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# Dilated Cardiomyopathy & Diet

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## In the Literature

Adin D, DeFrancesco TC, Keene B, et al. Echocardiographic phenotype of canine dilated cardiomyopathy differs based on diet type. *J Vet Cardiol.* 2019;21:1-9.

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## FROM THE PAGE ...

This study\* retrospectively reviewed medical records of dogs diagnosed with dilated cardiomyopathy (DCM) over a 40-month period at an academic institution. Records were included only if the food brand and variety were adequately documented and there was an echocardiographic diagnosis of DCM.

Dogs were grouped into grain-free (GF) or grain-based (GB) diet groups based on label ingredients as reported by the manufacturer. Diets were categorized as GB if wheat, rice, oats, cornmeal, barley, bulgur, millet, rye, and/or spelt were listed or as GF if none of these grain products were listed. The GF group was further subdivided into 2 categories: those eating the most commonly fed GF diet (GF-1;  $n = 14$ ) and those eating one of 12 other GF diets (GF-o;  $n = 22$ ). Additional information evaluated from the records included echocardiographic variables, presence or absence of concurrent congestive heart failure, results of ancillary testing (eg, whole blood or plasma taurine, plasma L-carnitine, blood selenium, infectious disease testing, necropsy [if available]), and information regarding diet change, if performed.

A total of 91 patients were included. There was a lower median weight for GF-1 dogs as compared with GB dogs. Dogs eating GF diets (both GF-1 and GF-o) had greater left ventricular diastolic measurements than dogs eating GB diets. Most dogs eating any GF diet received taurine supplementation (regardless of taurine level results) and a diet change; 7 GF-fed dogs (GF-1, 6; GF-o, 1) were later re-evaluated and were shown to have clinical and echocardiographic improvement. No GF-fed dogs experienced new-onset or recurrent heart failure after diet change.

The authors concluded that the study results provide compelling evidence that a nutritionally based, partially reversible cardiomyopathy occurs in some dogs fed GF diets from smaller brands and is likely associated with more than just an omission of grains.

\*The primary author of this study has received/acknowledges research support from Nestlé Purina PetCare.

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## ... TO YOUR PATIENTS

Key pearls to put into practice:

- 1 Until more is known regarding the specific cause of diet-associated cardiomyopathy, the best practice is to recommend commercial diets that meet Association of American Feed Control Officials standards and that have undergone feeding trials with formulations confirmed and analyzed based on WSAVA recommendations.<sup>1</sup> Thus, boutique companies, exotic ingredients, and grain-free diets—recently termed BEG diets<sup>2</sup>—should be avoided.
- 2 Taurine levels should be evaluated in any patient diagnosed with DCM. Another study has subsequently reported an association between golden retrievers fed GF or legume-rich diets and taurine deficiency.<sup>3</sup>
- 3 Taurine supplementation, raw diets, and home-prepared diets are not a good alternative to BEG diets. If a patient requires a home-prepared diet for a medical reason or due to owner choice, a board-certified veterinary nutrition specialist should be consulted (see **Suggested Reading**).

## References

1. World Small Animal Veterinary Association. WSAVA global nutrition guidelines. World Small Animal Veterinary Association website. <https://www.wsava.org/guidelines/global-nutrition-guidelines>. Accessed May 22, 2019.
2. Freeman LM. It's not just grain-free: an update on diet-associated dilated cardiomyopathy. Cummings Veterinary Medical Center at Tufts University Clinical Nutrition Service website. <http://vetnutrition.tufts.edu/2018/11/dcm-update>. Published November 29, 2018. Accessed May 22, 2019.
3. Kaplan JL, Stern JA, Fascetti AJ, et al. Taurine deficiency and dilated cardiomyopathy in golden retrievers fed commercial diets. *PLoS One*. 2018;13(12):e0209112.

## Suggested Reading

American College of Veterinary Nutrition. American College of Veterinary Nutrition website. <http://www.acvn.org>. Accessed May 22, 2019.

## FOR MORE

Find a related article on dilated cardiomyopathy and grain-free diets at [cliniciansbrief.com/article/respiratory-distress-inappetence-border-collie](http://cliniciansbrief.com/article/respiratory-distress-inappetence-border-collie)

**entyce**<sup>®</sup>  
(capromorelin oral solution)

30 mg/mL

**BRIEF SUMMARY:** Before using this product, please consult the full product insert for more information.

**For oral use in dogs only**

**Appetite Stimulant**

**Caution:** Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

**Description:** ENTyce<sup>®</sup> (capromorelin oral solution) is a selective ghrelin receptor agonist that binds to receptors and affects signaling in the hypothalamus to cause appetite stimulation and binds to the growth hormone secretagogue receptor in the pituitary gland to increase growth hormone secretion.

**Indication:** ENTyce (capromorelin oral solution) is indicated for appetite stimulation in dogs.

**Contraindications:** ENTyce should not be used in dogs that have a hypersensitivity to capromorelin.

**Warnings:** Not for use in humans. Keep this and all medications out of reach of children and pets. Consult a physician in case of accidental ingestion by humans. **For use in dogs only**

**Precautions:** Use with caution in dogs with hepatic dysfunction. ENTyce is metabolized by CYP3A4 and CYP3A5 enzymes (See Clinical Pharmacology). Use with caution in dogs with renal insufficiency. ENTyce is excreted approximately 37% in urine and 62% in feces (See Adverse Reactions and Clinical Pharmacology).

The safe use of ENTyce has not been evaluated in dogs used for breeding or pregnant or lactating bitches.

**Adverse Reactions:** Field safety was evaluated in 244 dogs. The most common adverse reactions were diarrhea and vomiting. Of the dogs that received ENTyce (n = 171), 12 experienced diarrhea and 11 experienced vomiting. Of the dogs treated with placebo (n = 73), 5 experienced diarrhea and 4 experienced vomiting.

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NADA 141-457, Approved by FDA

US Patent: 6,673,929

US Patent: 9,700,591

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