



FEATURE

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Not All Seizures Are Created Alike, Part 2: Managing Canine Environmental Seizures

Edited by Nannette Newbury, Guest Editor

The following article is the second in a three-part series that focuses on “reactive” seizures (not idiopathic epilepsy) in Australian Shepherds. I would like to personally thank owner Barbara Holland (Part Two) and breeder Michele Colborne (Part Three) for being willing to contribute to this series in addition to my Part One.

The stories for all of us remain painful. We are, however, united in our commitment to sharing our stories. Our goal is to illuminate the role that the environment plays on seizures (and compromised immune systems) and, ultimately, the long-term health of our dogs and our breed. By making small changes in what we put in and on our dogs we can eliminate and/or drastically reduce those seizures not caused by heredity. We encourage you to become an advocate for your dog’s health...be in charge, question treatments and procedures educate yourselves.

Ms. Holland is a pet owner. Her dog was bred by Heather Herron of Northbay Australian Shepherds. Her story is important for us as breeders. We must know and comprehend how devastating ill health can be for the average owner.

The dogs we choose to breed; the pre-natal care of the dam, sire and pups; how we care for the

pups after whelp, including food, medications, and vaccines, can all contribute to and build a strong immune system or compromise the health of a puppy for its entire life. Ignoring these factors can cause financial and emotional ruin for a family.

These articles do not discount the work being done to discover a gene in our breed for idiopathic epilepsy, but rather focuses on those seizures *not* caused by heredity. We are united in our dedication to potentially saving future Australian Shepherds from a fate similar to ours. *Nannette Newbury*

Banner **by Barbara Holland**

Banner is a five-year old Australian Shepherd, who suffers from environmentally triggered seizures. Banner does not have idiopathic epilepsy. Yes, Banner has seizures, but there is a difference between inherited seizures and seizures triggered by environmental causes. It took a long time and a lot of effort to figure out his triggers, but through diligence, and despite more than a few mistakes, I can now keep him seizure free, as long as none of the chemicals that he has become hypersensitive to get into his environment.

DISCLAIMER: For the purposes of authenticity there are numerous household product names and manufacturers included in this article. We have included the product names to clearly and transparently illustrate the degree of severity of Banner’s issues with the environment. We wish you to know that while these substances caused this specific dog’s problems, many of these products do not elicit the same seizure responses in other dogs. Do not assume and we do not imply that the stated products are harmful to every dog.

How Our Saga Started

Banner was three-years old when his first seizure occurred. The initial one came within a week of having his annual vaccination. Until this particular year, I had requested that my veterinarian leave out the Leptospirosis portion of the vaccine, but I was “strong-armed” into giving him the standard DHLPP. Our appointment was just before our Christmas vacation at the cottage up north. Little did we know what the future was for us and Banner.

His first seizure occurred, as most have, at 3:00 a.m. Something about the sleep state, and the imbalance of the sympathetic and parasympathetic nervous system just makes this the witching hour for us. I suspect it has something to do with blood sugar levels as well, although we have confirmed that he is neither hypo- nor hyperglycemic. It's just that this time is close to his breakfast time. As soon as we could hail the emergency vet, we got him up to the office nearest to our cottage. The doctor ran a complete blood panel and found nothing remarkable. He stated that we were in a “wait-n-see mode.” He quoted that 90% percent of seizure cases happen once, and never come back again. He discussed the pattern and when we would need to make the decision to put Banner on medication if it returned at a higher frequency.

As a long-time Aussie owner and member of ASCA, I was aware of the Aussie Genome Testing, and specifically the MDR1 gene test; identifying whether your canine carries the genetic mutation for a gene that causes multiple drug resistance. In layman's terms, it's an inability to pump medications back out of the brain due to a lack of a particular protein responsible for this action. The build-up can cause seizures. We submitted Banner's DNA swab to the lab in Washington, and after six weeks his results came back Normal/Normal. He does not have MDR1 concerns.

One month later, at our Metro-Detroit area suburban home, he had another seizure. Same time, same duration, same recovery period. Less than two minutes of grand mal seizing, with about 10-15 minutes of post-ictal behaviour. We took him to our regular vet and they again, ran blood panels that showed nothing remarkable. Our vet suggested that we look into complimentary services. There was nothing more that he knew to do.

