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PURINA Pro Club

Great Dane Update

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Addressing the Great Dane Health Survey

Hearth problems have overtaken bloat and cancer as the leading cause of death in male Great Danes, according to a recent health survey conducted by the Great Dane Club of America (GDCA). In addition, more dogs than anticipated suffer from allergies, hypothyroidism, chronic infections and other immune-related disorders.

The survey, which was published in January 2004 and was the first one undertaken by the national parent club, also reveals there are greater than expected post-surgical deaths, especially among female Great Danes.

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*MARY ANNE ZANETOS,
GDCA CHAIRWOMAN OF THE HEALTH SURVEY*

While the survey confirms the importance of many health issues the GDCA already knew about, some of the results yield new insights.

"Despite an overall feeling of optimism about the breed's health, there are a number of new serious health concerns cropping up," says Mary Anne Zanetos, GDCA chairwoman of the health survey. "We wanted to obtain current and accurate data on the incidence of specific conditions and problems afflicting the breed today, and to identify problems most amenable to research. The survey met all major objectives."

Margaret Slater, Ph.D., and her research associates at Texas A&M University College of Veterinary Medicine distributed, collected and ana-

lyzed the survey. A private marketing firm, Furst Direct, selected a random sample of Great Dane owners from AKC registrations and surveys sent to selected households.

Three targeted groups received the survey: GDCA members, members of affiliate Great Dane clubs, and a random sampling of 2,000 owners of Great Danes based on AKC registration. More than 3,600 surveys were mailed; 519 households responded, representing 1,565 adult Great Danes and 4,773 puppies born to those adults.

"We achieved good participation from experienced breeders and exhibitors," Zanetos says. Some survey respondents had as few as one dog in the home, while others had a dozen or more. The average number was three. The length of respondents' involvement with the breed varied widely, ranging from nine months to 54 years, and the average was just shy of 19 years.

The first part of the survey gathered information on how owners feed and care for their Great Danes. It included questions about activities owners enjoy with their dogs, veterinary care and husbandry practices, breeding results, and perceptions on the health of Great Danes. The second part requested a detailed health history for each Great Dane that lived in the owner's household within the past five years, including dogs deceased but alive within that timeframe.

Part One Results

"We are expecting more from our Great Danes these days," Zanetos says. "Not only are many being exhibited in conformation events, but significant numbers of Danes are also competing in performance events. In keeping with these new challenges, the GDCA wants to promote health and temperament screening tests to help identify dogs most suitable for breeding to meet these new needs."

Two thirds of households surveyed consider themselves exhibitors, and 25 percent are involved in some type of performance event. The most common event is obedience, with 20 percent participation, followed by agility,

Health Survey Results on the Web

For detailed information about the results of the Great Dane Club of America health survey, please visit the parent club web site at www.gdca.org. The site also contains information about ongoing research, including dilated cardiomyopathy, thyroid disorders, hip dysplasia and vonWillebrand's disease.

with 7 percent involvement. Other events include flyball, tracking and weight pulling.

"Statistics confirm increased participation in agility and other events that require extensive training, indicating that owners have made a long-term commitment to performance events. Thus it is likely this trend will continue and perhaps increase in the future," Zanetos says. "Ultimately, we may expect to see breeders placing a higher emphasis on specific physical and mental attributes needed to compete successfully in performance events."

Related to health care, 73 percent of households use some type of health screening, and the most common screening is X-raying hips, used by 68 percent of respondents at least occasionally. Several other screenings are performed by more than 50 percent of owners, including vaginal cultures, thyroid, brucellosis and cardiac/ultrasound screenings.

Zanetos thinks the numbers represent a good start but would like to see even more active participation in health screening, including information being submitted to the Canine Health Information Center (CHIC) program. For a dog to be certified through this program he/she must have results reported for the following screenings:

- Hip Dysplasia – Results accepted from the Orthopedic Foundation of America (OFA), PennHIP, Great Dane Club of America, or Ontario Veterinary College (OVC)

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Health Survey

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- Eyes – Results accepted from the Canine Eye Registration Foundation (CERF)
- Congenital Cardiac Disease – Results accepted from OFA
- Autoimmune Thyroid Disease – Results accepted from OFA.

Other health measures include use of heartworm medication by 70 percent of Great Dane owners and flea prevention by 35 percent of owners.

