

Fall Toxins Newsletter

Fall Issue: September, October and November

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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. The chemical toxicity is due to a methylxanthine (like theobromine), and results in vomiting, diarrhea, hyperactivity, inflammation of the pancreas (i.e., pancreatitis), an abnormal heart rhythm, seizures, and rarely, even death. With Halloween right around the corner, make sure your kids know to hide the stash from your dogs. (Dogs make up 95% of all our chocolate calls, as cats are usually too discriminating to eat chocolate!) In smaller dogs, even the wrappers from candy can result in a secondary 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 a gastroenteritis (such as a mild vomiting or diarrhea) to a severe, fatal pancreatitis. Other table food like corn-on-the-cob can result in a severe foreign body in your dog's intestines, resulting in projectile vomiting, diarrhea, and may require an expensive intestinal surgery. Desserts made with xylitol, a natural sugar-free sweetener, or foods containing grapes or raisins can also result in toxicity. Xylitol results in an acute drop in blood sugar and even liver failure at high doses, while grapes and raisins can result in severe, fatal acute kidney failure. When in doubt, don't let your pet get any table food!



Mouse and rat poisons (rodenticides): As we prepare to winterize our garage, cabin, or house, keep in mind that there are some more dangerous rat poisons to pick from than others. 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 separate 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. All of these rodenticides also pose the potential for “relay toxicity”— in other words, if your dog eats a whole bunch of dead mice poisoned by rodenticides, they can get the secondary effects from this. This is most commonly seen in birds of prey (i.e., raptors), so we generally recommend avoiding them in the first place!

- 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), large and soft lumps under the skin, vomiting, nose bleeds, bruised skin, exercise intolerance, weakness, bloody urine, bleeding from the gums, and inappetance. With LAACs, it takes 2-3 days before the poison actually takes effect and before clinical signs of bleeding occur, but chronic ingestion shortens the time period. If there is any suspicion of ingestion, a prothrombin test, usually referred to as a PT test, supports the diagnosis (it takes 48 hours after ingestion before this PT test will be abnormal). Fortunately, prescription-strength Vitamin K₁, the antidote, is routinely found in most veterinary offices.

- **Cholecalciferol (Vitamin D₃):** One of the most dangerous rat poisons out there is a Vitamin D₃-based rodenticide. This type basically increases calcium blood levels so high that it causes a 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. This is the type to avoid in your garage, as it has no antidote!
- **Bromethalin:** This rarer type of rat poison doesn't have an antidote and results in brain swelling. If toxic amounts are ingested, we see clinical signs of walking drunk, tremoring, and seizing. Treatment is symptomatic and may require an extended amount of time in the veterinary hospital due to long-lasting effects (days up to a week).
- **Phosphides:** This type of poison is more commonly seen in mole and gopher poison, and typically doesn't come in the classic blue-green or yellow blocks or pellets. Phosphide rodenticides typically come in a poisoned "gummy worm" form that you put in the dirt. These types of phosphide poisons result in phosphine gas in the stomach, resulting in severe bloat, profuse vomiting, abdominal pain, and potential lung and heart complications. Like cholecalciferol 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: There are various types of mushrooms located throughout the United States that may be non-toxic; however, other types of mushrooms may be irritating to the stomach and intestines, while some types of mushrooms may be hallucinogenic or result in liver failure (i.e., acute hepatic necrosis). While the likelihood of mushroom toxicity is low, it's very difficult for veterinarians and pet owners to be able to readily 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), provided your dog is alert, asymptomatic, and able to adequately protect his or her upper airway (i.e., voice box). Sometimes stomach pumping (i.e., gastric lavage) is even necessary in severe cases. In general, clinical signs seen from mushroom ingestion include vomiting, diarrhea, abdominal pain, walking drunk, depression, tremors, and seizures, with liver and kidney damage occurring later. One can collect all the pieces of the mushroom in a paper towel, place them in a labeled ("DO NOT EAT! POISONOUS") paper bag, and refrigerate the sample for future possible identification by a mycologist.



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 and molding food products have the potential to contain tremorgenic mycotoxins, which are toxic to both pets and wildlife. 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 CNS signs (including incoordination, tremors, and seizures). Ruleouts for this include other toxins that can cause similar signs, such as metaldehydes (i.e., snail bait), strychnine, organophosphates (the ingredient in some types of fertilizers), and methylxanthines (i.e., chocolate). Prompt decontamination and treatment is necessary!

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 been poisoned, contact your veterinarian or **Pet Poison Helpline** at **800-213-6680** with any questions or concerns. Please be aware there is a **\$35.00**/per case fee, but it may save your pet's life!

Resources: Pet Poison Helpline (PPH) is an Animal Poison Control that provides treatment advice and recommendations relating to exposures to potential dangerous plants, products, medications, and substances, to veterinarians, veterinary staff and pet owners 24 hours a day, 7 days a week. Please be aware there is a **\$35.00**/per case consultation fee. Pet Poison Helpline is located in Bloomington, Minnesota. The Helpline number is **800-213-6680**. For further information regarding services, visit the PPH website at www.petpoisonhelpline.com.