



Your Trusted Source For Toxicology and Pet Health Advice

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Ethanol Toxicosis in Pets

Ethanol is a form of alcohol that can be found in many sources including alcoholic beverages, some mouthwashes, liquid medications, hand sanitizers, and uncooked yeast-based bread dough. Given all of these sources, there are many ways that pets can ingest ethanol and be at risk of toxicity.

Ethanol toxicity in pets can cause hypoglycemia and hypothermia. Effects are dose-dependent and vary based on age, weight, breed, and species. Young animals are reported to be at increased risk due to their small size and immature organ systems, as well as their increased susceptibility for hypoglycemia. Early clinical signs from ethanol toxicity are typically related to the CNS system, such as depression, weakness, ataxia, or coma. Other common clinical signs include vomiting and gastric irritation, tachycardia, hypotension, and changes in respiratory rate. In severe cases, respiratory depression, failure, and even death may occur. Signs are typically seen rapidly, often within one hour of ingestion, but they may be delayed up to two hours.

Diagnosis of ethanol toxicity in a pet is typically based on history and clinical signs, however blood work may show an increased blood alcohol level, as well as electrolyte abnormalities and metabolic acidosis. A pet that has consumed ethanol will also test positive on the Kacey ethylene glycol test, potentially confusing treatment recommendations if the exact exposure is unknown.

Ethanol is very quickly absorbed by the GI tract (80-90% absorption in 20-30 minutes), so emesis is typically an ineffective treatment option. However, in an asymptomatic animal, it can be attempted with recent ingestion (within 15 minutes of ingestion for oral liquid or within 60 minutes for bread dough). If an animal is showing signs, emesis should never be attempted. Activated charcoal is not effective at binding ethanol and therefore not recommended.

If an animal is known to have ingested a small amount of alcohol and is asymptomatic, it can typically be monitored at home and given small high-sugar meals to prevent the development of hypoglycemia. If an animal has clinical signs or a known ingestion of a large amount of ethanol, they require immediate veterinary attention as hypoglycemia and hypothermia need to be treated aggressively. Typical treatment includes monitoring blood glucose levels and treating with dextrose boluses as indicated, IV fluid therapy, rewarming, and supportive care to address adverse GI and CNS effects. If ethanol toxicity is addressed and treated quickly, the prognosis is excellent.