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Dog Tips

Should You Say 'No' to Standard Heartworm Protocol?

If you have a dog and a traditional vet, likely you've been told your pet needs this preventive every month of the year, year in and year out. But has your vet told you about its side effects that can damage your pet's health and its growing resistance?

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- The conventional veterinary community wants pet owners to give their dogs a heartworm preventive every month of the year, year in and year out, regardless of where they live
- The facts are that only 13 states carry a high risk for heartworm infection, less than 1.5% of dogs in the U.S. test positive for heartworm, and a heartworm infestation is more difficult to acquire than pet parents have been led to believe
- Heartworm preventive drugs are not harmless. They are chemical pesticides with the potential for toxicity. In addition, there is a growing problem of heartworm resistance to preventives
- If you live in a heartworm endemic area of the country, work with your holistic or integrative veterinarian to develop a sensible preventive protocol to keep your pet safe and healthy
- Always insist on a heartworm test before beginning any preventive treatment

Editor's Note: This article is a reprint. It was originally published August 28, 2016.

Recently, I ran across an article at another online pet health site that claimed to debunk common misunderstandings about heartworm disease. The first "misconception" the author set out to discredit was "Heartworm prevention isn't necessary year-round." I thought to myself, "Here we go again ..."

What the author is suggesting is that all you misguided pet owners out there don't realize your furry family members should be on year-round, birth-to-death heartworm prevention drugs, no matter where you live, the time of year, the age of your dog (and sometimes, your cat), his size or health status.

Where Your Dog Lives Is the Most Important Consideration

As justification for recommending year-round heartworm preventives to all dogs everywhere, the author explains that, "Although it's true that areas with a large mosquito population have higher incidences of heartworm disease, this condition has been diagnosed in all 50 states."[1]

This assertion can easily lead to an incorrect assumption about the prevalence of heartworm disease in the U.S. While it may be true that at least 1 dog in all 50 states has been affected, it does not mean heartworm disease is a significant threat in every state.

According to the 2016 heartworm prevalence map published by the Companion Animal Parasite Council (CAPC), just 1 out of every 76 dogs in the U.S. — less than 1.5% — tests positive for heartworm. In addition, in only 13 states are dogs considered at high risk for heartworm infection.

Those 13 states are primarily in the southeast, where soaring temperatures and high humidity during the warmer months of the year provide an ideal environment for mosquitoes to thrive.

The problem with conventional veterinary recommendations on heartworm prevention is that instead of focusing on the likelihood of infection and the risks versus benefits of administering a toxic chemical preventive every month of every year of an animal's life, the focus is on the scary, gross nature of a disease that occurs in only a small percentage of dogs.

Heartworm preventives are chemical insecticides with the potential for short- and long-term side effects damaging to your pet's health. In addition, heartworm "preventives" don't actually prevent the worms.

They poison the larvae at the microfilaria (L1 to L2) stage of development, causing them to die inside your pet's body.

In addition to concerns about the toxicity of these insecticides, there is also evidence of growing heartworm resistance to preventives. "Superbug" resistance is typically the result of overuse of certain classes of drugs, as in the case of antibiotics.

