

Fall Toxins Newsletter

Fall Issue: September, October and November

By Drs. Ahna Brutlag and Justine Lee



Now that summer has drawn to an end, it's important to remember all those upcoming seasonal toxins that we need to be aware of. With Halloween and Thanksgiving right around the corner, make sure to educate yourself on the pet poisons that are around your house and that we commonly see here at Pet Poison Helpline (PPH) during this time of the year.



Chocolate: While the occasional chocolate chip within one cookie may not be an issue, we worry about certain *types* of chocolate – the less sweet and the darker the chocolate, the more toxic it is to your pet. Baker's chocolate and dark chocolate pose the biggest problem. Other sources include chewable, flavored multi-vitamins, baked goods, or chocolate-covered espresso beans. Poisoning is due to a chemical similar to caffeine called theobromine. Ingestion of too much theobromine (or caffeine) results in vomiting, diarrhea, hyperactivity, inflammation of the pancreas (i.e., pancreatitis), an abnormal heart rhythm, seizures, and rarely, death. With Halloween right around the corner, make sure your kids know to hide the candy stash from your dogs. (Dogs make up 95% of all our chocolate calls, as cats are usually too discriminating to eat chocolate!) In some dogs, even the wrappers from candy can pose a problem by causing a bowel obstruction in the stomach or intestines.



Table food: While you may think you are "loving" your dog by giving him table scraps from Thanksgiving dinner, it could be very unsafe for your pet. While there's not a "toxicity" issue from fatty table foods (such as bacon, gravy, turkey skin, grizzle, etc.), it can result in signs from gastroenteritis (mild vomiting or diarrhea) to a severe, fatal pancreatitis. Other table food like corn-on-the-cob can result in a bowel obstruction in your dog's intestines, resulting in projectile vomiting, diarrhea, and may require expensive intestinal surgery for removal. Desserts made with xylitol, a natural sugar-free sweetener, or foods containing grapes or raisins can also result in poisoning. Xylitol causes an acute drop in blood sugar and even liver failure at high doses, while grapes and raisins can result in fatal acute kidney failure. When in doubt, don't let your pet get any table food!



Mouse and rat poisons (rodenticides): As you prepare to winterize your garage, cabin, or house, keep in mind that mouse and rat poisons can also be harmful to pets. Always make sure to place these poisonous baits in areas where your pet can't reach them (i.e., high up on shelves, hidden behind work spaces, etc.). Currently there are four common categories of rodenticides available for general use. Each has a different and unique mechanism of action. This results in four different sets of clinical signs in both the target rodent population and our curious pets who might consume them.

- **Long-acting anticoagulants (LAACs):** By far the most well-known and perhaps most widely used rodenticides are the LAACs. This family of rodenticides works by causing internal bleeding and preventing the body from clotting normally. Common signs include coughing (blood in the lungs), exercise intolerance, weakness, large and soft lumps under the skin, vomiting, nose bleeds, bruised skin, bloody urine, bleeding from the gums, and inappetence. With LAACs, it takes 2-3 days before the poison actually takes effect and signs of bleeding occur. If there is any suspicion of ingestion, a clotting test called a prothrombin test, or PT test, supports the diagnosis (it takes 36-48 hours after ingestion before a PT test will be abnormal). Fortunately, there is an antidote for this group of poisons—prescription-strength Vitamin K₁, an inexpensive pill given 1-2 times per day for one month, is routinely found in most veterinary offices. Because this group of poisons is "long acting" the product can remain in your pet's liver for months to years. Therefore, if your pet were to ingest this mouse poison a second time, it's critical you inform your vet that your animal was previously exposed as the additional dose or mouse poison is compounded onto the previous one.

