

## Survival of Epileptic Dogs

Long-term outcome of dogs with epilepsy is poorly documented. This study investigated survival and prognosis in client-owned dogs with idiopathic epilepsy ( $n = 78$ ) or with epilepsy with a known intracranial cause ( $n = 24$ ). Selected risk factors that may influence survival time and duration were investigated. The study was retrospective and hospital-based and included follow-up questionnaires given to owners via telephone. Questions were asked about the dog's epilepsy and treatment status, whether the patient was still alive, and, when applicable, cause of death.

Results indicated that dogs with idiopathic epilepsy had a median life span of 9.2 years, close to that reported for dogs in general, compared with 5.8 years for dogs with known intracranial disease. Neutered male dogs with idiopathic epilepsy had a significantly shorter life span than did intact males; it was hypothesized that testosterone may possess anticonvulsant properties.

Dogs with epilepsy secondary to inflammatory disease had longer survival times than dogs with epilepsy caused by neoplasia, malformation, or hemorrhagic stroke.

Therapy with 2 anti-epileptic drugs did not negatively impact survival time. Death/euthanasia related to epilepsy occurred in 52% of dogs, many with histories of cluster seizures and/or status epilepticus. Data from this study may influence how clinicians advise owners about prognosis in epileptic dogs, although certain breed profiles with specific epilepsy phenotypes may not have been represented.

### Commentary

This study helps support what veterinary neurologists have been telling clients for years—namely, that idiopathic epilepsy typically does not shorten the patient's life span. Although a previous study found a significantly shorter life span in dogs with epilepsy-related death,<sup>1</sup> this study found a similar life span as compared with the general canine population. The original study was performed in the late 1990s. It is possible that the longer survival time in this study is related to increased importance of the human-animal bond and

to tolerance of the disorder, its treatment, and associated adverse effects of treatment, although this has not been critically analyzed.

The authors also found that the need to use more than 1 antiepileptic drug (AED) was not linked to poor prognosis. In this study, only 1 dog was on more than 2 AEDs; many epileptic dogs treated by veterinary neurologists are on 3 or more. It would be interesting to know whether specific AEDs are associated with shorter life span and whether patients given higher numbers of AEDs had any difference in life span and epilepsy-associated death. To my knowledge, there are no studies that investigate or describe the actual causes of epilepsy-related death (eg, owner financial constraints, adverse events associated with medications, quality-of-life issues for owners and pets).—*Mark Troxel, DVM, DACVIM (Neurology), Massachusetts Veterinary Referral Hospital*

### Reference

1. Berendt M, Gredal H, Ersbøll AK, Alving J. Premature death, risk factors, and life patterns in dogs with epilepsy. *JVIM*. 2007;21(4):754-759.

### Source

Fredse N, Koch BC, Toft N, Berendt M. Risk factors for survival in a university hospital population of dogs with epilepsy. *JVIM*. 2014;28(6):1782-1788.

## Therapeutics Research Note: Imepitoin Trial

Imepitoin is a GABA-mimetic drug previously shown to have anticonvulsive activity in a canine seizure model. In this multicenter randomized trial, efficacy of imepitoin was comparable to phenobarbital in 226 client-owned dogs newly diagnosed with epilepsy. Adverse events (eg, sedation, polydipsia, increased appetite) were more common with pheno-

barbital than with imepitoin, and elevation in liver enzymes occurred only in the phenobarbital group. Safety of imepitoin was further evaluated in healthy beagles. Infrequent mild clinical signs of toxicity occurred at doses of 150 mg/kg twice a day; the no observable effect level (NOEL) was 90 mg/kg twice a day, which is 3x the recommended therapeutic

dose. The authors concluded that imepitoin is safe and effective for treating canine epilepsy.

### Source

Tipold A, Keefe TJ, Löscher W, Rundfeldt C, De Vries F. Clinical efficacy and safety of imepitoin in comparison with phenobarbital for the control of idiopathic epilepsy in dogs. *J Vet Pharmacol Ther*. 2015;38(2):160-168.