Foray into Holistic Veterinary Service

After Banner's second seizure, our regular vet admitted that unless something shows in a standard blood panel, they just have no way to test and know what causes the seizures. My vet was also unaware of the MDR1 gene testing. I was looking for a more thorough answer, and additional tests that could be done.

My regular vet, at Serenity Veterinary Hospital, in Sterling Heights Michigan, suggested that I contact a doctor that had previously worked at Serenity, who now runs a practice that solely treats pets on the basis of Nutritional Response Testing. Dr. Gregg Sheppard and his wife Melissa run Sheppard Alternative Animal Care in Shelby

Township, Michigan. They became interested in applying this technique when their daughter became seriously ill as a child, and regular medical doctors could not pinpoint the reason she was failing to thrive. As a last-ditch hope, they were sent to a Nutritional Response Testing specialist and discovered food sensitivities and environmental triggers that were suppressing her health. She is now a very happy, healthy young lady after eliminating the bad, and bolstering her nutrition with supplements that support the body to heal on its own. Soon, Dr. Sheppard became interested in learning this technique to apply to his veterinary practice, to help explain the mystery cases that standard veterinary medicine just could not resolve.

In our initial appointment, they identified that Banner's liver was the organ that was exhibiting the highest stress. Every seizure pet that they treat has shown the liver to be the organ that needs support and that heavy metals present from various environmental sources is the stressor.

In all of their seizure patients, if the owner is diligent about removing the toxin source, and supports detoxification with whole-food supplements, the pet ceases to have seizures.

Chemical Sensitivity

Once the liver has experienced a toxic overload, it seems that there is a hypersensitivity to what were previously mild hepatotoxin/neurotoxin sources. Since we believe the zero point for the

start of his issues was a vaccine, we have carefully considered our options for any future vaccinations.

As far as a vaccination protocol, the holistic vet and the Petoskey vet who initially saw him after his first seizure, both agree that Banner should not receive any further vaccinations until we have his seizures under control (zero incidences) for at least a year. They offered to titer and if needed, stagger future shots. Since his rabies vaccine was coming up, they agreed to write a letter exempting this dog from the vaccine as it could be fatal for him. The state of Michigan honors such letters from veterinary professionals.

Holistic Approach

Dr. Sheppard used Nutritional Response Testing to find the toxins that Banner was showing weakness to, find food sensitivities that were not supporting his health, and identify supplementation that would help the body repair itself.

Food Change

Dr. Sheppard had a list of limited-ingredient foods to choose from that were recommended for seizure dogs. Many of the major dog food brands contain questionable preservatives. Fish-based foods do not need the extra preservatives. We chose Natural Balance® Fish and Sweet Potato dog food and treats. On occasion, I will buy 100% pure salmon jerky or 100% sweet potato chews.

For folks looking to evaluate their current food choice, I highly recommend an internet search to check for reported toxic preservatives in their dog food brand. You



are going to rely on the research of some very dedicated individuals who gather this information. The dog food companies do not have to call out their preservative ingredients, although many are starting to become more forthcoming. The potentially harmful chemical preservatives to avoid include ethoxyquin (which was in Banner's previous dog food), propylene glycol (essentially anti-freeze), BHA (butylated hydroxyanisole), BHT (butylated hydroxytoluene), TBHQ (Tertiary butylhydroquinone) and propyl galate. Each of these toxins has different effects on the body. Ethoxyquin is known to contribute to seizures, and has been banned in cat food, but not yet banned in dog foods.

Supplements

The supplements that Dr. Sheppard dispenses are produced by Standard Process. His protocol has shifted a bit as we determine what works best, but in general, his supplementation regime is as follows:

- **Organically Bound Minerals:** These bind to the toxins to pull them out of his liver.
- **Canine Hepatic Support:** Supports liver metabolism, hepatic circulation, bile production and flow and hepatic immune function.
- **Antronex:** This supplement contains a liver fat extract that supports the body's immune system detoxification mechanism.
- **Parotid:** Supports the saliva producing parotid gland to improve digestion and cleanse the upper digestive tract and provide tissue support.