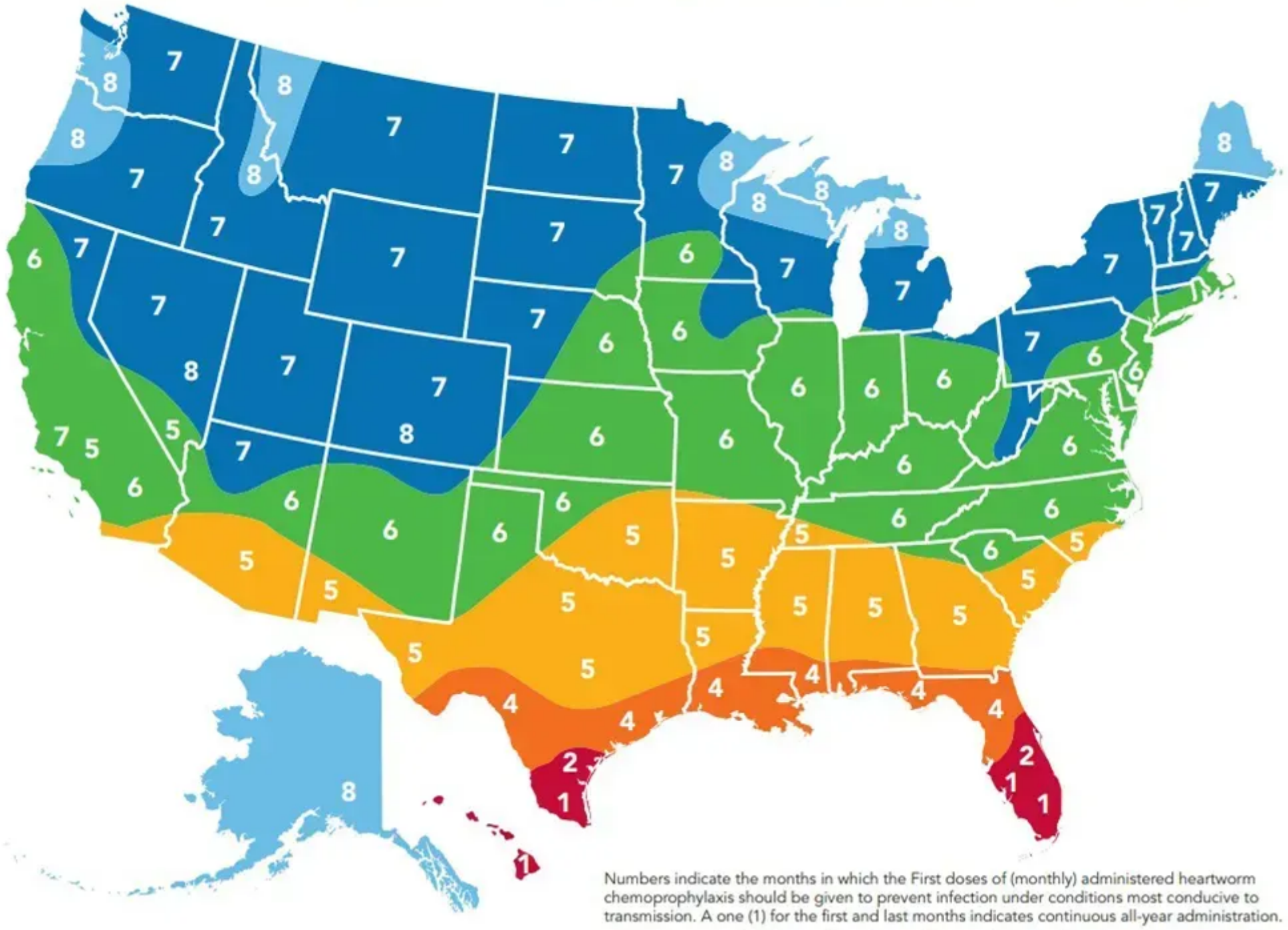
Perhaps the traditional veterinary community is well-intentioned, but their approach seems manipulative to me. In addition, it assumes pet guardians aren't bright or attentive enough to figure out when it's appropriate to protect their dogs from mosquito bites.

Regional Guidelines for Giving Heartworm Preventives

There are only a few areas in the U.S. in which giving a year-round heartworm preventive might be advisable — those areas are in south Texas, south Florida, and a few other locations along the Gulf Coast. The rest of the U.S. ranges from three to seven months of high exposure risk. The majority of states are at six months or less.

