

Grain Free Diets High in Legumes Associated With Cardiomyopathy in Golden Retrievers

Given the marketing push behind grain free diets, I feel urgency to share the following information. Veterinary Cardiologist, Dr. Joshua Stern, has noticed a disturbing trend in dogs. Golden Retrievers are developing acquired dilated cardiomyopathy, (DCM) caused by lack of an amino acid called taurine. The other form of dilated cardiomyopathy is called inherited or familial DCM. It is a common cause of heart failure in large breed dogs including boxers, dobermans and great Danes.

According to Dr. Janet Olson, “Taurine is an amino acid that is found in high concentrations in heart and muscle. Among its many functions, it aids in normal contractile function. Evidence shows that taurine helps mediate calcium channel transports and modulates calcium sensitivity of the myofibrils.”

Taurine deficiency causing cardiomyopathy in cats was a huge problem in the late 80’s. Cats are obligate carnivores who cannot make taurine from other amino acids. They must consume it in their diet. After commercial diets were supplemented with taurine, the incidence of DCM decreased dramatically. The problem was rarely seen in dogs because dogs can synthesize taurine from two other amino acids, methionine and cysteine.

Unfortunately, DCM is now being seen in dogs on grain free diets. Dr. Stern noticed an increased incidence of acquired DCM in Golden Retrievers on grain free diets that contain high levels of legumes. Merriam-Webster defines legumes as the fruit or seed of leguminous plants (peas or beans) used for food. Examples include peas, alfalfa, beans and peanuts.

Dogs who have been fed or are currently on a grain free diet should be tested for taurine levels. A simple blood sample is all that is required. If the level of taurine is below normal limits, veterinary cardiologist, Dr. Janet Olson, recommends chest films. If the heart is enlarged, then more diagnostics are needed to to access cardiac function.

Clinical signs of DCM including coughing, exercise intolerance and an increased respiratory rate. Unlike heart disease caused by leaky valves, patients with DCM usually don't have heart murmurs. That is why Dr. Olson recommends chest films to access heart size.

Treatment begins with changing the diet to one without legumes. In dogs with low blood levels of taurine, supplementation may be needed. Dogs suffering from clinical signs of heart failure may require oxygen therapy as well as diuretics to reduce fluid build-up and other heart specific medications. If acquired DCM is caught early, the heart damage can be reversed with taurine supplementation. Unfortunately, even with aggressive therapy and supplementation, dogs with severe cardiac dysfunction may succumb to this disease. My colleague told me about a family with two dogs that developed acquired DCM. Both had been fed grain free diets since they were pups. Even with aggressive therapy, one of the dogs died. He was only three years old!

In my own practice, I am seeing a large number of owners relying on the advice they receive from the (let's be honest – untrained) clerk at the pet store rather than their veterinarian. The marketing campaigns touting grain free diets make things even worse. When grain is taken out of dog food, it is replaced with fat or a carbohydrate with an even higher glycemic index. Because of this, I am seeing more diabetes and pancreatitis in dogs. I am also seeing more urinary tract infections and crystals in dogs on grain free diets. Now I have to look for acquired DCM as well. While I'm making a small fortune fixing the medical problems caused by grain free diets, it breaks my heart to see these animals suffer needlessly. If your veterinarian suggests a specific diet, especially a prescription diet, please heed their advice. Don't fall for a slick marketing campaign based on the human grain free craze. Your dog's health is depending upon it.

Source:

-Olson, Janet. Taurine Deficiency Induced Dilated Cardiomyopathy in Golden Retrievers. Memo, Veterinary Cardiology Specialists.