Food Sensitivities

Banner was tested and determined to express sensitivity to chicken, beef, dairy, and wheat.

A Moment of Weakness

After a short while on the new holistic approach, we had another incident that occurred, and I took Banner to an emergency vet. That vet ran the same standard blood panel as well as checking thyroid function and tick titres. All lab results were non-remarkable.

They prescribed phenobarbital. For three days, I watched Banner's ataxia response to the pheno, crying my eyes out, and watching him get worse and worse. After talking to the holistic vet, he convinced me that the dog's issues were liver- and toxin-based and pheno only causes a worse toxic load. I cut him off the drug and dedicated myself to finding the real triggers rather than masking it with a drug that would only harm him worse in the long term.

What Nutritional Response Testing (NRT) Has Found Immediately Following Seizures

It can be really easy to watch the NRT process and think that it is complete voo-doo, like a really good snake oil sales pitch or a religious "healing" session. With absolutely no leading from me as to what the dog came in contact with, NRT identified some pretty shocking substances in Banner's system that were stressing his body (I'm a flat-out believer—there is no way the doctor could predict these actual environmental toxins were the recent changes in his life until I told him):

What Was Identified In Banner's System

Chromium: This was discovered in one of the very first appointments with Dr. Sheppard. My husband had read online that if you put dryer sheets in your shoes, it helps eliminate stinky-feet odor. We now realize what a horrible idea this is, as dryer sheets contain numerous neurotoxins. Banner was stealing the dryer sheets out of Dave's shoes and sucking on them! One of the key toxic ingredients in dryer sheets is chromium.

Antimony: During the end of June, as the various cities in proximity to my house in Sterling Heights were holding their annual Fourth of July fireworks displays, and the neighbours were setting off their own nightly displays, Banner had multiple seizures. Upon NRT testing, he came up with antimony, which is a key ingredient in cheap Chinese fireworks. We immediately left for our two-week vacation to the cottage in Northern Michigan, and he no longer had any seizures. The difference in air quality is significant between the two locations. We now make every effort to get out of our suburban environment as the firework season comes upon us. We got through the 2013 July season unscathed.

Titanium (Dioxide): Titanium dioxide is an ingredient that makes specialty papers or pastes very white. It is common in things like spackle, toothpaste, paper products, etc. Just a few days prior to Banner's appointment, he stole (and later evidence showed he ingested) a Tim Horton's coffee cup with its "sparkling white" interior paper.

How I Know It Is Environmental

Looking back, I can definitively say that each incident can be tied to chemicals in Banner's environment. If Banner's issues were truly epilepsy, the doctor said his seizures would be escalating—not decreasing—more frequent, and severe. The fact that we can sustain extremely long periods between incidences, and can locate and remove a trigger and achieve long-term success, tells us that this truly is environmental, and if it is environmental, it can be controlled.

How He Communicates

Banner knows when a trigger is present. When we were running the dishwasher, he would stand in the family room, looking worriedly into the kitchen, and make a whining vocalization unlike anything I had ever heard from him before. He would look at the dishwasher and back away, trying to coax me away from it as well. He was like Lassie trying to communicate that Timmy had fallen in the well. Dishwasher detergent contains bleaches and harsh cleaning chemicals. Even the natural brands contain D-Limonene, a natural substance created from lemon peels, but it is a known neurotoxin. The extreme heat of the dishwasher created overwhelming fumes.

Banner would do the same worrying for the clothes washing machine, when I ran bleach in it.

In early 2012, I laid off my twice-a-month cleaning ladies for three months and we had no further seizures. They touted using "Green Clean" certified brands of cleaners. When I checked the MSDS sheets for the chemicals in their cleaners, the floor cleaner that was used right next

to his crate contained over 36% propylene glycol (anti-freeze). I found a cleaning brand I trusted (mentioned later) and let them return, as long as they never brought anything from the outside, into my house, not even washed rags. They agreed not to wear any perfumes.