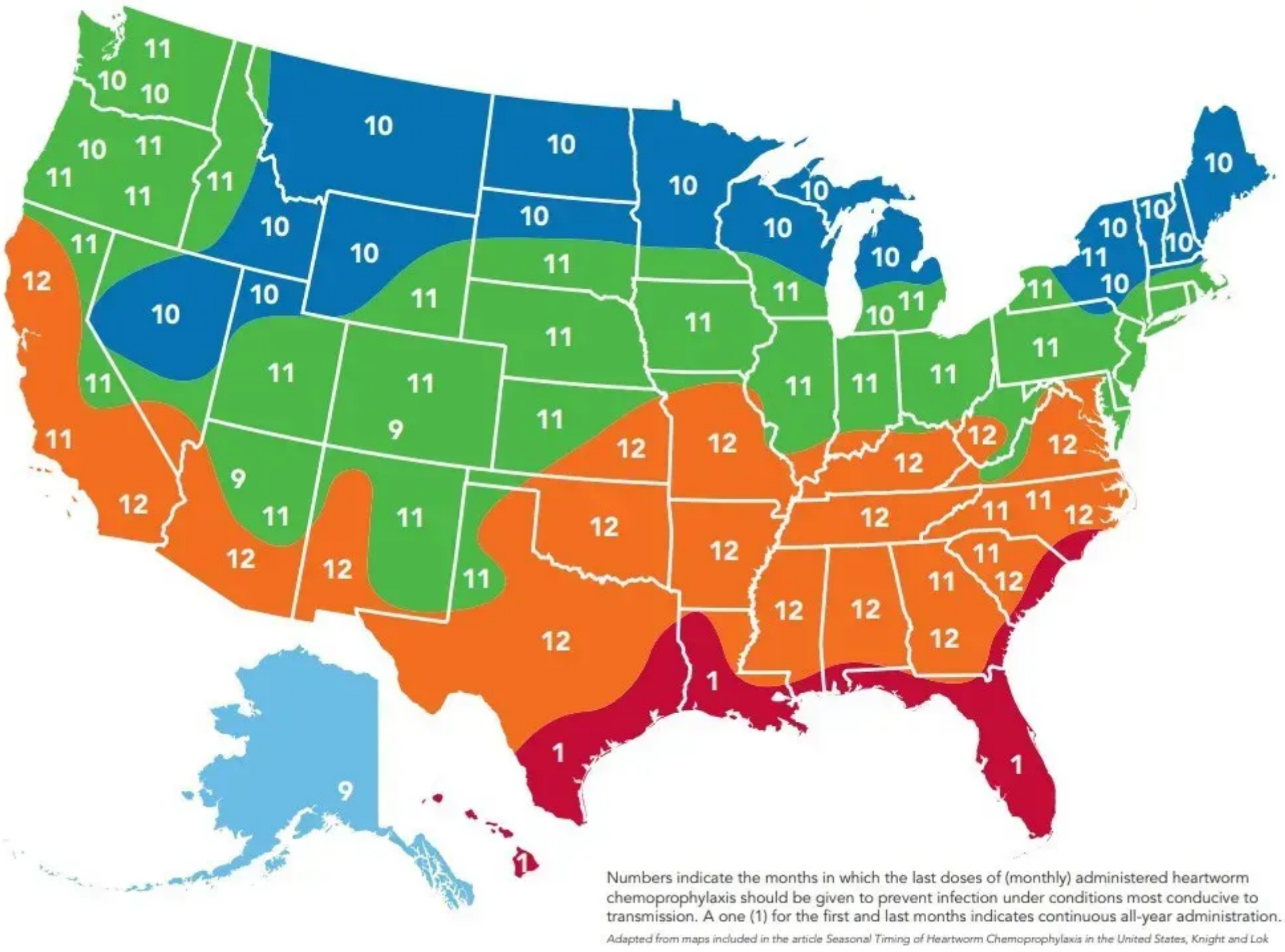
If you're concerned your dog is at risk of a heartworm infection, in consultation with your **holistic or integrative veterinarian**, you can use the following maps to guide you in when to start and stop a heartworm preventive.

TIMING OF FIRST MONTHLY DOSE OF HEARTWORM PREVENTIVE



Numbers indicate the months in which the First doses of (monthly) administered heartworm chemoprophylaxis should be given to prevent infection under conditions most conducive to transmission. A one (1) for the first and last months indicates continuous all-year administration.

