

Storm Phobia in Dogs

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Case Summary

Milo, a 6-year-old, neutered, mixed Chihuahua-dachshund (ie, Chiweenie), presented for trembling, hypersalivation, whining, and hiding during storms while the owners were home. Additional clinical signs included urination and defecation when he was home alone during a storm.

At age 3, Milo started showing mild signs (ie, trembling, hiding), which progressed in severity. When the owners were home, they tried giving him food-stuffed toys, comforting him, and allowing him to hide; when they were gone, they confined him to a crate. Nothing had helped reduce his fear or panic during a storm.



Milo could be left alone in the house without any signs of fear when there were no storms. He also did not panic during fireworks displays.

Milo was up-to-date on vaccinations and monthly heartworm and flea and tick preventives.

Behaviors should be recorded objectively, like clinical signs for any body system.

Follow these steps for patients with suspected storm phobia (ie, irrational fear of storms).

1 Behavioral Evaluation

Assessment of a storm phobia patient in the practice should involve evaluation of:

- Body language (eg, does the patient indicate fear, anxiety, stress, or relaxation?)
- Interest in exploring surroundings
- Interaction with the veterinary team
- Mentation, including whether the patient is bright, alert, and responsive (BAR)

Behaviors should be recorded objectively, without assessment, like clinical signs for any body system.

2 Physical Examination & Laboratory Tests

The veterinary team should perform a physical examination, complete blood count (CBC), serum chemistry profile, total thyroxine (TT₄), and urinalysis. (See **Milo's Behavioral & Physical Evaluations & Results.**)

Resource

- Overall K. *Manual of Clinical Behavioral Medicine for Dogs and Cats*. St. Louis, MO: Elsevier; 2013.

3 Signs & Differential Diagnoses

Patients generally exhibit signs of hypersalivation, whining, trembling, hiding, urination, and defecation during storms. The differential diagnoses include:

- Cognitive dysfunction
- Frustration-related behaviors
- Incomplete housetraining

- Noise phobia
- Separation-related disorders
- Storm phobia

4 Treatment

Core components of a treatment plan for storm phobia patients can include:

- Counterconditioning during storms (eg, pairing a positive with

Milo's Behavioral & Physical Evaluations & Results

BASELINE BODY LANGUAGE IN THE EXAMINATION ROOM

Milo's body language during the first 30 minutes included:

- Ears held in neutral position or forward
- Pupils of normal size for ambient light
- Relaxed stance and musculature
- Soft mouth, with mandible hanging slightly open
- Tail at back level, softly wagging
- 4 legs under the body, with hind legs not stretched back, and tail wagging at spine level when offered freeze-dried chicken treats by a team member; eating from the hands of the veterinary nurse and the veterinarian within 5 minutes

STORM SOUND-INDUCED BODY LANGUAGE

Milo was given 3 sound tests, each 20 seconds long, and allowed 1 minute to recover each time. The first was storm sounds from Sounds Scary and iTunes, played at level-2 volume on an iPad. Next, sounds of rain were played

without sounds of thunder, and third, a recording was played with the sounds of rain and thunder. The dog recovered to his baseline body language in 45 seconds in all 3 trials. Responses included:

- Attempts to hide behind the owner's legs
- Dilated pupils
- Panting
- Tail down
- Trembling

FIREWORK SOUND-INDUCED BODY LANGUAGE

Firework sounds from Sounds Scary were played for 20 seconds at level-2 volume on an iPad. Milo responded with:

- Relaxation identical to baseline body language and no discernible reaction

PHYSICAL EXAMINATION & LABORATORY FINDINGS

Physical examination and CBC, serum chemistry profile, TT₄, and urinalysis were unremarkable.

a negative event to change the patient's emotional state)

- Creation of a safe zone
- Medication, daily and as-needed (PRN)
- Relaxation conditioning (eg, teaching the patient to relax on cue to induce relaxation during stressful events such as storms)

Provide immediate relief with a PRN anxiolytic medication (eg, benzodiazepine [diazepam], serotonin antagonist and reuptake inhibitor [trazodone]). Medication, depending on which is chosen, should be given 30 to 120 minutes before the storm.

