

Red Alert: These Flea and Tick Products Could Harm Your Pet

It's not just spot-on products taking the lives of cats and dogs. These government-approved tablet and topical products have been added to the list for serious neurologic adverse effects on muscle control that include tremors and seizures.

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

STORY AT-A-GLANCE

- Permethrin, a parasiticide, is highly toxic to cats; in fact, many, if not most spot-on flea/tick products for dogs have the potential to poison your cat
- In 2018, the FDA issued an alert on another chemical insecticide, isoxazoline due to the potential for neurologic adverse events in dogs and cats
- In 2010, the EPA issued an advisory on approximately 70 spot-on flea and tick control products due to a dramatic increase in reports of skin irritation, skin burns, seizures, and death
- For the health and safety of your pet, especially if you have a cat or small dog, it's very wise to find natural, nontoxic pest preventives

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One of the first articles I wrote here at Mercola Healthy Pets about the dangers of permethrin, found in spot-on flea and tick products, was back in 2011. Yet, here we are in the latter half of 2020, and pets are still being inadvertently poisoned by permethrin and several other pest-killing agents found in flea/tick products. Recently a cat in Missouri was accidentally poisoned by permethrin in a flea control product for dogs.¹

It was apparently a spot-on product, because the recommendation to pet parents in the news piece was to "try to avoid any type of flea medication easily spread from dog to cat through direct contact. Using a pill form of flea control is a much safer option." This tells me the product was applied to a dog, and the cat came in contact with the dog.

Needless to say, I don't agree with advice to switch to pill form instead and would much prefer that pet parents exhaust all nontoxic remedies (see below) first before reaching for chemical pest preventives.

It's important to understand that permethrin is so dangerous for cats that if a kitty is exposed, symptoms such as dilated pupils, drooling and muscle tremors can appear within five to ten minutes. Seizures can begin within a half hour. If you think your cat has been in contact with this chemical, the recommendation is to put him in warm water and bathe him with dish soap followed by an immediate trip to your veterinarian or the nearest emergency animal hospital.

PLEASE NOTE: Dish soap (many wildlife rescuers recommend **Dawn**) works in emergency situations to quickly and thoroughly remove toxic residues from pet fur. I am NOT recommending dish soap as a pet shampoo.

Four Cats Died in Four Weeks

Other parasiticides used in flea/tick products for dogs are also deadly for cats. In fact, the current Pet Poison Helpline list of the top 10 cat poisons puts “spot-on flea/tick medications for dogs” at number 2.²

In 2013, four cats died in a four-week period after their owners treated them with spot-on products intended for dogs.³ Neither the names of the products nor the parasiticides they contained were mentioned. In one case, the owners noticed fleas on both their cats, so they applied “just a drop” of a topical spot-on flea treatment on each kitty.

Within hours both cats became very ill and one began convulsing. The owners rushed them to a veterinary clinic, but neither survived. Sadly, the owners knew the flea treatment was intended for dogs but figured a small amount would be safe for their kitties.

Another Potentially Poisonous Parasiticide: Isoxazoline

The U.S. Food and Drug Administration (FDA) has issued an alert to pet owners and veterinarians about the potential for neurologic adverse events in dogs and cats treated with flea/tick products containing isoxazoline, a parasiticide (chemical insecticide).⁴

The quite serious side effects pets have experienced after being given products containing isoxazoline include muscle tremors, ataxia (loss of muscle control), and seizures. The implicated products have received FDA approval and include:

- Bravecto (fluralaner) tablets for dogs
- Bravecto (fluralaner) topical solution for cats and dogs
- Nexgard (afoxaloner) tablets for dogs
- Simparica (sarolaner) tablets for dogs
- Credelio (lotilaner) tablets for dogs
- Revolution Plus (selamectin and sarolaner topical solution) for cats

The FDA doesn't provide any specifics in its alert about the number of adverse events reported or whether they involved primarily cats, dogs, or pets under a certain weight.

The FDA has asked the manufacturers of these products to change the labeling “... in order to provide veterinarians and pet owners with the information they need to make treatment decisions for each pet on an individual basis.”

The agency also suggests that, “Veterinarians should use their specialized training to review their patients’ medical histories and determine, in consultation with pet owners, whether a product in the isoxazoline class is appropriate for the pet.”

I'm guessing most veterinarians who routinely prescribe chemical flea/tick products would only consider pets with a previous history of neurologic issues to be at risk. After all, there's no way to predict a potential problem in healthy animals, and yet the FDA warns that, “... seizures may occur in animals without a prior history.”⁵

Spot-On Products Are High Risk for Cats and Small Dogs

Despite the constant drumbeat from veterinary drug manufacturers, conventional veterinarians, and increasingly, print and broadcast ads promoting flea and tick preventives, needless to say, these chemicals aren't as harmless as their advocates would have us all believe.

Several years ago, the Environmental Protection Agency (EPA) issued an advisory on approximately 70 spot-on flea and tick control products due to a dramatic increase (50%) in reports of adverse events during 2008.⁶ Reactions included skin irritation, skin burns, seizures, and death.