Since we had so many issues with laundry fabric softeners, and detergents I went overboard and washed every single clothing and linen item in the house with vinegar, to remove any fragrance residue out of the offending products.

The absolute worst chemical offender was Febreze[®], specifically Swiffers[®] infused with Febreze[®]. In one weekend, he had six seizures, due to an unopened box of Swiffers[®] that had Febreze[®] scent on them. My husband had bought the box, and had not noticed the fine print about the scent addition. The box was inside a cabinet in the kitchen. Banner was avoiding the kitchen, and looking toward the cabinet worriedly. As soon as I discovered the box, and removed it from the house, his seizures stopped.

I recalled I had a box of Swiffers[®] in my car, not realizing those were scented as well. I put Banner in the car to take him to vet and all of a sudden, he started shaking violently in what looked like a fear reaction. He jumped in the back seat and started pawing at the Swiffer[®] box. I pulled over and threw them out and he calmed down.

Three office co-workers have had older dogs that developed seizures and after I talked about my experiences with Banner, they realized that their spouse had recently doused the dog's environment with Febreze[®]. A very popular Pinterest pin states that Febreze[®] contains 80 known toxins, including very strong hepatotoxins.

Seizure Activity

The only other time Banner had a similar reaction to the Febreze[®] was earlier, when I brought home grocery bags that contained a canister of one of those new-fangled laundry crystals. It wasn't even opened and he started drooling and shaking: seizure soon to follow. We now keep such unstoppable chemical assaults out of his environment.

Our theory now is, if we won't put it in our mouth, it doesn't come in the house. We threw out all toxic cleaners, everything with a scent, including talcum powder. No cologne, no Clorox[®] wipes, no perfume ads in magazines, no candles, no scented doggie poop bags, no scented garbage bags, no scented maxipads, no grooming products for the dog, no dishwasher tablets, no bleach, no dryer sheets, no fabric softener, no baby wipes or any other substance with propylene glycol. We got rid of all the chemicals in the garage and basement.

An extremely helpful canine seizure support website (link referenced at end) also suggested not to use any non-stick coated items in the house, such as cooking pans and even many new hair curling irons. Banner gave warning whines when I used a curling iron like this, but I never knew if it was the non-stick coating or the almost inaudible beep that the device made when it flashed the red light to tell me it was ready. He could obviously hear it much better than I could. Teflon[®] usage in households that have birds has been proven to kill them, so I'm okay with this suggestion to eliminate it from my house.

Needless to say, we don't ever fertilize the lawn or use weed killer.

Since heavy metals seem to be the problem I became concerned when I noticed that Banner would lick the metal floor vents when the air conditioner came on. He had licked the vents to the point of rusting. The metal welding used in the construction of the vents could also be a source of antimony, so I replaced all the vents with plastic covers.

Alternates for What I Have Given Up

I use Better Life[®] non-toxic cleaning products, or concoctions that I make up from natural ingredients, such as vinegar, Castile oil soap, rubbing alcohol, hydrogen peroxide or baking soda. Many "green" products actually are not. I use the Environmental Working Group list from the internet to check the relative toxic safety of a product or I look up the Material Data Safety Sheet (MSDS) for the specific product I am interested in researching. I have been able to use essential oils with no issue, but have to be careful because certain oils can trigger seizures (eucalyptus, rosemary... to name a few). Sadly, you'll see these harmful essential oils in dog shampoo products. I have painted walls with Zero-VOC paint, with no issue, and had the deck stained with Zero-VOC stain/sealer. Since seizures come with loss of bladder control as the bonus gift, in order to wash the dog, and wash the spots on the floor, I use Peter Rabbit[®] Non-toxic Baby Shampoo or I've even safely been able to wash him with Dawn[®] soap, although that is not my first choice. For non-toxic Japanese beetle control I put out a pheromone trap, and I put down beneficial nematodes and milky spore.

I suppose my number one suggestion is do what you can to detoxify your life. The dog feels better. I feel better. My husband feels better. Even though it is not always convenient, and it took a lot of training to get my husband to only pick out unscented grooming products, it has been worth it to keep the boy seizure free.