Dogs with storm phobia often need a daily medication, plus a faster-acting anxiolytic medication PRN. Dogs requiring PRN medications whose owners will be away from home for lengthy periods should be given a daily medication and the PRN medication. Daily medication may provide longer-lasting anti-anxiety coverage if the owners cannot administer a faster-acting anti-anxiety medication before the storm. Fluoxetine, sertraline, and clomipramine are commonly used as daily medications.¹ (See **Milo's Diagnosis, Treatment Plan, & Outcome.**)

5 Outcome
With well-timed medication administration, counterconditioning, and relaxation techniques, many dogs are able to overcome their phobia and weather storms without incident.

Milo's Diagnosis, Treatment Plan, & Outcome

DIAGNOSIS

Because Milo showed no signs of fear, anxiety, or stress when the owners were preparing to leave or when stormy weather was not a factor, separation-related disorders were ruled out. Frustration-related behaviors were also ruled out because clinical signs of frustration with his environment (eg, destruction or damage due to lack of exercise or enrichment) were not apparent whether the owners were present or not. Milo showed no fear of other sounds, ruling out noise phobia. He was well housetrained with no accidents reported except during thunderstorms, ruling out incomplete housetraining.

CLINICAL TREATMENT

Milo was prescribed diazepam, 1.0 mg/kg PO, as a fast-acting PRN medication. Effects of diazepam include anxiolysis, increased appetite, muscle relaxation, and slight sedation. To help ensure the medication would be administered at least 1 hour before a storm, the following dosing instructions were given to the owners:

- Administer 1 hour before a storm based on the weather forecast and a 20% or greater chance of rain.
- Administer just before leaving the house if a storm or a 20% or greater chance of rain is forecast while Milo would be alone.

OTHER RECOMMENDATIONS FOR MILO

- Discontinue confinement unless he is comfortable in the crate.
- Use doggy daycare/day boarding during initial behavior modification and medication testing.
- Countercondition with food toys to lower arousal and fear and distract Milo during storms.
- Provide a safe zone.
- Provide relaxation exercises.

OUTCOME

Milo's owner was able to go home at lunchtime so Milo was not left alone for more than 6 hours. Because he did not have any concurrent behavioral diagnoses, PRN medication was sufficient. Milo also was conditioned to stay on a mat that served as a safe zone during storms when the owners, who were instructed how to prepare the safe zone, were not at home. (See **Learning to Stay in a Safe Zone**, page 37).

Reference

1. Crowell Davis S, et al. Use of clomipramine, alprazolam and behavior modification for treatment of storm phobia in dogs. *JAVMA*. 2003;222:744,748.

Signs Associated with Storm Phobia

Storm phobia (ie, irrational fear of storms) may be displayed regardless of the owners' presence. In general, middle-aged dogs are initially presented for storm phobia; however, signs of anxiety or fear in response to storms may be first exhibited at a younger age, but owners may not think the signs severe enough to seek help.

Clinical signs may be exhibited in response to any of the stimuli that precede storms (eg, barometric pressure, wind changes, dark clouds, lightning, thunder, rain).

Clinical signs may include but are not limited to:

- Attempting escape
- Destruction
- Elimination
- Hiding
- Hypersalivation
- Pacing
- Panting
- Seeking attention
- Seeking height
- Whining

Team Education

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Human–Animal Bond

Storm phobia, not uncommon in dogs, poses a risk to the human–animal bond and can cause physical harm to the dog and emotional suffering for both pet and owner if untreated.¹ The entire veterinary team should be able to identify potential signs of storm phobia, understand effective treatment is possible, and be able to provide clients with the necessary support. (See **Signs Associated with Storm Phobia**.)

When a patient presents with suspected storm phobia, veterinary team members must not only look for behavioral signs but also listen for signs of a weakening human–animal bond. Dogs with storm phobia, like those with other behavior problems, are at higher risk for relinquishment, abandonment, or rehoming. Clients may state openly they are considering these options or more subtly indicate their frustration and decreased tolerance. An emergency consultation may be necessary to provide the patient and client with immediate relief, and boarding or hospitalization may be required while medication therapy is instituted.

