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## **GRAIN-FREE DIETS AND YOUR DOG'S HEART**

*Dr. Emily Adamson*

As a pet owner, you make important decisions every day that affect your pet's health. From the moment you bring them home, you work hard to make choices that lead to a healthy, happy dog – which food they eat, how often they exercise, the toys they play with, which veterinarian you visit—the list is endless. It might be a surprise to learn that the diet your dog is currently eating could be putting them at risk for heart disease later in life, and switching their food (under the advice of your family veterinarian) might be the most important decision you make to improve their health and lifespan today.

Recent reports have stated that dogs eating boutique, exotic meat, and/or grain-free diets (also known as “BEG” diets) might be at a higher risk for developing Dilated Cardiomyopathy, also known as DCM. DCM causes the heart's chambers (especially the main pumping chambers, or ventricles) to become dilated, which causes the walls to become abnormally thin and weakened. These changes in the heart's structure lead to decreased cardiac output, or decreased forward blood flow and oxygen delivery to tissues. Dilated Cardiomyopathy is typically a disease related to genetics, and large-breed dogs (especially Great Danes and Dobermans) are breeds known to be predisposed to developing this disease. This disease is also linked to a nutritional deficiency in some dogs (Cocker Spaniels especially) and cats – diets low in taurine are the culprits in this case.

However, new research suggests that grain-free diets might also be linked to DCM in dog breeds that aren't typically seen with the disease. Further research shows that these grainfree diets contain a higher proportion of ingredients like peas, lentils, chickpeas, other legume seeds, or potatoes, which might be what's putting dogs at risk for developing DCM. The FDA received a report in 2018 from a veterinary cardiology center showing a higher rate of DCM reported in dogs consuming “diets...[that] frequently list potatoes or multiple legumes such as peas, lentils, and their protein, starch, and fiber derivatives early in the ingredient list, indicating that they are main ingredients.”<sup>1</sup> A research paper published in the *Journal of Veterinary Cardiology* in 2018 gave evidence that structural changes in the heart occur in some dogs fed “non-major brand grain free diets, and [the changes] may be associated with the factors other than the omission of grains”<sup>2</sup>. Interestingly, this study also showed that some dogs that had these changes consistent with early DCM actually improved after a diet change (meaning, their heart disease was partially reversed by changing their diet!)

What does all of this mean for you and your pet? The tricky thing about all this information is that it is very early in the research stage. Any veterinarian will agree that more research needs to be done to make better recommendations. But, based on the information we have right now, the best recommendation we can make is to avoid feeding your pet diets that list peas, lentils, chickpeas, potatoes, or other legumes as “main ingredients.” If you look at your pet's dog food bag, the top 3-5 things on the ingredient list are considered “main ingredients.” If you see those ingredients there, don't panic! Ask yourself a few questions:

- “Did my veterinarian specifically recommend this food for my dog?” If the answer is yes, you should consult with your vet before you try to change their diet.
- “Is this the only diet I've found that doesn't cause other health problems in my dog (GI upset, etc)?” If the answer is yes, you should consult with your vet before you try to change their diet.
- “Am I feeding this particular food because my friend recommended it / my breeder gave it to me / I chose it because it looked healthy for my dog?” If the answer to this question is yes, you should consider changing your dog's diet.

If you're considering changing your dog's diet, we understand that this is no easy task. There are so many options! The best thing to do is give your veterinarian a call, and work with them to get a personalized recommendation for your pet. Here are some important considerations when choosing a food:

- Consider switching to a dog food brand that meets AAFCO (Association of American Feed Control Officials) standards for a healthy dog food. All dog foods that meet these standards will have a statement on the package that specifically mentions “AAFCO” – more information about these statements can be found at: <https://talkspetfood.aaftco.org/readinglabels>
- Look for dog food brands that don't list peas, lentils, chickpeas, potatoes, or other legumes in the top 3-5 ingredients on the ingredient list.
- Avoid grain-free diets unless your veterinarian recommended one to you. This isn't to say that all grain-free foods are bad, and it certainly doesn't mean that grain-free diets cause DCM. This is to say, “we aren't 100% sure what the link is yet. To be safe, avoid these diets that are being researched in the link to DCM until we know for sure.” Very, very few dogs have a true medical need to be on a grain-free diet, so if you're not sure, consult with your family vet.
- Consider brands that are well-known in the pet food industry for having completed many research, nutritional, and safety trials to

- guarantee you're feeding the absolute best nutritional mix to your pet.
- Most importantly, ask your veterinarian! We would love to provide you with a recommendation and work with you to find a pet food that you (and your furry family member) will love.

If you are concerned about your pet's heart health, there are a few important ways your veterinarian can screen your dog for cardiac changes. The first is a physical exam! Many dogs with changes in their heart will have a heart murmur, which can be detected by listening to your dog's heart with a stethoscope. Further diagnostic testing could include chest x-rays to look at the size of your dog's heart, taurine level testing to make sure they are not deficient, and/or an echocardiogram (ultrasound of the heart) to examine each wall and chamber of your dog's heart. If your pet has been showing signs of heart disease at home (decreased energy, coughing, syncope or "fainting") you should seek veterinary care as soon as possible, regardless of diet.

There are many opinions, articles, blog posts, and fact lists online regarding this topic. Any veterinarian would strongly encourage pet owners to be wary of what advice and information you get online – not every source is reputable! If you're not sure about any topic regarding your pets, the absolute best source for information is your veterinarian.

The Journal of American Veterinary Medical Association (JAVMA) sums it up best in their article about DCM and diets: "Importantly, although there appears to be an association between DCM and feeding BEG, vegetarian, vegan, or home-prepared diets in dogs, a cause-and-effect relationship has not been proven, and other factors may be equally or more important. Assessing diet history in all patients can help to identify diet-related cardiac diseases as early as possible and can help identify the cause and, potentially, best treatment for diet-associated DCM in dogs."

Resources used in this article:

<https://www.whole-dog-journal.com/blog/please-don%27t-panic-about-the-%27grain-free-thing%27/>

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

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

Other good reads regarding this topic:

The FDA's statement about DCM and diets: <https://www.fda.gov/animal-veterinary/outbreaks-and-advisories/fda-investigation-potential-link-between-certain-diets-and-canine-dilated-cardiomyopathy>

An article to help interpret the FDA's statement: <https://www.whole-dogjournal.com/blog/update-on-grain-free-diets-and-dcm-cases-in-dogs/>

Selecting a pet food that meets AAFCO standards: <https://talkspetfood.aaftco.org/rightpetfood> 