Helpful Tips

The website <www.canine-epilepsy-guardian-angels.com/> has a ton of suggestions on how to manage your pet's seizures. A couple of very helpful suggestions that really work, are the use of honey to ward off an impending seizure, and placing ice on the dogs saddle area.

I also use the canine Shen Men pressure point on the dog's ear to stop the grand mal paddling immediately. This helps reduce the recovery time, when they don't paddle so hard through the seizure. <animalwellbeing.com/earpoints.htm>

I have seen YouTube videos that also show owners who have had success in stopping a seizure by carefully bear hugging their dog's chest and giving them a command when they go into grand mal. The pressure relaxes the dogs out-of-balance sympathetic/parasympathetic system, and brings them back around (similar theory as the Thunder Shirt).

Additional Websites

- Nutritional Response Testing: www.youtube.com/watch?v=pA8H8D-4enU
- Environmental Working Group: www.ewg.org/guides/cleaners
- Toxin Lists: householdproducts.nlm.nih.gov/index.htm
- Better Life Non-Toxic Cleaning Supplies: www.cleanhappens.com/?gclid=CJ6-8tzosrwCFecRMwodaEgAbg
- My holistic vet: www.sheppardcare.com/

A lot of the pet advocate-type websites get attacked by the legal teams representing products that don't like being named as possible source contributors to canine seizures. For my own story, I am just calling out what doesn't work for our environment and my specific situation. It is important to note that while Banner has had reactions to these products other dogs do not. I gladly share my experiences, and if it helps someone control their dog's seizures, I'm all for telling my story. It's such an emotionally draining, heart-breaking experience, and it really turns your life upside down when a pet that trusts you implicitly for its care, is suffering. Finding and eliminating your pet's personal triggers gives you control back, and the hope that their system eventually can overcome what set them off in the first place.

Epilogue

On March 29th, not long after writing the above article, we lost our battle with seizures. I had been away on a three-day business trip, and on Saturday, took a mid-morning nap to recover. I was awakened to a shaking bed. Not knowing what Banner may have gotten into while I was away, I was not prepared for how serious this one was. Two months earlier, Banner had experienced a broken toe nail, for which the vet prescribed an antibiotic. After one day's dose, he had had the worst seizure to date. Much longer than the typical two minutes, and when he finally came out of it, it took him three hours to recover during the post-ictal phase, not the typical 10-15 minutes. I ceased the medication immediately, and he stayed seizure free for a couple of months.

Flash forward to the 29th—this one was worse. I kept my eye on the clock, and by the time I realized he wasn't coming out of this, I knew it was going to be too late to save him. We rushed him to emergency as quickly as we could, but that was 15 additional minutes where he was seizing in the back of my SUV. The details at the vet are gruesome and tough to relive. His temperature had spiked beyond the 109° that a thermometer could read. His brain was so far gone that he could not thermo-regulate. They placed every ice pack they could gather around his body. His eyes were unresponsive to light, and despite the major dose of propofol, he would not stop seizing. The young vet said that if she were able to stabilize him, he would very likely be in a seriously brain damaged condition, and it would take months of hospitalization to treat his crackling lungs.

I thought of all the chemicals that surrounded him in that place, and knew he'd never make it. I don't know what could have possibly happened in the three days I was gone.

Whatever he got into, could have possibly been introduced after I got home. We'll never know. But once you have accepted that your dog has environmental seizures, you know that whatever caused the last one, was because you were unable to protect him.

I can see how people want to just believe it is epilepsy (idiopathic, which means "unknown cause"). That absolves you. But in my case, I had come to know that there was some trigger in his environment that I was unable to protect him from, and I will forever be haunted by the "what-ifs" and "if-onlys." We tried, so very hard, and we were successful at keeping the seizures at bay for almost six years of his life, less the 20 days that he had one. Even after he has been gone now for nine weeks, I still can't bring myself to allow chemicals in my house. I can't paint my toenails. I can't allow new potted plants with dreaded fertilizer in the soil, onto my porch. While the story doesn't end well, I don't want it to diminish the message that I am trying to make, which is that there are ways to cut down the toxic environmental triggers. Doing the best that you can do for your pet is all they ask of you.

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