## Toxic Pesticides

## Reversing The Damage

by: Deva Khalsa VMD

The advent of easy to use spot-on products has made flea and tick prevention convenient for many pet owners. Certain ticks can carry dangerous diseases so we've all become extra careful with our prevention routine.

As a veterinarian, I've been taught that the majority of these products are harmless and safe, but evidence now shows that both the 'active' and some 'inactive' ingredients in the spot- on preparations have been linked to serious health effects both in laboratory animals and in pets.

The Washington-based Center for Public Integrity (CPI), a nonprofit investigative news organization, and the National Resources Defense Council, an environmental advocacy group, have both published reports about the safety of prescription and over-the-counter flea and tick treatments.

Dr. Dobozy of the EPA's Pesticide Division has found that the active ingredient (fipronil) in Frontine remains in a pet's system with the potential for nervous system and thyroid toxicity. Tests on laboratory animals resulted in thyroid cancer and altered thyroid hormones, liver and kidney toxicity, reduced fertility and convulsions. Front-line's web site creates the impression that the product stays in the oil glands of the skin. But Dr. Dobozy's study showed that, in fact, it does enter the body and the organ systems.

Advantage contains the active ingredient Imidacloprid. In laboratory studies Imidacoprid has been found to increase cholesterol levels in dogs, cause thyroid lesions, create liver toxicity, and has the potential for damaging the liver, heart, lungs, spleen, adrenals, brain, and gonads. As a neurotoxin, it can cause incoordination along with labored breathing and muscle weakness. When this drug was tested after its introduction in 1994, researchers found an increase in the frequency of birth defects when it was tested on rats, mice and dogs. In the Journal of Pesticide Reform, author Caroline Cox exposes thyroid lesions as a result of exposure to imidacloprid.

Most people think that the pyrethrins (naturally occurring compounds from the chrysanthemum plant) and pyrethroids (the synthetic counterpart) are less hazardous than other tick and flea preventive ingredients. Data from pyrethroid-based insecticides was recently made public through the Freedom of Information Act and



analyzed by CPI. According to CPI, from 2002 through 2007, at least 1,600 pet deaths related to spot-on treatments with the above mentioned ingredients were reported to the EPA. That was nearly double the reported fatalities linked to flea treatments without pyrethroids. The pyrethroid spot-ons also accounted for more than half of the "major" pesticide pet reactions including brain damage, heart attacks and seizures. Non-pyrethroid spot-on treatments accounted for about 6 % of all major incidents. Bio Spot Flea and Tick Control, Defend EXspot Treatment and Zodiac FleaTrol Spot On all contain either or both of the active ingredients Permethrin and/or Pyriproxyfen. Permethrin has been implicated as a carcinogenic insecticide causing lung cancer and liver tumors in laboratory animals. There is also a suspicion that it disrupts endocrine function. It can act as a neurotoxin, causing tremors as well as increased aggressive behavior and learning problems. Vectra #D, the new guy on the block, contains 36.08% Permethrins.

As a result of all this newly revealed information in the CPI's report, the EPA in April 2009 announced it was taking a closer look at all spot-on flea and tick products. The EPA is also taking action to address uncertainties about the so-called 'inert' ingredients present in these products.

Safe alternatives are very much needed for flea and tick control. Medical problems that have become common in our dogs and cats could potentially be linked to these previously "believed to be innocuous" spot-on products.

The laundry list of the toxins our pets are exposed to on a daily basis has the potential to result in a multitude of diseases in our dogs and cats. A recent study showed that bladder cancer in Scotties was linked to lawn chemicals. The bottom line is that our pets our constantly exposed to a variety of toxins and we need to provide them with the tools to flush these dangerous chemicals out of their bodies.

The good news is that new research is providing us with solutions. Studies show that kale cleans up after the party, dumping carcinogens and toxins out of the cells at least six times faster than in control groups. Kale and broccoli are considered super-foods for they have special phytochemicals that help prevent disease. Phytochemicals are compounds found in plants and nature that help prevent or eliminate disease. John Hopkins Medical School discovered the first phytochemical in kale in 1992. Since then hundreds have been discovered. While we can't put our pets in a bubble before we take them out for a walk, there are healthy ways of helping them to cope.

Health oriented magazines repeatedly tell us that if we eat more colored fruits and vegetables our own cancer risk is cut by 30%. A sad fact is that cancer is the leading cause of death in dogs over two years of age. This sage advice about phytochemicals in colored fruits and vegetables and their cancer preventing qualities for humans may apply equally well for our dogs and cats.

It all comes down to the cell and how well it can repair itself. Somehow we've expected our dogs and cats to stay healthy on highly processed, heated and compressed prepared pet foods. These foods don't have the tools our pets need to cope with the toxic environment they live in. If your Maytag Man doesn't have his tools he won't be able to fix your washing machine. Similarly, without the necessary tools, our pets don't have what they desperately need to stay healthy. Every dog needs a daily serving of a complete and balanced supplement with vitamins, minerals and phytochemicals to help them stay healthier and live longer. Adding lightly steamed or pureed vegetables to your pet's meal every day may also help the cells stay healthy. A good multivitamin may also provide the necessary tools for your dog to stay healthy.

Quality supplementation may be the best 'supplemental' health insurance you can give your dog! It's so important, in today's toxic world, to fill in all the gaps in your dog's nutrition and provide him with all the tools he needs to stay healthy.

Dr. Khalsa earned her degree from the University of Pennsylvania's School of Veterinary Medicine in 1981. From her earliest years as a veterinarian, Dr. Khalsa trained in homeopathy, along with many other holistic modalities, and soon began developing her own treatment protocols drawing from her rapidly growing knowledge base.

Since beginning her holistically oriented veterinary practice over 25 years ago, Dr. Khalsa has been incorporating homeopathy, acupuncture, Chinese Herbs, nutritional advice, allergy-elimination techniques such as N.A.E.T and also J.M.T. into her approach. Today her work is a blend of sophisticated holistic techniques and traditional veterinary medicine designed to best enhance the natural strengths and attributes of her patient.

Aside from her impressive career and dedication to teaching within the veterinary world, Dr. Khalsa loves sharing her knowledge with the public. She coauthored, 'Healing Your Horse: Alternative Therapies' (Howell Book House, 1993), and most recently authored, 'Dr. Khalsa's Natural Dog' (Kennel Club Books, 2009), a book best described as a 'holistic bible' for dog owners. Dr. Khalsa is a Fellow and Professor of the British Institute of Homeopathy. She has lectured both nationally and internationally.

