



### **Bloat Initiative Takes a Prominent Seat at the 2013 Canine Health Foundation Parent Club Conference**

Written by: Karen Carver, Ph.D.

Every two years, the Canine Health Foundation (CHF), in partnership with Nestle Purina, sponsors a health conference that brings together a group of internationally recognized research veterinarians and scientists for several days of presentations and workshops designed specifically for Parent Club representatives. As usual, this year's conference was exciting and interesting, and highlighted significant efforts being undertaken to help dogs live longer, healthier lives. In this article, I describe two of the presentations, one on canine cognition and one on gastric dilatation-volvulus (bloat).

#### **CANINE COGNITION**

This year, the conference began with a keynote session on Canine Cognition. Dr. Brian Hare, an Associate Professor of Evolutionary Anthropology at Duke University and co-author of *The Genius of Dogs* spoke about studying what goes on in the mind of a dog. His research group has recently launched a new website called Dognition. The goal of the venture is to help dog lovers better understand the unique ways in which individual dogs think. You provide online information about your dog and then play science-based games designed to help you discover your dog's cognitive dimensions: e.g., empathy, communication, memory, cunning, and reasoning. Not surprisingly, conference participants asked Dr. Hare whether cognitive dimensions tended to vary by breed. He responded that he does not currently have enough data to

address this intriguing question, but the hope is that over time, the data collected through the website may allow him to do so. To participate in this experiment, while also learning something interesting about your own dog, check out the Dognition website: <http://www.dognition.com>. The test costs \$39 for each dog.

#### **GASTRIC DILATATION-VOLVULUS (BLOAT)**

The presentation I found the most interesting and useful was given by Dr. Elizabeth Rozanski, a critical care/emergency veterinarian, and a research professor at Tufts University. She spoke on "Bloat and Multiple Organ Failure: What We Know and Where We are Going." Dr. Rozanski is part of a special emphasis initiative undertaken by the CHF this year to identify and better understand the underlying mechanisms of gastric dilatation-volvulus, commonly known as "bloat." Gastric dilatation-volvulus is a devastating condition that affects many breeds of dogs. The condition is particularly common in large-breed and/or deep-chested dogs (like the Weimaraner). Bloat develops when the stomach fills with air and then twists on itself, preventing air and liquid from leaving the stomach. Over time, the stomach grows in size and cuts off circulation and prevents blood from getting back to the heart from the abdomen and rear legs. This process also damages the stomach itself, and typically the spleen. The condition must be promptly corrected through surgery, but is still fatal in a

large number of affected dogs. Bloat is not something to “sleep on” to see how your dog is in the morning. This is a true emergency and 10 to 15 minutes can make a difference in the outcome.

Dr. Rozanski advised that the largest risk factors associated with bloat are: breed, genetics, anxiety, and stress. Anxiety provoking situations appear to represent an especially high risk category for some dogs. There was some suggestion that this may be related to panting and swallowing air. There is also evidence to suggest that having a first-order family member (littermate, parent, grandparent) with previous bloat/torsion increases the risk.

### **GDV IN WEIMARANERS**

As many of us know, bloat/gastric torsion are conditions that disproportionately affect Weimaraners. Twenty-eight percent (28%) of respondents from the WCA's 2012 Health Survey listed bloat/gastric torsion as a serious health issue for Weimaraners, second only to immune-mediated disorders and Hypertrophic Osteodystrophy (HOD). In addition, approximately 6% of survey respondents reported that their dogs had been diagnosed with bloat and/or torsion; and thankfully, medical correction was possible in approximately 80% of these dogs. These dogs survived. This rate is higher than the rate reported by Dr. Rozanski from her study of 498 dogs; approximately 24% of the dogs in her study were euthanized at diagnosis. However, of the dogs that received treatment, 84% survived. This means that approximately 320 of 498 dogs—or about 64%—survived. Dr. Rozanski commented that dogs are typically euthanized either because of poor prognosis or because of cost of care.

If treatment had been provided for the 24% of euthanizations, the survival rate would undoubtedly have been higher.

### **SYMPTOMS**

Bloat symptoms include restless attempts to retch/vomit and a continuing reluctance to settle. There may be nausea, drooling, and in some dogs, a distended abdomen. However, in the Weimaraner, the stomach is typically located under the ribs and so a distended stomach may not be easily identifiable. The most notable symptoms in Weimaraners may be a reluctance to settle, pale gums (associated with shock) and a high heart rate. Knowing the typical color of your dog's gums and resting heart rate is a recommended best practice. If you suspect bloat, immediately seek help from a veterinarian. Do not delay. Calling ahead to say that you may have a dog with bloat allows the facility to make surgical preparations before you arrive. Prompt treatment is the key to achieving the best outcome possible. However, even under the best circumstances, with the best care possible, many of these dogs will not survive.

