

## Study finds spike in deadly heart disease linked to trendy dog diets

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Fiji, a female golden retriever, had taurine-deficient dilated cardiomyopathy. The DCM was reversed with diet change and taurine supplementation. Credit: Jamie Warren

University of California, Davis, veterinarians led a team that has found a link between some popular grain-free, legume-rich dog diets and a type of nutritional deficiency and canine heart disease known as taurine-deficient dilated cardiomyopathy. The study was recently published in the journal *PLOS ONE*.

Researchers found dogs eating some of these boutique diets are not making or maintaining enough [taurine](#), an amino acid important for heart health. Taurine deficiency has been known for many years to lead to dilated cardiomyopathy, or DCM, a heart muscle disorder that can lead to [congestive heart failure](#) and death.

"Given this recent surge in cases, we need to pay close attention to what we are feeding dogs," said lead author Joshua Stern, a veterinary cardiologist and geneticist at the UC Davis School of Veterinary Medicine. "Choosing a well-researched dog food that has a healthy nutrient profile backed by expert formulation and research is of paramount importance."

Stern said while some dog breeds are more genetically prone to a traditional form of DCM, the disease is now showing up unexpectedly in other breeds, such as the golden retriever. The common link unifying these cases is their diets. He began noticing the trend two years ago and is now treating many dogs with nutritionally mediated DCM that were all eating quite similar diets. Last year, the U.S. Food and Drug Administration issued an alert to [pet owners](#) and veterinarians about the potential association between the diets and DCM. The FDA continues to research this issue in an effort to help identify the exact dietary factor causing the problem.

## **Study looked at golden retrievers**

Stern's research involved 24 golden retrievers with dilated

cardiomyopathy and a documented taurine deficiency, representing the largest collection of cases with this condition that has been published. Twenty-three of the 24 dogs diagnosed with DCM had also been fed diets that were either grain-free, legume-rich or a combination.

Stern then prescribed the dogs a diet change and taurine supplementation. As a result, all but one dog improved. Nine of 11 dogs in this group with the most advanced stage of the disease, congestive heart failure, also showed dramatic improvements or no longer had congestion.

"This study helped us confirm that this condition is treatable and avoidable, something that traditional DCM of genetic origins is not," said Stern.



Suva, a female golden retriever, was treated at UC Davis. She came out of heart failure after switching diets. Credit: Jamie Warren

Stern said consumers who are concerned about their dog's health, should not naively switch their dog's diet or simply add a taurine supplement. Instead, consult with your vet as dogs can develop DCM from nutritional origins and not be taurine-deficient. Taurine supplements can also mask the problem and lead to a delay of an important diagnosis.

## **DCM cases involve different dog food brands and formulas**

Stern urged pet owners to take a second look at their dog's diet. Cases of DCM have been reported in [dogs](#) eating multiple different brands and formulas of food.

The problem may not be that the [diet](#) is "grain-free" or "legume-heavy" but that ingredients are interacting to reduce availability of taurine or that other nutrients are missing or interacting in the formulation.

For example, while a lot of pet owners may not want to see "byproducts" in their dog's food, often the byproducts contain organ meat like heart and kidney, which are good sources of taurine.

"Pet owners should ask themselves if they're buying the [food](#) because it sounds good to them, or whether it's right based on veterinary research and evidence," said Stern. "Staying away from some of the most common marketing gimmicks may help to protect your pet."

For more information on selecting foods for your pet, Stern recommends that clients consider using the recommendations set by the [World Small Animal Veterinary Association for selecting a healthy dog food](#).

Click [here](#) for more information on dilated cardiomyopathy and [dog food](#).

**More information:** Joanna L. Kaplan et al. Taurine deficiency and dilated cardiomyopathy in golden retrievers fed commercial diets, *PLOS ONE* (2018). [DOI: 10.1371/journal.pone.0209112](https://doi.org/10.1371/journal.pone.0209112)

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