

Just a Tiny Amount of This Poison Can Kill – And It's Found in Many Homes

It's toxic for a 50-pound dog, and can easily be deadly for a 10-pound one, yet it's found in many homes. Signs of poisoning start in just 15 to 60 minutes, and time is of the essence if you want to save your dog's (or cat's) life. What to know about this growing problem.

Analysis by [Dr. Karen Shaw Becker](#)

STORY AT-A-GLANCE

- As e-cigarettes continue to grow in popularity with people trying to quit smoking, the incidence of nicotine poisonings among pets has also increased
- The liquid nicotine in e-cigarettes, cartridges and vials is much more potent than the nicotine regular cigarettes, and flavored nicotine gives off an aroma that can be attractive to pets
- Liquid nicotine can also bypass the liver and be absorbed directly into the bloodstream through the skin and mucous membranes of your pet's mouth
- Signs of nicotine poisoning occur quickly after ingestion, and usually start with vomiting. The more nicotine ingested, the more severe and potentially life-threatening the symptoms
- If you know or suspect your dog or cat has ingested nicotine, there's no time to waste. Get your pet to your veterinarian or the closest emergency animal hospital immediately

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Electronic cigarettes were introduced a decade ago, and they've grown steadily more popular as more and more smokers try to kick the habit. That's the good news.

The bad news is that for smokers with pets, e-cigarettes can pose an even bigger danger to furry family members than second or third-hand tobacco smoke. The problem with e-cigarettes is the nicotine, which is highly toxic to pets.

Most regular cigarettes contain between 8 and 40 milligrams (mgs) of nicotine per cigarette, while e-cigarettes can contain up to 80 mgs per teaspoon of liquid,¹ and refill containers of liquid nicotine can contain up to a whopping 500 mgs per teaspoon.

In addition, many liquid nicotine products contain flavoring agents that can make them enticing to pets, especially dogs. According to a September 2014 warning by the Pet Poison Helpline:

"... [The helpline] has encountered a sharp uptick in calls concerning cases of nicotine poisoning in pets that ingested e-cigarettes or liquid nicotine refill solution.

In fact, over the past six months, cases have more than doubled, indicating that along with their increased popularity, the nicotine-delivering devices are becoming a more significant threat to pets.

While dogs account for the majority of cases, nicotine in e-cigarettes and liquid refill solution is toxic to cats as well."²

What Are E-Cigarettes?

If by chance you've never heard of an e-cigarette or aren't sure what they are or do, they're simply a newfangled nicotine delivery system in the age of e-everything.

The "cigarette" cylinders are battery-operated devices that turn liquid nicotine into vapor that is inhaled. When a person is using an e-cigarette, he or she is said to be "vaping" as opposed to smoking. According to Pet Poison Helpline:

"The most recent craze is flavored e-cigarettes, which are available in an array of flavors from peppermint to banana cream pie, and everything in between."

It's easy to imagine how a pet, especially a dog, might be drawn to a curiosity that smells like banana cream pie, isn't it?

Why Are E-Cigarettes so Toxic to Pets?

For starters, if the smell of flavored e-cigarettes is enticing to your pet, it means he or she will be more likely to investigate and try to sample them than a regular cigarette. And then there's the issue of the level of nicotine in e-cigarettes.

Each cartridge contains about the same amount of nicotine as two regular tobacco cigarettes. Even worse, the nicotine cartridges are purchased in packs of 5 to 100, so if a pet chews into a pack of cartridges, the danger of poisoning increases exponentially.

According to the Pet Poison Helpline, ingesting a single cartridge will cause signs of toxicity in a 50-pound dog, so in a 10-pound dog, just one cartridge can be life-threatening. And any dog of any weight can be severely and even fatally poisoned if they ingest multiple nicotine cartridges.

In addition, if chewed, the cartridges themselves can cause injury to your pet's mouth, and gastrointestinal (GI) upset and/or obstruction if they are swallowed. Finally, some people fill their own e-cigarette cartridges from bottles of "e-liquid" or "e-juice" that contain significant amounts of nicotine.

Obviously, these bottles of nicotine pose the greatest poisoning hazard to pets. Cats can be in double trouble because e-cigarette vapor contains **propylene glycol**, which is proven to cause Heinz body hemolytic anemia in kitties.

Heinz body destroys red blood cells. Cats can ingest propylene glycol by licking or chewing on an e-cigarette.³

Symptoms of Nicotine Poisoning

If your pet ingests nicotine, signs of poisoning will be apparent within about 15 to 60 minutes, and the greater the amount ingested, the more severe the symptoms, including:

- Drooling
- Tremors
- Vomiting
- Ataxia
- Diarrhea
- Muscle weakness
- Agitation
- Seizures
- Increased heart and respiration rates
- Cyanosis
- Depression
- Coma
- Lethargy
- Cardiac arrest

Another feature of liquid nicotine that makes it so dangerous is it can be absorbed through your pet's skin or the mucous membranes of her mouth. When a dog eats a regular tobacco cigarette, the liver gets rid of much of the nicotine before it hits the bloodstream.

But nicotine absorbed through the skin or mouth bypasses the liver and goes directly into the bloodstream, which means more of the nicotine is gets into your pet's system.

Nicotine Exposure in Pets Is a Medical Emergency

If you suspect or know your pet has ingested liquid nicotine (or any form of nicotine from an e-cigarette, regular cigarette, nicotine patch or nicotine gum), call your veterinarian or the nearest emergency animal hospital immediately. You can also call the **Pet Poison Helpline** at 1-855-764-7661, or the **ASPCA Animal Poison Control Center** at 1-888-426-4435.

Remember: nicotine poisoning happens very rapidly, especially after ingestion of liquid nicotine from an e-cigarette, so immediate veterinary care can mean the difference between life and death for your pet. Home care is usually not sufficient for even small doses of nicotine, due to the severity of the poisoning.

To help prevent poisoning, make sure e-cigarettes, refill cartridges and/or bottles, and any other products containing nicotine are kept well out of the reach of furry family members (and children as well).

Sources and References

[VetStreet June 15, 2015](#)

¹ [VetStreet January 3, 2017](#)

² [Pet Poison Helpline, September 2, 2014](#)

³ [Dogtime.com](#)
