



## Common Toxins: Chocolate, Rodenticide, Antifreeze

### Chocolate Toxicity

Chocolate contains substances called methylxanthines, which include stimulants like caffeine and theobromine. Dark or baking chocolate contains a higher concentration of theobromine than milk chocolate.

Clinical signs can vary from hyperactivity and tremors to vomiting, diarrhea, seizures, heart arrhythmias and even death.

Treatment depends on how long it has been since ingestion of the chocolate. If your pet is brought in within 4 hours after ingestion they will be given a drug to make them vomit. If more time has passed or your pet is showing signs of toxicosis, treatment will likely include activated charcoal, IV fluids, and hospitalization to monitor for progression of signs.

The overall prognosis is good for pets that are treated. If a large amount of chocolate is ingested and absorbed it can become fatal.

### Rodenticide Ingestion

Anticoagulant rodenticides (D-Con, Ratimus, Promar, Havoc) work by inhibiting the action of vitamin K, which is needed for certain clotting factors to work. Without these factors, the pet is at high risk of bleeding. If your pet is brought in immediately after ingestion it can be given a drug to induce vomiting and/or activated charcoal to absorb toxins left in the stomach. Your pet will then usually be sent home with Vitamin K to prevent any bleeding for 2-4 weeks depending on the type of rodenticide ingested.

Signs of bleeding can start within 3- 4 days after ingestion, signs include pale gums, weakness, blood in the stool or vomit, or shock. Your pet can also bleed into the abdomen, chest, or joints.

Diagnostic blood tests will be run to determine red blood cell count and clotting times. Clotting times will be prolonged before bleeding is noted, usually within 1-2 days of rodenticide ingestion.

If your pet is actively bleeding, treatment includes plasma transfusions, Vitamin K administration, and hospitalization to monitor patient status. If you suspect your pet of ingesting a rodenticide please bring the box with you so it can be examined by staff.

### Antifreeze

The toxic component of antifreeze is ethylene glycol which causes acute kidney failure. Antifreeze has a sweet taste to it which can actually encourage pets to drink it. Unfortunately, small amounts can cause irreversible kidney damage and death.

Clinical signs include the pet appearing drunk, anorexia, vomiting, collapse, or seizures.

Diagnostic tests will be run to check for ethylene glycol in the blood, look for signs of kidney failure, and check for crystal in the urine which may indicate ingestion.

Treatment includes IV fluids, 4-MP (antidote for ethylene glycol), activated charcoal, and aggressive monitoring for any changes in clinical signs.

The prognosis is affected by the amount of antifreeze ingested and time before treatment. This is an extremely life threatening emergency and the prognosis for many pets is very guarded.

**Other Common Toxins and Organ Systems Affected That May Require Veterinary Care:**

NSAIDs (Rimadyl, Metacam, Aspirin) – affect kidneys, liver, and GI tract

Grapes & Raisins – affect kidneys

Onions – affect red blood cells

Organophosphates (flea and tick solutions) – affect nervous system and GI tract