

Grapes and Raisins can be Dangerous

By: Christine Wilford, DVM

Concern is being expressed about dogs that suffered apparent kidney failure after ingesting grapes or raisins. In the May 15, 2001 issue of the *Journal of the American Veterinary Medical Association*, a letter to the editor described preliminary observations of five dogs that had ingested large quantities of grapes and five that had ingested large quantities of raisins. All developed serious medical problems. Information on the dogs was obtained after a review of cases in the computerized database of the ASPCA Animal Poison Control Center in Urbana, Illinois.

The estimated amount of grapes or raisins ingested was known in only four of the 10 dogs. In those dogs, it ranged from 9 ozs. to 2 pounds. When the body weight of the affected dog was considered, the "dose" ranged between roughly 1 to 2.5 ounces per pound of the dog's body weight.

Of the dogs who ate grapes, three ate red, seedless grapes. The grapes came from several sources, including grape crushings and fermented grapes from wineries. The raisins involved were mostly from various commercial brands of sundried raisins. In all reports, vomiting began within the first few hours after ingestion. Most dogs vomited or defecated partially digested grapes or raisins. Loss of appetite, diarrhea, lethargy and signs of abdominal pain were also reported. Not all dogs exhibited all symptoms. Signs continued for anywhere from several days to three weeks.

Laboratory findings were consistent with sudden onset of kidney failure. Abnormal blood values developed in most of the dogs within 24 hours to several days after ingestion, including elevated levels of calcium, phosphorus, BUN (blood-urea-nitrogen) and creatinine. Abnormally decreased urine output or inability to produce urine was reported in five dogs. Some dogs produced abnormally dilute urine. Two dogs died, and three were euthanized because treatment was unrewarding.

Five dogs recovered after aggressive treatment, which lasted up to three weeks in some cases. Intensive treatment included intravenous fluid therapy, along with medications used to support remaining kidney function. One dog underwent dialysis and recovered completely. Microscopic examination of kidney tissue from one dog revealed abnormalities, but these abnormalities were not severe enough to explain the degree of clinical disease experienced by the dog. At the time of this publishing, the results of screening tests for the presence of contaminants in the dogs' blood were negative, but the results of some tests were not available yet.

Although no scientific reports have been published, and there is currently no definitive explanation, the author's advise that ingestion of significant quantities of grapes or raisins is a serious situation and should be managed aggressively. If ingestion is known to have occurred, try to prevent the digestion and absorption of the grapes or raisins. To do this vomiting should be induced the stomach should be pumped, and the administration of activated charcoal should be initiated. Fluid administration to maintain kidney function should continue for at least 48 hrs. Bloodwork should be evaluated for at least 72 hours to monitor for the development of kidney failure.

It is not certain what caused the renal failure in these dogs. Possible causes include mold toxins, high amounts of vitamin D3, contamination with pesticides, heavy metals or other environmental toxins, or any other unknown toxin within the grape or raisin itself. Investigation into this matter will continue.

