

# Dietary Supplements in Dogs with Epilepsy

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**The pharmacokinetics of anticonvulsants can be influenced by other medications and diets<sup>4</sup>; thus, diets of dogs on chronic anticonvulsant medications should vary as little as possible.**

## In the Literature

Berk BA, Packer RMA, Law TH, Volk HA. Investigating owner use of dietary supplements in dogs with idiopathic epilepsy. *Res Vet Sci.* 2018;119:276-284.

## FROM THE PAGE ...

Epilepsy is the most common chronic neurologic disorder in dogs.<sup>1</sup> Lifelong administration of anticonvulsant medications is the current mainstay of therapy,<sup>2</sup> but diet has been increasingly recognized as potentially influencing seizures and behavior in dogs with epilepsy.<sup>3</sup> In addition to diet, dietary supplements (eg, fatty acids) are gaining popularity among pet owners and are being explored in animal models. This article, based on a web survey, investigated owner use of dietary supplements in dogs with idiopathic epilepsy.

Of the 297 valid owner responses, 67.7% of owners altered their dog's diet after their dog was diagnosed with idiopathic epilepsy. Less than one-third (27.6%) of these had consulted a clinician beforehand. Almost half of the respondents (45.8%) reported giving dietary supplements, with coconut oil and fish or fish-derived oil being the most common. Other supplements included milk thistle, cannabis, vitamin B12, glucosamine/chondroitin sulfate, taurine, dried herbs, and homeopathic remedies. Owners most commonly sought advice online for information on dietary supplements; less than one-fifth of owners sought advice from a clinician. Owners reported believing dietary supplements had the potential benefits of decreasing seizure frequency, decreasing seizure severity, and/or protecting their dogs from the potential side effects of anticonvulsant medications.

The pharmacokinetics of anticonvulsants can be influenced by other medications and diets<sup>4</sup>; thus, diets of dogs on chronic anticonvulsant medications should vary as little as possible. Dietary supplements may also affect the disposition of anticonvulsants, making an understanding and awareness of safe combinations of anticonvulsant medications and supplements imperative.

The constituents and metabolites of medium-chain triglyceride oils (eg, coconut oil) are believed to have antiepileptic effects. For example, decanoic acid was recently found to have an inhibitory effect on excitatory neurotransmitters.<sup>5</sup> Ketogenic diets have been shown to reduce seizure frequency in humans,<sup>6-9</sup> but, although used in dogs, their anticonvulsant effects in this species needs further study. Other popular supplements such as milk thistle, cannabis, and vitamin B also require further research in veterinary medicine.

### ... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** This study showed that surveyed owners sought clinician consultation for information on diets and dietary supplements less than half of the time. This demonstrates that clinicians need to actively engage with owners in discussion about epilepsy management, including not only long-term anti-convulsant medications but nutrition and dietary supplements as well.
- 2** In epilepsy cases, the veterinary team should include questions about diet and dietary supplement use when acquiring patient history.
- 3** The potential interactions between dietary supplements and anticonvulsant medications are still being investigated. Both the clinician and pet owner must be aware that some supplements, although touted as providing health benefits, still lack conclusive scientific evidence on their actual effects.

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