

# Ethylene Glycol Poisoning

Antifreeze poisoning is common in dogs and cats and usually results in death if patients are not diagnosed and treated promptly. Unfortunately, the mortality rate for dogs that ingest antifreeze is reported to range from 59% to 70% and is even higher in cats. The American Association of Poison Control Centers reports that antifreeze is the second most common cause of fatal poisoning in animals. The high incidence is due to the availability and pleasant taste of antifreeze as well as the small amounts necessary to induce poisoning. Ethylene glycol makes up about 95% of antifreeze solutions.

Prognosis declines 8 hours after ingestion in dogs and 3 hours after ingestion in cats. Clinical signs and laboratory results are key in recognizing ethylene glycol poisoning. Signs can appear anywhere from 30 minutes to 12 hours after ingestion, depending on quantity consumed as signs are dose dependent. Signs can include: nausea, vomiting, mild to severe lethargy, ataxia (failure of muscle coordination), nystagmus, polyuria (increased urination) and polydipsia (increased water consumption). After 12 hours, nervous system signs diminish which temporarily looks like the animal has recovered. Between 12 and 72 hours, the animal may experience renal (kidney) failure, severe CNS (central nervous system) depression, coma, seizures, anorexia, vomiting, oral ulcers, salivation and oliguria (severely reduced amount of urination).

Prognosis can be good if treatment is given within 6 hours after ingestion in dogs and 3 hours in cats, although treatment should be rendered at any time as it has been shown to be beneficial up to 36 hours.

The best treatment to antifreeze or ethylene glycol poisoning, is prevention. Eliminate access to antifreeze from drained radiators and containers must be inaccessible, as dogs will open containers by chewing. There are now antifreeze products available which are

classified as non-toxic. Increased usage of these non-toxic products can decrease the frequency and tragedy of antifreeze poisoning.