



What's all the hype about grain-free diets and heart disease?

Much information has been circulated on the internet and other in sources regarding grain-free diets and associated heart disease in dogs. The recent announcement from the US FDA alerting pet owners and veterinarians about reports of Dilated Cardiomyopathy (DCM) in dogs eating pet foods containing peas, lentils, other legume seeds, or other exotic ingredients has raised questions among the public. We hope to address the most current understanding of the problem and the most commonly asked questions here. While we do not yet have all the answers, we do have some information and recommendations to share with veterinarians, clients, and breeders.

What we know:

Over the past 8-10 years there have been increased reports of DCM in dogs that are eating grain-free, exotic-ingredient, vegetarian/vegan, or home-prepared diets. This increase has appeared to have correlated with the rapid expansion in unique and trendy pet foods (boutique diets). While there has historically been some evidence of diet-responsive DCM in some breeds (Golden Retrievers, Cocker Spaniels, Newfoundlands, Irish wolfhounds, Saint Bernards), the incidence in these breeds has appeared to increase when eating grain-free, vegetarian/vegan, or exotic-ingredient foods. In other cases, the breeds of dogs developing DCM appear unusual, meaning that the dog does not have a breed history of an inherited type of DCM and/or the dog may be very young.

KEY POINTS:

- Taurine deficiency may be a factor in the unique foods, but it is unclear whether taurine deficiency is a cause or merely an association with yet unknown other dietary components.
- Some breeds may be more sensitive to changes in nutritional factors (such as taurine). This may suggest breed-related differences in metabolism.
- Dogs with DCM that have been eating the diets described above may reverse the condition (if caught early) or respond favorably to a change in diet and taurine supplementation, regardless of normal taurine blood levels.

What we recommend:

- If your dog does not have a medical condition requiring alterations in specific dietary ingredients, we recommend the owner feed a diet made by a well-established manufacturer that contains standard ingredients (e.g. chicken, beef, rice, corn, and wheat).
- If your dog has been diagnosed with DCM and is eating a diet with non-standard ingredients, we recommend changing the diet as above and measuring whole blood and plasma taurine levels.
 - If taurine levels are low or low end of normal range, dietary supplementation of taurine should be added.
 - Follow-up echocardiography should be performed in 3, 6, and 12 months to assess for improvement in heart function.
 - Screening echocardiography for DCM should be performed in all dogs of the same household eating the non-standard diet.
- If your dog does have a medical condition that requires a non-standard diet, we suggest a diet made by a well-established manufacturer that has undergone extensive Association of American Feed Control Officials (AAFCO) feeding trials. Your veterinarian can help you choose an appropriate diet for your dog's medical condition.

- Owners of dogs with possible diet-associated DCM should save samples (and product labels) of all dietary components they are currently feeding, including not only the main food itself but also all treats, chews, and supplements.
- With complete diet information in hand, the veterinarian or owner should report the case to the FDA, which can be done either online or by telephone as this will help the agency identify possible underlying causes as quickly as possible.

Web site: <https://www.fda.gov/AnimalVeterinary/SafetyHealth/ReportaProblem/>

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Related Publications:

Kaplan JL, Stern JA, Fascetti AJ, et al. Taurine deficiency and dilated cardiomyopathy in golden retrievers fed commercial diets. *PLoS One*. 2018 Dec 13;13(12):e0209112. doi: 10.1371/journal.pone.0209112.

Mansilla WD, Marinangeli CPF, Ekenstedt KJ, et al. The association between pulse ingredients and canine dilated cardiomyopathy: addressing the knowledge gaps before establishing causation. *J Anim Sci*. 2019 Jan 7. doi: 10.1093/jas/sky488.

Freeman LM, Stern JA, Fries R, et al. Diet-associated dilated cardiomyopathy in dogs: what do we know? *J Am Vet Med Assoc*. 2018 Dec 1;253(11):1390-1394. doi: 10.2460/javma.253.11.1390.