### **TREATMENT**

Treatment typically consists of fluid resuscitation, prompt surgical correction, and supportive care. Surgery is conducted to de-rotate the stomach, evaluate damage, and inspect the spleen. She also stated that many owners administer simethicone to a bloating dog, especially in cases when specialized emergency care is a significant distance away. Simethicone is an anti-foaming agent used to reduce gas/bloating. She expressed little optimism that this would help in cases of torsion.

She noted that among dogs without significant gastric necrosis (stomach tissue death) poor outcomes were sometimes still observed. The cause was typically due to aspiration pneumonia, disseminated intravascular coagulation, cardiac dysfunction and other organ failure. She also discussed lactate clearance levels. This is a blood marker that increases in value when shock is present and can be associated with gastric necrosis. She stated that in her experience, some veterinarians will use lactate values for determining prognosis for individual dogs. She firmly stated that while this is a good marker for “groups,” and the research that generated it came from a reputable group of researchers, it should not be interpreted as a good marker for “individual” dogs. Resist using this marker to predict your own dog’s likelihood of recovery.

### **PREVENTION**

Dr. Rozanski also discussed prevention, stating that the single best prevention is gastropexy—a surgical procedure that “tacks” or stitches the stomach to the lining of the abdomen. It is an effective and safe surgery and can be done during another surgical procedure like spaying. In addition, many animal hospitals can do the procedure laparoscopically, which minimizes the size of incisions. Other types of preventative measures were discussed. She stated that “feeding from a height” does not appear to matter, but the jury may still be out on whether smaller/more frequent meals or exercise after eating matters. She did say, however, that there is some evidence to suggest that large food size may be protective.

### **RESEARCH FUNDING**

In early October, the CHF announced two grants that will provide \$485,000

in bloat research. The first study, headed by Dr. Claire Rebecca Sharp will evaluate the genetic basis of bloat. Her grant will support the beginning of a biobank of samples to facilitate the study of bloat by future investigators. The second study, headed by Dr. Laura Nelson will try to identify the abnormalities in the stomach’s ability to contract and how this might predispose large-breed dogs to bloat.

Results from the WCA’s health survey led the health committee to recommend that \$10,000 of donor-advised funds be contributed toward the Bloat Initiative. This recommendation was approved by the WCA Board, and the WCA is listed on the CHF’s website as a Charter Bloat Initiative Sponsor. <http://www.akcchf.org/canine-health/your-dogs-health/bloat/>. Our club represents one of about 30 sponsors of this important research initiative. The health committee would like to thank everyone who collects weight circles (proofs of purchase) from bags of Purina brand dog foods. To date, this program has provided nearly \$2 million for canine research. If you feed your dogs Purina food, please consider signing up for Purina Pro Club at <http://www.PurinaProClub.com>. The research funded by your contributions is important, and your efforts are deeply appreciated.

### **LEARN MORE**

To learn more about GDV, Dr. Rozanski is featured in a free educational webinar sponsored by the CHF entitled, “Bloat: What Every Dog Owner Needs to Know.” In this video, she presents the signs and treatment options for bloat, along with current options for prevention. Readers can view the webinar here: <http://www.akcchf.org/news-events/multimedia/>

video/bloat.html. The foundation also has plans to provide continuing education to veterinarians showing surgical procedures for prevention - gastropexy during spay/neuter.

Other important health topics were covered at the conference this year, including inherited cardiomyopathies, epilepsy, cataract prevention, bloat, hemangiosarcoma, nutrition, soft tissue injuries, and physical therapy, among others. The CHF is working to release most of the presentations as webinar videos in the months following the conference. If you are interested in viewing some of these presentations, please check the CHF website at: <http://www.akcCHF.org>.

*Karen Carver, Ph.D. is a demographer working in the Washington DC area. She and her family have two Weimaraners "Felix" and "Gabi." Gabi just celebrated her first birthday. While she looks like a pointer, we've come to appreciate her remarkable "retriever" abilities. She has now brought us every orange flag-tipped survey boundary marker that used to exist on the property. Gabi's private dog park is now apparently "unbounded." Karen is a member of the WCA Health Committee and can be contacted at [K.Carver@Systemsdev.com](mailto:K.Carver@Systemsdev.com).*