Dr. Dodds take on and general recommendations for heartworm prevenatives

A normal functioning immune system is an essential component to promote the health and longevity of companion animals. The immune system is a delicately balanced and integrated functional network of circulating and cellular components that protect the individual against acute and chronic disease.

Stress has a major influence on this function and can be physiological, physical and emotional. Immune function tends to be more active in the young, stable in mid-life and then wanes gradually in old age.

In the last few decades, veterinarians and animal fanciers have recognized that immunologic diseases have significantly increased in the dog population. At the same time, the ongoing linebreeding and inbreeding practices of dog fanciers tend to promote the genetic susceptibility to disease. More than 40 diseases are known to have an autoimmune basis (i.e. where the body reacts against itself producing antibodies that destroy various tissues), and susceptibility to almost all of them is influenced strongly by a specific small group of genes in people and animals.

The recent dramatic increase in immunological diseases has been attributed to the effects of environmental influences on these genetically susceptible individuals. An increasing number of breeds are at relatively high risk for these problems. The genetic influences are compounded by the fact that immunological recognition and reactivity is continually challenged throughout life by an array of environmental agents that serve to promote failure of the body’s self-tolerance. This produces or triggers a variety of autoimmune diseases affecting the thyroid, blood, eyes, skin, muscles, joints and specific organs. Environmental agents known to be involved include the effects of drugs, toxins, chemicals, viruses and other infectious agents, vaccines, hormonal and nutritional influences, and stress. Perhaps our biggest challenge in preventing and controlling these serious and increasing problems is to identify and remove/reduce the environmental factors involved.

Some individual animals affected with autoimmune diseases and their immediate relatives have been shown to react adversely to commercial, monthly heartworm preventives. When an individual’s immune system is compromised, any regular exposure to particular kinds of drugs, chemicals or toxins can produce significant adverse effects, whereas these exposures are well-tolerated by animals by animals with healthy immune systems that do not carry the genetic susceptibility to these disorders. It is important to emphasize that the licensed drug or chemical is safe unless used in a genetically or physiologically susceptible companion animal. These adverse reactions usually occur within the first 10-14 days after the monthly product has been administered and typically begin after an animal has had 2-5 doses. Occasionally, animals that have been taking monthly preventives for a relatively long time will develop subsequent product intolerance. This usually indicates that some underlying disease process has emerged to explain the problem. Based on cumulative data, it is my recommendation that dogs affected with autoimmune diseases
and their immediate relatives receive only plain daily heartworm preventive (Dimmitrol = diethylcarbamazine). If heartworm disease is not prevalent where the animals live, routine use of heartworm preventives is not recommended. This is especially important for dogs suffering from chronic diseases of the skin, hair and coat, or those with bone marrow, thyroid or liver disease.

**General Recommendations**

Foremost, I recommend administering heartworm preventive every 45 days instead of every 30 days, but only if this interval is strictly adhered to. If it’s difficult to keep track with a reminder calendar, then your dog may need to stay on the medication every month.

Spinosads are found in Trifexis, a monthly heartworm/flea preventive, as well as Comfortis for flea prevention. While I believe these are effective for flea prevention and killing, spinosads are contraindicated in epileptic or seizure prone dogs and should not be given to these dogs. Unfortunately, this is generally unknown and should be shared with your veterinarian, friends and family.

**Overall, the temperature needs to be above 57 degrees for approximately two weeks and mosquitoes are prevalent.** Please use the temperature as your primary guide; however these are general recommendations based on state:

**Year Round Heartworm Preventive**
- Alabama
- Florida
- Georgia
- Hawaii
- Mississippi
- Louisiana

**Borderline**
- Arizona
- Arkansas
- California
- Kentucky
- Nevada
- New Mexico
- North Carolina
- Oklahoma
- South Carolina
- Tennessee
- Texas

**May - October Heartworm Preventive**
- Canada
- Alaska
- Connecticut
- Colorado
- Delaware
Idaho
Illinois
Indiana
Iowa
Kansas
Maine
Maryland
Massachusetts
Michigan
Minnesota
Missouri
Montana
Nebraska
New Hampshire
New Jersey
New York
North Dakota
Ohio
Oregon
Pennsylvania
Rhode Island
South Dakota
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

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