# Seizure-Precipitating Factors in Epileptic Dogs

Erin Akin, DVM, DACVIM (Neurology)

Bush Veterinary Neurology Service Woodstock, Georgia

### In the Literature

Forsgård JA, Metsähonkala L, Kiviranta AM, et al. Seizure-precipitating factors in dogs with idiopathic epilepsy. *J Vet Intern Med.* 2019;33(2):701-707.

## FROM THE PAGE ...

Epilepsy is the most common chronic neurologic disorder in dogs.¹ Humans with epilepsy frequently report precipitating factors associated with their seizures, which are numerous and varied and have included stress, difficulty sleeping, infectious disease, hormonal factors, and missing medication, among others.² In dogs, estrus has a reported association with cluster seizures, with intact female dogs clustering during estrus and for ≤1 to 3 months after.³ Other potential seizure-precipitating factors in canine epileptics include visits to the veterinary clinic, groomer, and/or boarding facility.⁴

In this study, 50 owners of dogs with idiopathic epilepsy were surveyed via an openended question followed by a checklist to identify seizure-precipitating factors and their prevalence in canine epileptics. When asked the open-ended question, 58% of owners reported at least one seizure-precipitating factor; stress, excitement, and hot weather were most frequently identified through this method. When selecting from the checklist, however, 74% of owners recognized at least one seizure-precipitating factor. The number of factors identified ranged from 1 to 9 per dog and included visitors to the home, altered sleep patterns, unfamiliar places, changes in lifestyle or routine, and weather. No owner reported vaccinations or dog shows as a precipitating factor.

A seizure occurred during or immediately following the precipitating factor in 19% of dogs with an identified precipitating factor, within 24 hours of the precipitating factor in 35%, and within 48 hours of the precipitating factor in 4%. In 11% of dogs, the precipitating factor only affected seizure frequency. Most dogs had both precipitated and unprecipitated seizures. Dogs with focal seizures had more precipitating factors identified than those with generalized seizures.

Knowledge regarding the relationship between epileptic seizures and seizure-precipitating factors in canine epileptics is limited. Further studies are needed to identify seizure-precipitating factors, their prevalence, and their influence on seizures in epileptic dogs.

### ... TO YOUR PATIENTS

Key pearls to put into practice:

- Seizure-precipitating factors are common in dogs with epilepsy and most commonly include stressful situations, lifestyle changes, and alterations in sleep patterns.
- When treating a dog diagnosed with epilepsy, clinicians should discuss seizure-precipitating factors with the owner. Attempts to minimize these factors should be attempted when possible to achieve better treatment outcomes.
- Precipitating factors do not always immediately precede a seizure; the seizure may follow within 24 to 48 hours after the precipitating factor. Thus, hospitalizing a patient for a minimum of 24 seizure-free hours may be beneficial.

# References

- Ghormley TM, Feldman DG, Cook JR Jr. Epilepsy in dogs five years of age and older: 99 cases (2006-2011). J Am Vet Med Assoc. 2015;246(4):447-450.
- Balamurugan E, Aggarwal M, Lamba A, Dang N, Tripathi M. Perceived trigger factors of seizures in persons with epilepsy. Seizure. 2013;22(9):743-747.
- Van Meervenne SAE, Volk HA, Van Ham LML. Association between estrus and onset of seizures in dogs with idiopathic epilepsy. J Vet Intern Med. 2015;29(1):251-253.
- Shell L, Scariano R, Rishniw M. Features of stimulus-specific seizures in dogs with reflex epilepsy: 43 cases (2000-2014). J Am Vet Med Assoc. 2017;250(1):75-78.