

## **Dilated Cardiomyopathy (DCM) & Grain-Free/"Boutique" Diets**

### **What is dilated cardiomyopathy?**

Canine dilated cardiomyopathy (DCM) is a primary disease of cardiac muscle that results in a decreased ability of the heart to generate pressure to pump blood through the vascular system. Certain breeds are predisposed to DCM.

### **What are the clinical signs of DCM?**

DCM is characterized by dilation of the ventricles with ventricular wall thinning. In many cases, dilation of all four chambers of the heart is seen. The ability of the heart to serve as a pump is diminished, and clinical signs of DCM occur secondary to either decreased delivery of oxygenated blood to the body (lethargy, weakness, weight loss, collapse), or to congestion of blood in the lungs (coughing, increased respiratory rate and/or effort, abdominal distention) or both. Cardiac dilation, decreased oxygen supply, and increased oxygen demand secondary to elevated heart rate and ventricular wall stress may predispose to the development of cardiac arrhythmias arising in either the atria (atrial fibrillation, supraventricular tachycardia) or in the ventricles (ventricular premature complexes, ventricular tachycardia). Arrhythmias may predispose affected dogs to sudden death.

### **How is DCM diagnosed?**

DCM is diagnosed by echocardiography, which demonstrates the chamber dilation and indices of decreased pump function characteristic of the disease. Thoracic radiography is useful to evaluate pulmonary (lung) tissue and vessels, and may show evidence of fluid accumulation in the lungs (pulmonary edema) or around the lungs (pleural effusion). Electrocardiography may be used to characterize heart rhythm and to rule out arrhythmias; and in some cases, a 24 hour electrocardiogram may be recommended to more accurately characterize cardiac rhythm.

### **How is DCM treated?**

Treatment of DCM is directed at improving systolic (pump) function of the heart, dilating the peripheral blood vessels to decrease ventricular workload, eliminating pulmonary congestion if present, and controlling heart rate and cardiac arrhythmias if present. These treatment goals are addressed by the administration of cardiac medications, which may be delivered by injection in emergent situations, or orally in patients that are more stable.

### **What is the prognosis if my dog is diagnosed with DCM?**

Canine DCM can be a devastating disease, and the prognosis for dogs with DCM is variable depending upon breed and status at presentation. The prognosis for Doberman Pinschers with DCM, for example, is less favorable than in other breeds, while DCM in Cocker Spaniels may be relatively slowly progressive. Patients that present in congestive heart failure generally have a worse prognosis than those that are not in congestive heart failure at presentation. Irrespective of this, medical therapy may provide significant improvement in lifespan and quality of life in affected dogs.

### **How is a grain-free or "boutique" diet related to dilated cardiomyopathy?**

The FDA is investigating a possible link between grain-free & boutique diets and DCM in dogs. In recent years more reports have been filed regarding dogs diagnosed with DCM that are not breeds prone to the disease- and it has been noted in these cases the dogs are fed diets with unusual carbohydrate sources (potatoes, lentils, peas, and other legumes).

The FDA is currently recommending to owners that feed their dogs a grain-free or "boutique" diet to consult with their family veterinarian to discuss transitioning to a different food.

Grain-free diets have become popular in recent years as they are advertised as healthier alternatives to brand name diets, in addition to being better for dogs with allergies. In truth, less than 1% of pets with food allergies are allergic to grains. Instead they are typically allergic to the protein in the diet (usually chicken or pork).

More recent studies are also showing a trend of "boutique" diets in general being closely related to DCM.

Want to read more about DCM and grain-free/"boutique" diets? We recommend the following resources:

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### U.S. Food and Drug Administration's Center for Veterinary Medicine and the Veterinary Laboratory Investigation and Response Network

Article:

<https://www.fda.gov/news-events/fda-brief/fda-brief-fda-investigates-cases-canine-heart-disease-potentially-linked-diet>

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### The American Kennel Club

Article:

<https://www.akc.org/expert-advice/nutrition/what-you-need-to-know-about-the-fdas-grain-free-diet-alert/>

"In the Dec. 1 version of the Journal of the American Veterinary Medical Association, Lisa M. Freeman, DVM, Ph.D., DACVN, provided an update to the research on DCM and emphasized the issue is not just grain-free diets. She calls the suspected diets "BEG" diets (boutique companies, exotic ingredients, or grain-free diets). The apparent link between BEG diets and DCM may be due to ingredients used to replace grains in grain-free diets, such as lentils or chickpeas, but also may be due to other common ingredients commonly found in BEG diets, such as exotic meats, vegetables, and fruits," Freeman wrote."

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### Tufts University, Clinical Nutrition Service

Article: <https://vetnutrition.tufts.edu/2018/11/dcm-update/>

"It's unlikely that most dogs eating a BEG diet will develop DCM. However, given the fact that we don't yet understand why BEG diets are affecting some dogs and because DCM is a life-threatening disease, I recommend you reconsider your dog's diet until we know more. Contrary to popular belief, there are no health benefits of grain-free or exotic ingredient diets except in the rare case of food allergy. If your dog is a part of your family and you want to feed him the very best, be sure to base this important decision on more objective factors than marketing and the ingredient list."

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### The American Veterinary Medical Association

Article: <https://avmajournals.avma.org/doi/full/10.2460/javma.253.11.1390>

