

Pyrethrin and Permethrin Toxicity in Dogs and Cats

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Toxin

[Pyrethrin](#), [Permethrin](#), and Pyrethroids.

Source

Found in many types of flea, tick, and insect control products. Active ingredient names include pyrethrin, etofenprox, allethrin, resmethrin, sumethrin, and permethrin. Several name brands include Adams, Bio Spot, Duocide, Happy Jack, Hartz, K9 Advantix, Mycodex, Ovitrol, Proticall, Raid, and Zodiac.

General Information

Pyrethrins are derived from the flower of the pyrethrum plant, *Chrysanthemum cinerariaefolium*. They kill fleas, ticks, mites, and other insects and are popular among pet owners who prefer to use all-natural products. Permethrins are synthetic pyrethroids that are more stable and last longer. The permethrins are commonly used for collars, dips, sprays, shampoos, and spot treatment. Both the natural and the synthetic compounds work by interfering with nerve impulses, thus paralyzing and killing the parasite.

These toxins cause interference with the pet's nervous system if overdosed. DO NOT use permethrins on cats and DO NOT use any product on a cat unless it is specifically made for cats. Small dogs are more susceptible to pyrethrin/permethrin toxicity than larger dogs since their surface area to weight ratio is higher. Symptoms may be seen within a couple of hours, especially in cats.

Toxic Dose

Varies depending upon type of pyrethroid, size of animal, and species.

Signs

The most common signs are tremors, drooling, lack of appetite, vomiting, diarrhea, incoordination, hyperactivity, disorientation, vocalization, depression, difficulty breathing, and [seizures](#). Death is possible. Additionally in cats, may see ear flicking, paw shaking, or contractions/twitching of the skin.

Immediate Action

If skin exposure occurred, bathe using a dishwashing detergent such as Dawn, and thoroughly rinse the animal. If ingested, induce vomiting if the product does not contain petroleum distillates. Seek veterinary attention.

Veterinary Care

General treatment: In case of dermal exposure, the animal will be bathed and rinsed well. If ingestion occurred, the induction of vomiting may be continued, gastric lavage is performed, and [activated charcoal](#) is administered.

Supportive treatment: The body temperature is monitored, especially after bathing, as hypothermia increases the toxicity. Other treatments include anticonvulsants and/or muscle relaxants for controlling the seizures, and providing a safe environment to prevent injury resulting from the incoordination and disorientation. Atropine can be used to help decrease some of the signs such as the drooling. Fluids are generally administered.

Specific treatment: Unavailable.

Most pets recover from pyrethrin intoxication within 24-48 hours; recovery from pyrethroids may take longer. If no improvement is seen within 24 hours with treatment, the pet should be reevaluated.

Prognosis

Usually fair to good.