Part one of the survey also delved into feeding practices for Great Danes, revealing that 93 percent of households feed dry food, 39 percent feed

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canned or moist food (usually in combination with dry food) and 15 percent feed other diets. Most Danes, about 77 percent, are fed twice a day, while 12 percent are fed free choice, and the rest are fed just once or more than twice a day.

Health Perceptions

Half of Great Dane owners surveyed believe that the overall health of Great Danes is about the same as it has been in the past. Thirty-four percent report that Great Dane health is better, and 5 percent think it is worse.

"The top reasons given for better health include a longer life span, greater knowledge about the breed and less bloat," Zanetos says. Interestingly, some of the reasons, such as life span and bloat, given to illustrate better health are the same reasons given for worse health. Other reasons for worse health are more allergies; eye, heart and skin troubles; autoimmune problems; and Addison's disease.

When asked about the top health problems experienced in individual households and in the breed overall, bloat, cancer and heart disease, particularly dilated cardiomyopathy (DCM), were the top three across the board. The health problems owners experienced in their own households also

included arthritis, allergies, thyroid, gastric torsion and eye problems. When asked about the top 10 problems in the breed, the list included hip dysplasia, joint problems, short life span and Wobbler's Syndrome, a degenerative disorder eventually causing incoordination and loss of sensation in the limbs.

The survey results conclusively show that heart disease, particularly DCM, which causes a weakening of the heart muscle so it is not able to pump blood efficiently, is emerging as a major health concern for the breed. Cancer and bloat make up the other top concerns in both individual households and the breed overall. These three problems also are the leading causes of death in Great Danes.

"Several new projects are, or will be, initiated as a direct consequence of the survey findings," says Zanetos. These projects will address the leading causes of death as well as a small but significant problem with temperament issues.

Looking Forward

Heart problems, including heart murmurs, DCM, sudden cardiac death, subaortic stenosis and valve defects, affect 13 percent of dogs, according to the survey results. The GDCA previously has supported research focusing on the mode of inheritance of DCM as well as identification of a genetic marker. "Both mortality and incidence data [from the survey] support X-linked inheritance of DCM," reports Zanetos. These results confirm previous research findings.

An X-linked trait is a condition in which the controlling gene(s) is located on the X chromosome, Zanetos explains. In these disorders, males inherit the disorder from their mothers, since the X-chromosome is contributed by the dam. In the case of DCM, it appears that most males inherit the disorder through unaffected carrier dams. "Since these dams are clinically normal, they are not detected by current methods of cardiac screening, which are based on detection of symptoms or structural abnormalities associated with heart disorders," she says.

With DCM on the rise, one of the new projects for the GDCA will be to create a program to educate Dane owners and increase awareness of the condition and its mode of inheritance. "This project is in the very early planning stages," Zanetos says. "Since many breeders are not familiar with DCM research or how X-linked traits are inherited, it would be useful for GDCA to develop and distribute educational materials on the subject.

Such information hopefully will help breeders to select mates that will minimize the transmission of DCM to future generations of dogs."

Another survey finding is that "too many Great Danes are dying as a result of post-surgical complications," says Zanetos. Four percent of female Great Dane deaths were from post-surgical complications, and it accounted for nearly 1 percent of deaths of male Great Danes. In an attempt to lower the potential for surgical complications, the GDCA is working with veterinarians to develop a recommended protocol for safer anesthesia use and post-operative care with giant breed dogs.

In addition to the health findings, the survey shows that temperament and behavior problems are a growing concern. "GDCA needs to create programs to increase awareness of the heritability of temperament; encourage early and effective obedience training of puppies; and encourage breeders to maintain close contact with new puppy owners, particularly pet buyers, so that behavior and temperament problems can be identified early and in time to intervene before they become serious," Zanetos says.

"Addison's disease and hypertrophic osteodystrophy (HOD) also are problem areas the GDCA may want to prioritize for future studies, perhaps in collaboration with other breed clubs who share these problems," Zanetos says. Developmental bone conditions, such as HOD, afflict approximately 15 percent of Dane puppies. Though less than 1 percent of dogs in the survey were reported to suffer from Addison's disease, the condition is believed to be significantly underdiagnosed in Great Danes, and may be the cause in some cases of sudden death, which were not autopsied, Zanetos says.

"This initial survey provides a baseline so that incidence of various health conditions can be followed over time," Zanetos says. "Our goal is to be fully aware of areas needing funding for research so that we can better the breed." ■

Send Us Your Questions

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