Antifreeze poisoning: prevention tips

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In the North, we depend on the wintertime use of antifreeze in the form of ethylene glycol to keep our cars going. Ethylene glycol is also used as an industrial solvent and rust remover. Unfortunately, our pets can die from the ingestion of this chemical, whether from a leaky radiator's puddle, or a tipped over container on the garage floor. As little as a half-teaspoon of antifreeze can cause symptoms and death in pets. And because of its sweet taste, animals lap it up, not knowing the danger of ingesting it.

How does antifreeze harm animals?

Ethylene glycol is converted to substances which draw calcium from the bloodstream. The calcium crystals are deposited in the kidney, producing permanent, fatal kidney damage.

Signs of antifreeze poisoning

Initially (one to six hours after ingestion), the pet may vomit and appear drunk. The ethylene glycol enters the central nervous system and produces a narcotic effect. Although after the initial signs, the animal may appear to be getting back to normal, 24 hours after ingestion the insidious symptoms begin. Vomiting, anorexia (not eating), ataxia (stumbling), and convulsions proceed into coma, and then death.

Diagnosis and treatment

Diagnosis is difficult to make from clinical signs alone since they mimic other conditions, so your veterinarian will take a circumstantial history, and if suspected, will proceed with treatment.

Treatment is done within 3 or 4 hours of ingestion and includes detoxification with activated charcoal, administration of ethanol by the veterinarian, and IV fluid therapy. An enzyme inhibitor called 4-methylpyrazole is available at some clinics. Therapies are only effective if administered within 24 hours of ingestion.

You must see a veterinarian immediately if you suspect your pet has ingested antifreeze. In addition, follow these guidelines to prevent your pet from ingesting antifreeze:

- Store antifreeze in sealed, clearly marked containers, ideally in a cupboard or on a high shelf not easily accessible to pets and children.
- Whenever possible, use antifreeze products that do not contain ethylene glycol.
- Regularly check your vehicle(s) for antifreeze leaks and obtain proper service should a leak occur.

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- Clean up antifreeze spills immediately and dispose of contaminated towels in a sealed container pets and children cannot open.
- If you drain your vehicle radiator at home, keep pets out of your garage/work area.
- During outdoor excursions, do not allow pets to drink out of or walk through puddles, as water runoff may contain antifreeze from other vehicles.
- Do not let your pet roam your neighborhood or property unsupervised.

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