Adapted from maps included in the article Seasonal Timing of Heartworm Chemoprophylaxis in the United States, Knight and Lok



For example, if you live on the Gulf Coast in either Texas or Florida where mosquitoes are a problem, the map suggests you begin giving a preventive on day one of month 1 (January), and give it year-round.

However, if you live in western Oregon or Washington, the map suggests you start dosing on August 1, and stop on October 1.

Just How Likely Is a Heartworm Infection?

Heartworms are a variety of roundworm (Dirofilaria immitis). They are spread by mosquitoes, and dogs can only get heartworm disease through infected mosquitoes. They can't get it from other dogs or other types of animals, from dog feces, or from their mothers while in the womb or through nursing.

Only certain mosquitoes can transmit heartworm to your dog. These mosquitoes must meet certain precise criteria, including:

- They must be female
- They must be of a species that allows development of the worms in the cells of the body (not all species do)
- They must be of a species that feeds on mammals (not all do)
- They must have bitten an animal infected with stage 1 (L1) heartworms about two weeks prior, since approximately 14 days are necessary for the larvae from the other animal to develop to stage 3 (L3) inside the

transmitting mosquito

This very specific mosquito must then bite your dog. When the larvae reach stages L4 to L5, which takes three to four months, under the right conditions they can travel via your dog's bloodstream to the lungs and heart. If your dog's immune system doesn't destroy the worms, they will reach maturity (L6), the adult stage, in which males can grow to 6 inches in length and females to 12. Two other critically important features in the transmission of heartworm are:

1. **The right temperature —** During the time the heartworm larvae are developing from L1 to L3 inside an infected mosquito, which is approximately a two-week period, the temperature must not dip below 57 degrees Fahrenheit at any point in time. If it does, the maturation cycle is halted. Full development of the larvae requires the equivalent of a steady 24-hour daily temperature in excess of 64 degrees Fahrenheit for approximately one month.
2. **Humidity and standing water —** Mosquitoes are a rarity in dry climates.

The bottom line: In order for your dog to develop heartworm disease, a number of things have to happen with near-perfect timing under a precise set of circumstances.

My Recommendations for Heartworm Prevention

If you live in an area of the U.S. where mosquitoes are common and you know your dog's risk of exposure to heartworm disease is significant, here are my recommendations for protecting your furry family member:

- With guidance from a holistic or integrative veterinarian, try using natural preventives like heartworm nosodes rather than chemicals. Make sure to do heartworm testing every three to four months (not annually), as natural heartworm preventives can't guarantee your pet will never acquire the disease.

  Remember, heartworms live in your pet's bloodstream, so natural GI (gastrointestinal) dewormers, such as diatomaceous earth, and antiparasitic herbs (such as wormwood, pumpkin seed and black walnut tinctures) are not effective at killing larvae in the bloodstream.
- If your dog's kidneys and liver are healthy, try using a chemical preventive at the lowest effective dosage. This could mean having the drug (Ivermectin) compounded if necessary for dogs weighing in at the low end of dosing instructions. Give the treatment at six-week intervals rather than every four weeks, for the minimum number of months required during mosquito season.
- Avoid all-in-one chemical products claiming to get rid of every possible GI worm and external parasites as well. The goal is to use the least amount of chemical necessary that successfully treats heartworm. Adding other chemicals to the mix adds to the toxic load your dog's body must contend with. Also avoid giving your pet a chemical flea/tick preventive during the same week.
- Follow up all heartworm medications given with natural liver detox agents like milk thistle and SAMe, in consultation with your veterinarian.
- Always insist on a heartworm test before beginning any preventive treatment. I like to run a SNAP 4Dx blood test every six months on dogs who spend a lot of time outdoors during warmer weather. The 4Dx tests for heartworm, Lyme disease, anaplasmosis and E. canis.

The reason I do tests every six months is because parasites are becoming resistant to heartworm, flea and tick chemicals. The sooner we identify an infection in your pet, the sooner a protocol can be instituted to safely treat it with fewer long-term side effects.

Sources and References

[1] VetStreet, November 1, 2016