- **Bromethalin:** This type of rat poison is gaining popularity and is often sold in conjunction with bait stations. It works by causing swelling of the brain and spinal cord. If toxic amounts are ingested, signs of incoordination, paralysis, tremoring, or convulsing are possible. The dose required to cause poisoning is very small, especially for cats. Unfortunately, there is no antidote to this poison and treatment may require an extended amount of time in the veterinary hospital due to long-lasting neurological effects (days up to a week). PPH does not recommend the use of this product in a home with cats.
- **Cholecalciferol (Vitamin D₃):** One of the most dangerous rat poisons is a Vitamin D₃-based rodenticide. This type increases calcium and phosphorus blood levels so high that it causes secondary kidney failure. With this type of rat poison, only a tiny amount needs to be ingested before it causes a problem, and long-term, expensive treatment is usually necessary. Due to the extreme difficulty in treating this type of poisoning, PPH recommends dog and cat owners avoid using this toxin on their property.
- **Zinc phosphide:** This type of poison is more commonly used in mole and gopher baits and is only labeled for outdoor use. Zinc phosphide ingestion results in the formation of toxic phosphine gas in the stomach, severe bloating, profuse vomiting, abdominal pain, and potential lung, heart, and liver complications. Like other rodenticide poisons, it only takes a small amount of poison to cause a big problem! Make sure to keep these toxins away from your pets, as this type can be poisonous to you too (if you inhale the phosphine gas if your dog vomits).



Mushrooms: Various types of mushrooms located throughout the United States are non-toxic, other types of mushrooms may be simply irritating to the stomach and intestines, and, still others may be hallucinogenic or result in fatality (e.g., liver failure, kidney failure, etc.). While the likelihood of mushroom poisoning is low, it's very difficult for veterinarians and pet owners to be able to identify the exact species of mushroom that is in your yard, and mycologists (mushroom experts) aren't readily available! Because mushrooms can be so toxic, it's important to immediately bring your dog to a vet right away for decontamination (inducing vomiting and giving activated charcoal to bind up any poison). Sometimes stomach pumping (i.e., gastric lavage) is necessary in severe cases. In general, clinical signs seen from mushroom ingestion include

vomiting, diarrhea, abdominal pain, incoordination, lethargy, tremors, and seizures, with liver and kidney damage occurring later. It's helpful to collect all the pieces of the mushroom for later identification. Wrap them in a paper towel, place them in a paper bag (not plastic) and be sure to label them "POISONOUS – DO NOT EAT!"

Compost bins or piles: While we applaud you for composting, make sure to do so appropriately – your compost shouldn't contain any dairy or meat products, and should always be fenced off for the sake of your pets and wildlife. These piles of decomposing and decaying organic matter have the potential to contain molds which can form tremorgenic mycotoxins—fungal byproducts which cause severe tremors and seizures in animals and people. Even small amounts ingested can result in clinical signs within 30 minutes to several hours. Clinical signs include agitation, hyperthermia, hyper-responsiveness, panting, drooling, and vomiting, and can progress to serious neurological signs (including incoordination, tremors, and seizures). Other causes for these signs include toxins such as metaldehyde (i.e., snail bait), strychnine, organophosphates (the insecticide in some types of plant care products), and methylxanthines (i.e., chocolate). Prompt decontamination and treatment is necessary for survival.

The best thing any pet owner can do is to be educated on common household toxins (both inside the house and out in the garden), and to make sure you pet proof your house appropriately. Make sure to keep all these products in labeled, tightly-sealed containers out of your pet's reach. When in doubt, if you think your pet has ingested something poisonous, contact your veterinarian or **Pet Poison Helpline** at **800-213-6680** immediately. The sooner you speak to an expert, the more quickly treatment can be initiated which results in a better prognosis for your pet and less veterinary costs for you!

Resources: Pet Poison Helpline, an animal poison control center based out of Minneapolis, is available 24 hours, seven days a week for pet owners and veterinary professionals that require assistance treating a potentially poisoned pet. The staff provides treatment advice for poisoning cases of all species, including dogs, cats, birds, small mammals, large animals and exotic species. As the most cost-effective option for animal poison control care, Pet Poison Helpline's fee of **\$39.00** per incident includes follow-up consultations for the duration of the poison case. 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 has an iPhone application with an extensive database of plants, chemicals, foods and drugs that are poisonous to pets. A powerful indexing feature allows users to search for toxins and includes full-color photos for identifying poisonous plants and substances. With a direct dial feature to Pet Poison Helpline, the app is called "**Pet Poison Help**," and is available on iTunes.