessarily want to commit to something like phenobarb where there's liver blood test monitoring and all the other things? Are good old Gabapentin. Gabapentin does a nice job of managing seizures. So, we can use it effectively. Now, acepromazine causes seizures, or at least doesn't control them. Benadryl, again, don't be using that kind of stuff for seizures, that is not an anti-seizure drug. We want to make sure that we're actually putting dogs on drugs are known to be anti-seizure. So, there's lots of good things that we can do.

And it doesn't mean that the dog has to have such a high dose of medication that they're stumbling around and disoriented for the rest of their life. Now, the first two weeks that they go on some of these meds, they can be a little bit disoriented, because the drug takes a while for them to accommodate and get used to. But typically, after two weeks on

medication, you can get them pretty well leveled out and the dogs are pretty comfortable. They've got a good quality of life. They interact normally. They sleep well. They wake well. They have a normal life. So, it's great.

But phenobarb does frequently increase water consumption, increase urination of course, that's secondary, and increased appetite. I had one dog on phenobarb that ate a golf ball. Apparently he was so hungry that a golf ball looked like it was tasty. Weird things can happen on phenobarb or on any drug. So, just be aware that there's going to always potentially be side effects to these drugs. But if you have a dog that has a tendency to have seizure activity, A, get a diagnosis, and B get an appropriate treatment, because there's a lot of good things we can do for these guys that don't mean that you have to give up on them.

Now, the other thing that can confuse people is vestibular syndrome. And vestibular syndrome happens frequently in older dogs. It starts off as an acute phase. People think it's either a stroke or a seizure, and the dog will have funny eye movements, right to left. It's called nystagmus. So please, if your dog has that, go in, get a diagnosis, and recognize that, with some medication to control the motion sickness kind of thing, like Cerenia, or Bonine, meclizine, you can very comfortably control that dog. And typically within two or three days, they're better. So, don't be given up on dogs with minor problems.

Laura Reeves:

Right. And so, one final thing, Marty. I know you are not a naturopathic doctor. I understand that. But talk to us, any knowledge you have about say, for example, a dog who perhaps is genetically prone to a seizure and has environmental triggers, some of those types of issues. Can you speak to that at all?

Dr. Marty Greer:

Yeah. And stressors can certainly initiate seizure activity. We had one dog in the hospital, many years ago, that when the owners would come to pick him up, he would get so excited that he would have another seizure. And then they would freak out. The dog had to be reanesthetized. So yes, stressors, environmental stressors, stress, excitement, all those things can cause it. So, keeping the dog quiet and calm can help. So, Gabapentin things like that can play a role.

The other thing that is not quite naturopathic, but works really, really, well is Purina makes two lines of dog food. They make an over-the-counter diet and they make a prescription diet line. Their over-the-counter diet line is called Bright Minds, and their prescription diet line is NeuroCare. And those diets actually reduce seizures. So, without having to have a prescription, you can start Bright Minds. You can pick it up at the store, at fancy stores, like Fleet Farm, and Lowe's, those fancy stores that people shop at. But you can get the prescription as well. And it's really pretty cool, because if we put them on a prescription diet of NeuroCare, we can sometimes reduce the amount of medication or reduce the number of seizures that we see without upping drugs. So, it's very cool. You have to feed them anyway, so you might as well feed them food that's going to reduce the risk of seizures. There have been some ketogenic diets that have been talked about, often not terribly effective. But the NeuroCare and Bright Minds does work.

And there are people that try CBD products. And at this point there is nothing that we can share with clients, as veterinarians, that say anything about efficacy or recommendations. So, if you ask your veterinarian, they are legally not allowed to talk to you about CBD oil, or CBD containing products, or hemp type products. If ask your veterinarian, and you get a non-answer, it's because legally they're not allowed to help you. It's not that we don't want to, it's that we are advised by our legal people that there's no studies on safety and efficacy. And like a lot of the other products that are nutritional in origin, they don't have a lot of good studies behind them. So, us making a recommendation specific about that would be inappropriate.

Dr. Marty Greer:

I will say, however, that I know Colorado State is doing a study on it. And there are probably other institutions that are studying the products. So, at some point, I think we're going to have some good ideas of what we can do for your pets pertaining to CBD oils, hems, those kinds of products. But at this point, we just don't have that. We just don't yet. It takes time to do this research.

Laura Reeves:

Right. Absolutely. One of the things that's great about the Pro Plan products, and I remember when they were first thinking they had this, when they were just started, I was talking to them then, they had done some really good clinical trials, actual feeding trials, that were evidence-based. And I think that that is so important to understand.

Dr. Marty Greer:

Oh, yeah. Yeah. And it definitely is evidence-based. It's very cool. We did some studies for Hills. I haven't done anything for Purina. But these pet food companies do really hardcore research. When I was doing some of the work on b/d that is Hill's behavior/brain diet for senility, we had to 10 clients in the study. One of my dogs was one of them. So, nine other people with dogs in the study.

And one of them was a veterinary technician that worked at the university in Milwaukee, in research. She was a research assistant as a vet tech, a certified vet tech. And she put her dog in the b/d study. And at the end of the study, she came to me and she said, "I think this research is so important and so good that I am selling my house, selling my kennel, uprooting my husband and my dogs, and we are moving to Topeka, because I'm going to go work for Hill's." I'm like, "Oh, okay. Good for you." But I lost a really great client. She did performance work with her dogs. She was amazing. She had sight hounds and scent hounds, very cool lady. And literally took a job in the pet food industry, because she saw how important that clinical research was and how much of a difference it made for her dog. And so, she committed the rest of her life to that.

Laura Reeves:

Wow.

Dr. Marty Greer:

That's really cool.

Laura Reeves:

That is amazing. All right. Well, Marty, thank you so very, very much. I really appreciate your time, as always, because you are a gift to our dogs.

Dr. Marty Greer:

Well, thank you. It's always fun to be here.

And everybody, don't forget, don't forget, we have Marty on our weekly webinar series through the 24th of November, K9 First Aid 911, every Wednesday. Sign up at puredogtalk.com. Half the proceeds go to Not One More Vet.

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