Concurrent Ailments

Team members should also be aware that storm-phobic dogs may suffer from concurrent behavior ailments (eg, separation anxiety, aggression, compulsive disorders) and may need a referral to a board-certified veterinary behaviorist. Storm phobic dogs also may suffer from additional noise phobias (eg, sirens, construction sounds, fireworks), which can be treated similarly to storm phobia (eg, behavior conditioning, environmental management, anti-anxiety therapeutics).

Worse, Not Better

Storm phobia and other behavior problems often worsen over time because dogs become sensitized through repeated negative exposure

Resources

- Shaw J, Martin D, eds. *Canine and Feline Behavior for Veterinary Technicians and Nurses*. Ames, IA: Wiley-Blackwell; 2015.
- Society of Veterinary Behavior Technicians: <http://svbt.org>
- Tynes W. Managing storm phobias with difficult patients—and clients. *Vet Med*. 2012;107(5):206-207.
- Veterinary Support Personnel Network: <http://vspn.org>

Visit veterinaryteambrief.com/storm-phobic-pets/client-script for a **Sample Script to Counsel Clients with Storm-Phobic Pets**.

and demonstrate increasing signs of frequency or intensity.² Punishment also can worsen behavior problems. Anxiety behaviors are the result of sympathetic nervous system activation, which is beyond the dog's conscious control, and being punished by an owner adds to the dog's fear and anxiety but does not provide new coping skills.

Screening for behavioral health, which can be included in routine wellness care, helps ensure early intervention before the patient's problem worsens.³ Veterinary professionals should access available behavior resources (see **Resources**, pages 34 and 36), and become an educated, skilled team member who can use his or her knowledge to

communicate to clients that help and solutions are available, and maximize the health of these patients in the practice. ■

References

1. McCobb EC, Brown EA, Damiani K, Dodman NH. Thunderstorm phobia in dogs: an internet survey of 69 cases. *J Am Anim Hosp Assoc.* 2001;37(4):319-324.
2. Overall KL. Noise reactivities and phobias in dogs: behavior modification strategies. *Dvm360 Magazine.* 2010;41(12). <http://veterinarynews.dvm360.com/noise-reactivities-and-phobias-dogs-behavior-modification-strategies>. Published December 1, 2010. Accessed June 16, 2016.
3. Luescher AU, Flannigan G, Frank D, Mertens P. The role and responsibilities of behavior technicians in behavioral treatment and therapy. *J Vet Behav.* 2007;2(1):23-25.

See also **Top 5 Aids to Calm Anxious Pets** and **Behavior Problems: Helping Clients Help Their Pets** at veterinaryteambrief.com/top-5-aids and veterinaryteambrief.com/helping-clients-help-pets, respectively.

Learning to Stay in a Safe Zone

- Teach the dog to relax on a mat using positive reinforcement techniques such as luring, capturing, and shaping.
 - **Luring:** Hands-free prompting involving a reward to guide the dog into the desired position or behavior
 - **Capturing:** Rewarding an animal for a spontaneous behavior when the trainer sees the behavior
 - **Shaping:** Building a new behavior by selectively reinforcing small approximations of the desired behavior; incremental steps are rewarded, previous approximations are extinguished, and the desired behavior is achieved
- Reward the dog with praise and a treat when he lies on the mat and gradually learns relaxing postures (eg, lowering his head, breathing slowly, lying with his hind end to the side, lying on his side).
- When a storm is imminent, the dog should be given medication, directed to his mat in the safe zone, and rewarded with a long-lasting food puzzle or chew bone.

See veterinaryteambrief.com/storm-phobia for more details on Learning to Stay in a Safe Zone.

TEAM TAKEAWAYS:



Veterinarians: Pet owners might not seek treatment until their dog's fears have escalated. Pinpointing the specific cause(s) of the dog's undesired behaviors during a behavior assessment and ruling out any underlying medical issues can help identify effective treatment strategies.

Nursing Team: The veterinary nurse is the team member most involved in implementing a behavior treatment plan. Spend time teaching pet owners how to create a safe zone and practice relaxation exercises, and follow up regularly with owners to assess progress or any setbacks in treatment.

Client Care Team: Storm phobia can be very stressful for both dogs and their owners. Offer ongoing support to families as they work through treatment, and identify any indicators that the human-animal bond may be suffering.