

WINTER AND HOLIDAY HEALTH HAZARDS FOR ANIMALS

Texas Department of State Health Services, Zoonosis Control

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With the arrival of the winter months and holiday season, there are additional health hazards that are of concern for animals; some are potentially fatal. A few of these health risks could be brought into the home inadvertently, thereby increasing a pet's possibility of exposure. To keep the season safe, protect animals from contact with or ingestion of the following:

1. **Antifreeze** - this mixture contains ethylene glycol, a product that can cause lethal kidney failure and metabolic acidosis (accumulation of acid in the blood and body tissues) if ingested. It has a sweet taste that attracts animals and can be toxic in small doses (i.e. 1-2 tablespoons can produce toxicity in a medium-sized dog). Antifreeze can be toxic even when diluted in water.

At least one brand of antifreeze is available that uses propylene glycol for the active component as an alternative to ethylene glycol. Larger quantities of the propylene glycol-based antifreeze usually have to be swallowed to produce toxicity as compared to ethylene glycol-based antifreeze. Additionally, propylene glycol-based antifreeze does not metabolize in the animal's system to form products that cause kidney damage; however, it can still cause illness and death via metabolic acidosis.

An antidote is available for antifreeze poisoning, but early recognition of ingestion and immediate intensive treatment are imperative for the survival of the animal. The best medicine, though, is to prevent animals from being in contact with this toxic substance by having antifreeze changed by a professional who knows how to properly dispose of it. If individuals change their own antifreeze, they should not drain it into the sewer or leave it setting out in a pan for any amount of time (all it takes is a few seconds for an animal to ingest it). Some snow globes may contain this product, so keep them out of reach from your pets.

2. **Chocolate** - Baker's or baking chocolate is the form of chocolate that contains a higher concentration of stimulant (theobromine) than either semi-sweet or regular milk chocolate. The extent of toxicity an animal exhibits after consuming chocolate is based on a variety of factors, such as the type of chocolate ingested, the size of the animal, or an animal's individual sensitivity to chocolate. Dogs in particular are attracted to sweet treats. Some typical clinical signs of chocolate toxicity include excessive excitability, restlessness, increased heart rate, muscle tremors, vomiting, and diarrhea. The last two clinical signs may be transiently present due to an animal consuming any amount of chocolate (i.e., any ingestion of chocolate may cause gastrointestinal upset, but not extensive toxicity). The literature gives a wide range of toxic levels, so a veterinarian should be consulted immediately to discuss the appropriate action to be taken if an animal has consumed chocolate. There is no specific antidote for chocolate toxicity. Animals can be treated by a veterinarian to address any clinical signs they are exhibiting; vomiting may be induced within 2 hours of the chocolate consumption depending on the amount ingested and other factors.

3. **Xylitol**^{1,2} - another dangerous substance associated with sweet treats is xylitol. Xylitol is among a group of sugar substitutes classified as sugar alcohols (somewhat a misnomer as they are not alcoholic); it might be found in some "sugar-free," "reduced-sugar," or "diet" foods such as gum, candy, baked goods, ice cream and peanut butter. Look for the term "xylitol" or the general term "sugar alcohol" on food labels when checking for

ingredients. In dogs, even a small amount of xylitol can cause toxic effects; it can also be fatal. If a dog consumes xylitol, it can cause hypoglycemia (sudden decrease in blood glucose) and/or liver failure. If you suspect that your dog has eaten a product containing xylitol, you should take it to a veterinarian immediately, as signs of toxicity can start within 30 minutes of ingestion (signs could also be delayed for a few days). Some of the clinical signs of xylitol toxicity in dogs include weakness, lethargy, vomiting, diarrhea, muscle tremors, seizures, anemia, increased thirst, increased urination, and bloody or tarry feces. There have been some indications that ferrets may react to xylitol in the same way that dogs do. Cats may also exhibit some of these clinical signs if they ingest xylitol; however, xylitol poisoning in cats appears to be rare, possibly because they may metabolize it differently or because they typically are not interested in eating food products that contain this substance.