When I first wrote about the advisory back in 2010, there had been over 44,000 reports of adverse reactions, including 600 deaths. In March 2010, the EPA published the results of a year-long study of spot-on products. Their findings included the following:

- Most adverse reactions were seen in dogs weighing between 10 and 20 pounds.
- Reactions in mixed breed dogs were most commonly reported, however, the Chihuahua, Shih Tzu, Miniature Poodle, Pomeranian, Dachshund, Maltese, Yorkshire Terrier and Bichon Frise seem particularly at risk.
- Products containing cyphenothrin and permethrin were especially problematic for small breed dogs.
- Most incidents occurred in dogs under three years old, likely at their first exposure to a spot-on product.
- Dosage ranges were considered to be too wide in some cases and product labeling was identified as needing a revamp in many cases.

Based on their findings, the EPA determined that spot-on product labels needed to provide clearer warnings against using treatments meant for dogs on cats. The agency also recommended that manufacturers lower recommended dosages for some pets to prevent over-medicating.

Safe, Nontoxic Alternatives to Chemical Parasiticides

There are safe, nontoxic alternatives for flea and tick control for pets, and they don't come with a long list of side effects, unlike virtually all forms of chemical pesticides. Alternatives I recommend include:

- A safe, natural DIY pest deterrent (see recipe below)
- Cedar oil (specifically manufactured for pet health)
- Natural, food-grade diatomaceous earth, topically (avoid eyes, nose and mouth)
- Fresh garlic (¼ teaspoon of freshly chopped garlic per 15 pounds of body weight)
- Feed a nutritionally optimal, species-appropriate fresh food diet to bolster your pet's innate immune defenses
- Bathe and brush your pet regularly and perform full-body inspections to check for parasite activity (if you spend a lot of time outdoors, it's important to check your pet and yourself for ticks every night during tick season)
- Use a flea and tick comb to naturally exfoliate your pet's skin while removing or exposing pests (absolutely nothing takes the place of physically checking for ticks)
- Make sure both your indoor and outdoor environments are unfriendly to pests

All-Natural Homemade Pest Deterrent for Dogs

You can make an all-natural pest deterrent for your dog very easily at home. It will help him avoid a good percentage of the pests he encounters, though not all of them. The recipe: mix 8 ounces of pure water with 4 ounces of organic, unfiltered **apple cider vinegar** and 10 drops of neem oil.

Neem oil is not an essential oil. It's expelled or pressed oil and is effective because fleas and ticks are repelled by it. It's also great for pets who are very sensitive to odors. Catnip oil can also be used as a pest deterrent, since it has been proven to be as effective as diethyltoluamide (DEET), the mosquito and tick spray humans use that has a number of toxic side effects.

If you want to add some extra punch to your dog's pest deterrent recipe and he's not sensitive to high quality essential oils, go with five drops of lemon, lemongrass, eucalyptus or geranium essential oil. I use geranium oil quite a bit because I find it very effective. In fact, I use it in my Dr. Mercola natural flea and tick products. If you have a dog who comes in contact with ticks, adding the extra punch of one of the essential oils I listed can be very beneficial.

You can store your homemade pest deterrent in the fridge, which is what I do. Before your dog goes outside mist him with it, being careful to avoid the eyes. The active ingredients, especially the oils in the recipe, dissipate in about four hours, so you may need to reapply it several times throughout the day.

All-Natural Homemade Pest Deterrent for Cats

My recipe for cats is very similar to the one for dogs. Mix 8 ounces of pure water with 2 ounces of organic, unfiltered apple cider vinegar, plus 10 drops of neem oil and 10 drops of catnip oil. Cats and essential oils can be tricky, so I leave the added punch of extra essential oils out of the kitty recipe.

Neither neem nor catnip oil are truly essential oils — they're distillates, so we're safe using those. Catnip oil works to deter mosquitoes as well. Cats aren't prone to heartworm, which is a mosquito-borne disease, but dogs are.

So those are two easy, all-natural recipes you can use to deter pests and as a bonus, they also make your dog or cat smell wonderful! You can use them during flea season, tick season and all summer long, and feel good that you're not using pesticides on your pet.

If you live in an area overrun with pests and must use chemicals, work with your wellness veterinarian to choose the least toxic protocol to manage the parasites in your area. Many veterinarians have integrative protocols that rotate natural deterrents with chemical preventives that reduce your pet's overall direct pesticide exposure.

These same vets will also provide detox strategies that reduce the potential for acute side effects as well as long-term consequences of repeated pesticide exposure.

Sources and References

¹ [KY3, June 13, 2019](#)

² [Pet Poison Helpline](#)

³ [Pittsburgh Post-Gazette, September 28, 2013](#)

⁴ [FDA.gov, Animal Drug Safety Communication](#)

⁵ [FDA.gov, Fact Sheet for Pet Owners and Veterinarians](#)

⁶ [EPA.gov](#)