April 22, 2010

W. Ron DeHaven, DVM, MBA
American Veterinary Medical Association
1931 North Meacham Road, Suite 100
Schaumburg, IL 60173-4360

Dear Dr. DeHaven:

The Michigan Department of Community Health’s Pesticide Illness and Injury Surveillance program has become aware of two situations where veterinary clinic personnel became sick during the treatment of dogs that had ingested zinc phosphide pellets. Phosphine gas was presumed to be produced when the zinc phosphide reacted with acid and water in the dog’s stomach. Clinic staff developed headaches, shortness of breath, nausea, and dizziness after vomiting was induced in the dogs in the examination room. These are symptoms seen with acute phosphine gas exposure.

We want to alert you to this problem and ask that you share the following information with members of your association so they may avoid human exposures while providing treatment to pets that have ingested zinc phosphide.

- Identify that the product the dog has ingested contains zinc phosphide. Zinc phosphide is used to kill rats, mice, moles, and gophers. It is available as a dark gray powder or grain-based pellet bait. Trade names include Arrex, Commando, Dexol, Kilrat, GopherRid, Phosvin, Ridall, Ratol and Sweeney’s Poison Peanuts. The chemical has an odor of fish, garlic, or acetylene.
- Have the dog vomit outside of the building, where there is plenty of ventilation and the area can be hosed down with water.
- Have all clinic personnel stand upwind of the animal.
- Do not lower your head down to the animal since the phosphine is heavier then air and will have a higher concentration closer to the ground.
- After vomiting is induced, take the animal upwind of the vomit.
- Flush the area with copious amounts of water while standing upwind. It can be washed down a storm sewer or off a hard surface onto grass. There will be adequate ventilation outdoors to prevent the phosphine from reaching harmful levels. Make sure the vomit is diluted enough so it does not attract other animals. Note the phosphine will be released from the product by water, making any remaining pellets non-hazardous.
- If the dog vomits in the exam room, the phosphine gas levels may approach values that could be harmful to humans. Remove personnel and animals from the area and ventilate. Most local fire departments can determine the level of phosphine and be able to determine when the area is safe to re-enter.
- If the dog vomits in the exam room and clinic personnel are exposed to phosphine gas, have them seek medical attention if they experience symptoms.

We hope you find this information useful. Please contact Abby Schwartz if you have any questions or concerns at schwartza@michigan.gov or 517-335-9684. Additional information about the hazards of phosphine gas can be obtained from poison control at (800) 222-1222 or the Agency for Toxic Substances Disease Registry web site http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=214

Sincerely,

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