Melamine and Cyanuric Acid Interaction May Play Part in Illness and Death from Recalled Pet Food

(Courtesy AVMA - SCHAUMBURG, Ill.) May 1, 2007 - Tests conducted on contaminated pet food and necropsies from affected animals have resulted in a new theory to explain how animals are being adversely affected by contaminated pet foods. A chemical reaction between melamine and cyanuric acid is suspected of forming crystals and blocking kidney function.

The investigation into contaminated pet food has focused on melamine contamination of ingredients imported from China, such as wheat gluten, rice protein concentrate and corn gluten (imported into South Africa). It is now believed that cyanuric acid, as well as melamine, has been found in urine samples from animals that died.

Analysis of the crystals in the kidneys of affected animals has revealed that they are approximately 70 percent cyanuric acid and 30 percent melamine, and are extremely insoluble.

Furthermore, tests mixing melamine and cyanuric acid in samples of cat urine resulted in almost immediate formation of crystals that were identical to crystals found in the kidneys of affected animals. Two other melamine- related substances—ammelide and ammeline—may also play roles and are under investigation.

As the recalls continue, the AVMA reminds pet owners and veterinarians that over 98 percent of pet foods are still deemed safe and haven't been recalled. The FDA is currently testing 100 percent of wheat gluten, rice protein concentrate, corn gluten, corn meal, soy protein, and rice bran being imported from China for these contaminants. The most recent pet food recalls have been undertake proactively, due to association with involved ingredients and suppliers rather than as the result of complaints that animals that have consumed the food and become ill.

Most affected cats and dogs are recovering through use of standard fluid therapy and supportive care. The AVMA urges all veterinarians who have seen animals they suspect have been affected by a contaminated pet food to submit their findings to an ongoing survey. This survey is being conducted by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) and is accessible athttp://www.aavld.org.

The AAVLD Web site also offers a protocol for sample submission and a list of accredited veterinary diagnostic laboratories. It is important to note that samples from the kidneys should not be preserved in formalin, as the crystals seem to dissolve over time in formalin. Instead, they should be preserved in 100 percent ethanol or snap-frozen in OCT medium and sent to a diagnostic laboratory on dry ice.

A comprehensive AVMA Pet Food Recall List is available athttp://www.avma.org/aa/menufoodsrecall/products.asp. The AVMA Pet Food Recall List contains all recall information that has come to the attention of the AVMA, but it is not guaranteed to be complete. The AVMA encourages all concerned to contact the specific manufacturer regarding the status of any particular pet food or treat.

For more information, please visit the AVMA web site atwww.avma.org.

Membership Renewal Period

ISVMA will be mailing membership renewal packets within the next two weeks. If you do not receive the mailing before the end of May please give ISVMA a call (217-523-8387) to make sure that your contact information is current.

In your renewal packet you will receive requests for support of the Illinois Veterinary Medical Foundation (IVMF) and the Veterinary Medicine Political Action Committee (VMPAC). We hope that you will give strong consideration to supporting these two important ISVMA partners.

The IVMF supports programs and services that benefit the veterinary profession in Illinois. The IVMF partnered with the University of Illinois College of Veterinary Medicine to develop the new Dr. Walter E. Zuschlag/ISVMA Veterinary Heritage Collection and Information Commons which is currently under construction at the College and is scheduled for dedication at the 2007 UI-CVM Fall Conference. The IVMF is also seeking support for the endowment of scholarships in memory of Dr. John Creasey (ILL 2006) and Dr. Clint Franks (ILL 2007) that are awarded to students elected by their peers to be ISVMA Class Representatives.

The VMPAC supports the legislative activities of ISVMA by giving ISVMA members and lobbyists an opportunity to contribute to legislators who assist us on our legislative agenda. ISVMA has had a very successful year in the State Capitol and we are building capacity to be an even stronger voice for professional veterinary medicine. Your support of VMPAC and participation in the grassroots advocacy network are critical to our continued success.

About the Photo in This Issue...

The Hooded Warbler *(Wilsonia citrina)* is a small but striking songbird that breeds in southern Canada and the eastern United States. The Hooded Warbler seems to prefer shaded habitats, and closely associates with understory components of southeastern forests. Perhaps related to its poorly lit habitat is the size of this warbler's eyes. They are among the largest among warblers breeding in the United States, and stand out boldly on its yellow face.

Part of its scientific name, citrina, refers to its dazzling yellow color. This species is sexually dimorphic in plumage color throughout the year. The adult males have a distinctive black hood and maintain their plumage coloration year-round. Adult males are olive green above, bright yellow below, with a black hood and throat. The forehead and cheeks are bright yellow. Females are also olive green above and bright yellow below, with varying degrees of black around the crown or throat. Some older females may look a lot like males, but their hood is never as complete or extensive.

Of interest is the fact that on the wintering grounds these birds maintain distinct feeding territories. Sexes show distinct segregation by habitat on the winter range. Individuals are also strongly territorial during winter. Males are most likely found in mature forest and females in scrub, second growth and disturbed habitats. Habitat segregation is thought to result from male dominance over females. This winter habitat segregation was first detected in Hooded Warbler and is now known to occur in other neotropical migrants such as American Redstart, Northern Parula and Black-throated Blue Warbler.

The Hooded Warbler is declining in only a few parts of its breeding range, and in the east is increasing according to Breeding Bird Survey data.

I photographed this male Hooded Warbler in Arkansas in April 2007.

Contact Us

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