

# Anti-freeze Poisoning



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Every year, by some estimates, about 10,000 dogs and cats are victims of accidental poisoning by automobile antifreeze. A pet does not have to drink a lot of antifreeze to be poisoned. Most brands of commercial antifreeze consist of 95 percent ethylene glycol, an extremely toxic chemical. Even a few licks of this sweet-tasting liquid can be fatal to a cat or dog. (Ethylene-glycol-based antifreeze is also extremely hazardous to children. A few ounces are lethal.) For a medium sized dog, ingestion of about 2 ounces (3-4 tablespoons) is toxic. For cats, as little as 1/4 of an ounce (1-2 teaspoons) can be lethal. Antifreeze poisoning commonly occurs in spring and fall when car owners replace the old antifreeze with fresh antifreeze in their car radiators. However, poisoning can happen anytime, particularly when a car boils over or when a hose leaks, releasing the antifreeze. Another source of antifreeze are the decorative "snow globes" glassware. The liquid in these displays contain 2% antifreeze and are very toxic.

Both cats and dog are attracted to the smell and taste of ethylene glycol. Therefore, when you or a member of your household changes antifreeze in the driveway, be sure to collect all of the waste coolant and properly dispose of it. And never leave a bucket of ethylene-glycol coolant unattended - even for a moment. Also remember that your car can leak coolant at any time. If you see a puddle of greenish-colored liquid in your driveway, flush the area with plenty of water and don't delay locating and fixing the leak. Another method of quick clean up is to spread cat litter on the spill, clean up with rags (which are bagged immediately) and then rinse. Antifreeze will biodegrade in the environment, but it takes weeks or months to do so, so removing the spill is absolutely essential.

Antifreeze poisoning occurs in two stages: In the first stage, the ethylene glycol in the antifreeze causes a drunken appearance in the animal within about 30 minutes which may continue for several hours. After passing through stage 1, the animal appears to recover. Stage 2 begins when the dog's liver begins metabolizing the ethylene glycol, changing it into more toxic substances. Within 12 to 36 hours of ingestion, these metabolites have reached such a level that the dog's kidneys stop functioning, and the animal slips into a coma.

Getting your pet to a veterinarian is critical within the first 9-12 hours following ingestion. After that length of time, the liver will have already begun metabolizing the ethylene glycol into substances that cause kidney failure and ultimately death. Inducing vomiting or give activated charcoal very short-term fixes and not a cure. The faster your pet is treated by a veterinarian the better the chances of recovery. Again, this poison is extremely toxic.

Symptoms of antifreeze poisoning include a drunken appearance including staggering, lack of coordination, and apparent disorientation and vomiting. The animal may appear listless and depressed.

## Prevention

1. Switch to a brand of antifreeze that contains propylene glycol instead of ethylene glycol.
2. Keep antifreeze sealed and away from animals; clean up spills completely, and fix any leaks immediately.
3. Don't allow your pet to wander unattended near driveways, roads, garages, or other places where she could come into contact with antifreeze.
4. Keep other products that contain ethylene glycol—like paint, cosmetics and novelty snow globes—out of the reach of animals, as well as any product of which you are not certain of the ingredients.
5. Monitor your pet for strange behavior. If you think she may have ingested antifreeze, take her to a veterinarian immediately.