



Antifreeze (ethylene glycol) poisoning in cats

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Key Issues...

- ★ The RSPCA is aware and understands that cat owners are concerned about antifreeze poisoning. Although a number of cats are reported as poisoned each year, it is not clear how many of these result from ingesting antifreeze or whether other poisons are involved.
- ★ The RSPCA are themselves concerned that cats are dying from some form of poisoning which, may, in some cases, be deliberate.
- ★ Poisoning of cats is a criminal offence under the Animal Welfare Act 2006. Where possible our inspectors will investigate such incidents to try and identify who may be responsible.
- ★ The RSPCA is concerned that highlighting antifreeze as a poison might stimulate 'copycat' poisoning since the product is cheap and freely available
- ★ We are educating and advising owners of the signs of poisoning in cats and urge them to take their animals to the vet as soon as any symptoms occur. We also ask them to report any evidence of deliberate poisoning to us.

Background

Ethylene glycol (EG), the main constituent of antifreeze and some vehicle screen washes and de-icers, is very poisonous to domestic animals, particularly cats - only a few millimetres of EG can cause serious toxicity and death. Most cats who are exposed to antifreeze (or other poisons) are not taken to a vet until some time after the exposure, by which point they already have acute kidney damage. Sadly, once this has occurred the prognosis for the cat is likely to be very poor.

In 2014, the RSPCA received around 800 calls to our cruelty line reporting incidents of suspected antifreeze poisoning of animals, with the majority being in relation to cats. Other cat charities deal with similar enquiries. The Society also educates owners on the signs of poisoning, urging them to take their animals to the vet immediately any symptoms occur and to report any evidence of deliberate poisoning to ourselves.

The RSPCA has two major concerns:

1. that cats are dying from some form of poisoning which may, in some cases, be deliberate, and
2. that highlighting antifreeze as a poison might stimulate 'copycat' poisoning since the product is cheap and freely available.

We have therefore looked more closely at the issue in order to decide how best to deal with these concerns, and in particular how to respond to members of the public whose cats are sadly dying.

Why do cats ingest antifreeze?

It is not known why cats ingest antifreeze. It has long been stated that it is very palatable to them as it tastes sweet and they are therefore attracted to drinking it. On this basis, the RSPCA and other animal welfare charities and organisations have, to date, focused on working with antifreeze manufacturers to

improve product labelling and have bittering agents (Bitrex) added to make the taste of antifreeze aversive to cats. Many antifreeze products, e.g. Halfords antifreeze, do now contain Bitrex. We have also investigated non-toxic forms of antifreeze with a view to promoting these. Propylene glycol for example is considered less toxic than EG and can be used in antifreeze, but is unpopular in comparison due to it being less effective and more expensive than EG. Also, such products do not appear to be readily available in the UK.

However, on further investigation, we have found that cats lack the ability to taste sweetness. The original theory about cats being attracted to the product is therefore unfounded; in fact they are unlikely to find antifreeze attractive unless it is mixed with a palatable food. The addition of bittering agents is therefore unlikely to be an effective solution and we are no longer pursuing this approach.

Is antifreeze the real cause of cat poisoning?

Antifreeze is not the only substance poisonous to cats. Although hundreds of cases were reported to the RSPCA last year, these were largely *suspected* as antifreeze poisoning and not confirmed as such. It is possible that cat owners blame antifreeze for sudden death or acute kidney failure without seeking veterinary confirmation because it is well publicised. The majority of the calls to the RSPCA cruelty line referred to 'cluster cases' where the caller also reported being aware of other suspected incidents in the local area. Most callers alleged deliberate poisoning had taken place through methods such as antifreeze being mixed with food and left out for cats to ingest. Accidental poisoning from leaking car radiators or accidental spillages are also commonly suggested, but there is no evidence for either of these occurring on a regular basis.

RSPCA veterinarians rarely give antifreeze poisoning as a definitive diagnosis. Antifreeze may be suggested as one of many potential causes of sudden death and/or kidney failure, but it is not routine to carry out tests (postmortems) to either confirm or refute this. Such tests are expensive and RSPCA veterinarians have found that pet owners are largely unwilling to pay for a postmortem. There is no information readily available on the situation in private practice. The Veterinary Poisons Information Service (VPIS) does collect information on the number of enquiries received regarding antifreeze poisoning, however few of these cases are confirmed by postmortems.

In summary, there is no reliable data to show what proportion of cat poisoning is due to ingestion of antifreeze and thus to assess the true extent of the problem. More data would need to be collected if we are to better understand the situation. This would require the testing of cats that are presented at vets with suspected antifreeze poisoning. This has significant resource implications in terms of diagnostic tests and the cost of hospital staff time.

What should the public do to keep their cats safe?

The most important advice for cat owners is to be extra vigilant, check the health of their cats regularly, know the signs and symptoms of poisoning and seek veterinary help immediately should any be seen. The sooner the cat receives veterinary treatment, the better chances of survival. The main symptoms are as follows and can become evident from 30 minutes after ingestion:

- Vomiting
- Seeming depressed/sleepy
- Appearing drunk and uncoordinated
- Seizures (fits)
- Difficulty breathing

We also have the following advice for cat owners on what to do if they suspect their cat may have been poisoned:

1. Stay calm. Remove your cat(s) from the source of poison.
2. Contact your vet immediately; inform them when, where and how the poisoning occurred. If appropriate, carefully take the packaging/plant/substance to the vet. Don't expose yourself to any harm.
3. Follow your vet's advice.
4. Report any evidence of deliberate poisoning to our cruelty line (0300 1234 999).

Owners should also be advised to never attempt to treat or medicate their cat themselves. Some medicines for humans or other animals may be poisonous to cats. It is also important to never attempt to make cats vomit.

Although we do not know how commonly such incidents occur, accidental poisoning is possible and members of the public should take care when using antifreeze:

- Always keep antifreeze in clearly labelled, robust, sealed containers, away from pets and their environment
- Clean up spills immediately, no matter how small. Ensure pets cannot access the area until it's clean and safe
- Always dispose of antifreeze and water coolant safely and responsibly. Contact your local authority for advice; see www.direct.gov.uk and 'search for your local council in England' on the home page

Antifreeze is not the only substance poisonous to cats, many common household items can also be poisonous. Pet owners can find more information and advice on poisoning on the [RSPCA website](http://www.rspca.org.uk).