4. **Mistletoe** - the berry of this plant is the most toxic component, especially if it is chewed instead of swallowed whole. If the berry is ingested in sufficient quantity, it can cause gastrointestinal and neurological signs, including convulsions.
5. **Poinsettia** - whether this plant is toxic has been debated for years. The most recent findings are that it contains no toxic chemical. However, as with any plant that an animal is not accustomed to eating, it can cause diarrhea and vomiting (a protective mechanism to eliminate the foreign substance). Animals tend to be attracted to poinsettias, so it is a good practice to keep these plants out of their reach.
6. **Holly** - the red berries on the holly plant, if consumed in large amounts, may cause gastrointestinal signs such as vomiting and diarrhea. These clinical signs can lead to dehydration, which may need to be treated with injectable fluids.
7. **Ivy** - this plant is not acutely toxic, but it can cause gastrointestinal upset if ingested.
8. **Christmas cactus** - this plant is nontoxic, but it can cause vomiting and transient diarrhea if consumed.
9. **Tinsel** - cats in particular are attracted to playing with Christmas tree tinsel. If ingested, it can cause an intestinal blockage or intussusception (prolapsing of one part of the intestine into the cavity of an immediately adjoining part). If indoor cats are present, it would be prudent to avoid using strands of tinsel. It would also be advisable to place breakable ornaments at the top of the tree. An investment in shatterproof ornaments might also be worthwhile.
10. **Glow jewelry**³ - dibutyl phthalate is a chemical contained in glow-in-the-dark jewelry, which are popular items at a variety of festivities. Although the chemical may have the potential to cause death via respiratory paralysis, pets generally will only ingest a minimal amount due to its unpleasant taste and the fact that only a small amount of the chemical is present in the jewelry. Pets that have bitten into the jewelry may exhibit heavy salivation, hyperactivity, and aggressive behavior, but they typically recover within minutes. Immediately after a pet happens to ingest this chemical, it helps to feed it small quantities of milk, canned food, or tuna juice to dilute the chemical in its mouth. Wash off any drops of the chemical that might be on the pet's coat and flush the pet's eyes with water if there has been ocular exposure. There is no known antidote for dibutyl phthalate; pets that have ingested large quantities should be monitored and given supportive treatment if warranted.

11. **Cold** - the U.S. Animal and Plant Health Inspection Service's *Animal Welfare Act* recommends that ambient temperature should not drop below 50 degrees Fahrenheit, especially when sick, aged, or young animals are present. If it does, plan to supplement the animal's environment with auxiliary heating and additional bedding. Additionally, animals should always be provided with adequate protection and shelter from the direct effect of wind, rain, or snow. Remember, animals in Texas are not acclimated to cold weather, so they must be protected from extreme weather conditions.

If you know or suspect that an animal has ingested any of the above items (1-10), immediately consult a veterinarian, animal emergency clinic, or poison control center. The **Texas Poison Center Network** can be reached at **1-800-222-1222**. The **ASPCA Animal Poison Control Center** can be reached at **1-800-548-2423**.

¹Food and Drug Administration. Paws off xylitol; it's dangerous for dogs: <https://www.fda.gov/consumers/consumer-updates/paws-xylitol-its-dangerous-dogs>

²Mayo Clinic Staff. Artificial sweeteners and other sugar substitutes: <https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/artificial-sweeteners/art-20046936>

³Rosendale ME. Glow jewelry (dibutyl phthalate) ingestion in cats: <https://www.aspcapro.org/resource/shelter-health-poison-control/unpalatable-lure-glow-jewelry> or *Veterinary Medicine* 1999;August:703.

Additional information and resources are available at:

Wilson PJ. <https://www.elsevier.com/connect/8-tips-to-keep-your-pet-safe-from-winter-and-holiday-hazards>

Wilson PJ. *Puppy Pal Pointers: From the True Tails of Ripple and Jessie*, AuthorHouse: Bloomington, IN (2005)

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