



24 Hour Emergency &
Referral Hospital

Toronto Veterinary Emergency Hospital

21 Rolark Dr, Toronto, ON, M1R3B1

Phone: 416 247 8387

Fax: 4162873642

Email: frontdesk@tveh.ca

Website: www.tveh.ca

Grape and Raisin Toxicity in Dogs

Recently, veterinarians discovered that grapes and raisins can cause kidney failure in dogs. It is unclear whether this is a new problem, or if the toxic nature of grapes and raisins became recognized after the establishment of a computerized animal toxicity database about 25 years ago. Whatever the case, the number of identified cases of illness or death in dogs after they have eaten raisins or grapes is on the increase.

What types of grapes and raisins are toxic to dogs?

"The type of raisins or grapes does not appear to matter..."

The type of raisins or grapes does not appear to matter, with reported cases of toxicity occurring after dogs have eaten seedless or seeded varieties, commercial or homegrown fruits, red or green grapes, organic or non-organic grapes, and grape pressings from wineries. In fact, certain types of currants are also poisonous. Foods containing grapes and raisins (such as Raisin Bran®, trail mix, granola mix, baked goods with raisins) are all potential sources of poison!



What is the toxic dose?

Since raisins are dried and therefore more concentrated than grapes, they are relatively more toxic than grapes; therefore, it takes a smaller number of raisins to result in poisoning in dogs compared to grapes. While there are some suspected toxic doses of grapes and raisins, there is no scientific, peer-reviewed published toxic dose. Therefore, the amount that a pet got into must be carefully weighed based on the breed, age, health, underlying medical history, and concurrent medications that the pet may be on.

Why are raisins and grapes toxic?

Currently, it is not known why grapes and/or raisins are toxic. Some researchers suspect that a mycotoxin (a toxic substance produced by a fungus or mold) may be the cause. Some suspect a salicylate (aspirin-like) drug may be naturally found in the grape, resulting in decreased blood flow to the kidneys. However, no toxic agent has been identified yet. Since it is currently unknown why these fruits are toxic, any exposure should be a cause for concern.

What should I do if my dog eats grapes or raisins?

"If you suspect that your pet has eaten any grapes or raisins, contact your veterinarian or Pet Poison Helpline immediately."

If you suspect that your pet has eaten any grapes or raisins, please contact your veterinarian or Pet Poison Helpline, an animal poison control service, immediately. Do not waste any time. Since there are still many unknowns associated with this toxicity, it is better not to take any chances when it comes to your pet's health. As with any toxicity, the sooner the poisoning is diagnosed and treated, the less dangerous for your pet, and the less expensive therapy will be for you.

What are the symptoms of grape or raisin toxicity?

The most common early symptom of grape or raisin toxicity is vomiting, which is generally seen within 24 hours following ingestion. Lack of appetite, lethargy, and possibly diarrhea can be also seen within the next 12–24 hours. Unfortunately, more severe signs are not seen for 24–48 hours after ingestion – often after acute kidney failure has occurred already. Signs of acute kidney failure include nausea, lack of appetite, vomiting, halitosis (bad breath), diarrhea, abdominal pain, excessive thirst, and excessive urination.



As the toxicity progresses, the kidneys may shut down and the dog will not produce any urine. As the kidney failure progresses, the dog's blood pressure will increase dramatically and the dog will usually lapse into a coma. Once the kidneys have shut down and urine output has dropped, the prognosis is poor.

How is the toxicity diagnosed?

Unfortunately, the symptoms of grape or raisin toxicity are non-specific, and are similar to kidney failure from many other causes. Your veterinarian will base a presumptive diagnosis of this toxicity based on a history of eating grapes or raisins, or the presence of pieces of grapes or raisins in the dog's vomit.

Your veterinarian will recommend diagnostic tests such as a complete blood count (CBC), a serum biochemistry profile and a urinalysis to assess the amount of damage to the kidneys. These tests will help determine what the prognosis is for your pet's recovery.

Is there an antidote?

No.

How is this poisoning treated?

The goal of treatment is to block absorption of the toxins and prevent or minimize damage to the kidneys.

The best treatment is to decontaminate a patient right away to prevent absorption of the unknown toxin from the stomach or intestines. Since grapes and raisins stay in the stomach for a prolonged period of time, inducing vomiting is of the utmost importance (even up to 4–6 hours after ingestion). Your veterinarian will also administer activated charcoal orally to

block further absorption of the toxin. Ideally, aggressive intravenous fluids should be started promptly to flush any absorbed toxins out of the body as quickly as possible and to help maintain kidney function. Drugs to control nausea or vomiting, to help maintain blood flow to the kidneys, and to control blood pressure will be administered as needed.

"The goal of treatment is to block absorption of the toxins and prevent or minimize damage to the kidneys."

Ideally, dogs should be hospitalized on intravenous fluids for 24 to 48 hours, depending on how severe the kidney damage is. Affected animals may need to be hospitalized for up to 2–7 days. During the course of treatment, your veterinarian will monitor your pet's kidney values daily to assess the response to treatment and determine whether the treatment needs to become more aggressive. Blood work should also be repeated 2–3 days after going home; this is to make sure the kidney blood values haven't increased at all.

What is the prognosis for recovery from poisoning from grapes or raisins?

Prognosis depends on many factors, including how severe the poisoning was, how soon the patient was decontaminated, whether or not the patient has already developed kidney failure, how soon treatment was initiated, and whether the clinical signs and kidney values improved once treatment was started.

Approximately 50% of dogs that eat grapes or raisins go into kidney failure. If a dog only ate a few grapes or raisins (depending on the size of the patient) and received immediate treatment, the prognosis is reasonably good. If the kidneys shut down so that no urine is produced, the prognosis is poor. It is important to realize that the kidneys have very little capacity to regenerate or repair themselves, and once the kidneys are damaged, they will not function as well as they did before the episode. When in doubt, seek treatment right away by contacting your veterinarian or Pet Poison Helpline for treatment advice. Your veterinarian will estimate the prognosis for your dog based on its symptoms, individual situation, and response to treatment.

How can I prevent this problem?

Keep all grapes and raisins, or foods containing grapes or raisins, out of reach of your pets. Do not share any food that may contain grapes or raisins with your dog, and especially do not use grapes as treats for your dog.

What other common foods are toxic to dogs?

Onions, chocolate, cocoa, macadamia nuts, fattening foods, and foods containing the sweetener xylitol can also be fatal.

Are other animals at risk?

So far, grape and raisin toxicity has only been identified as a problem in dogs. That said, there have been possible, anecdotal reports of cats and ferrets being potentially affected. Since there are still many unknowns associated with this toxicity, it would be prudent to avoid giving ANY grapes and raisins to your dog or any other pet.

*Pet Poison Helpline, is an animal poison control service available 24 hours, seven days a week for pet owners

and veterinary professionals who require assistance treating a potentially poisoned pet – including birds! Pet Poison Helpline is available in North America by calling 800-213-6680. Additional information can be found online at www.petpoisonhelpline.com. Pet Poison Helpline is not directly affiliated with LifeLearn.



Reviewed and Edited August 2014 by Dr. Brad Cotter, DVM, Emergency Veterinarian at Toronto Veterinary Emergency Hospital

This client information sheet is based on material written by: Cheryl Yuill, DVM, MSc, CVH & Justine A. Lee, DVM, DACVECC, Associate Director of Veterinary Services, Pet Poison Helpline

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