

Canine Heartworm FAQ

1. How does my dog get heartworms?

The life cycle: Dogs to mosquito and back to dogs...

- 1) Adult heartworms in the heart and surrounding blood vessels mate and produce microfilaria which circulate in the blood.
 - mosquito then feeds on infected dogs, ingesting microfilaria and blood
- 2) Microfilaria molt twice in the mosquito before becoming infectious to dogs
 - a mosquito feeds on your dog transferring infectious microfilaria
- 3) Microfilaria molt in your pet's tissues for 3 to 4 months
- 4) Worms migrate from tissues to the heart and surrounding blood vessels then mature into adults

2. Is heartworm a prevalent disease in the Kansas City region?

YES! Exposure levels range from 5 to 45%. The national map has Kansas City in the highest risk category along with the eastern and Gulf coast states and states in the Mississippi River Valley.

3. How does the preventive work? It kills the molting microfilaria at step three in the life cycle shown (see 1). At this step your pet has microfilaria in his/her tissues *and will develop heartworm disease unless you give the preventive*. The preventive does not kill near-adult or adult heartworms.

4. Does the oral preventive medication stay in my pets body for a whole month? No. It is cleared from your pets body within days. You only dose it once a month because it takes more than one month for the microfilaria to molt to a stage that can migrate from the tissues.

5. What determines my dogs risk to heartworm infection? Three things: 1) local mosquito activity, 2) the amount of time your dog spends outdoors, and most importantly, 3) use of appropriate heartworm prevention on a regular basis.

6. How big are the adult worms? Males are up to 7 inches, females up to 14 inches.

7. How long do heartworms live? Adult worms live five to seven years, circulating microfilaria live up to two years.

8. How many worms does it take to cause disease? Ten worms in a forty-five pound dog can cause very serious disease. Worm burdens approaching twenty are not uncommon. Burdens greater than fifty are often fatal.

9. How long does the life cycle take? At least 200 days. Cooler temperatures can delay the molting stages that take place inside the mosquito.

10. What are the symptoms? Early disease or very light infections may have no symptoms. This is when we try to diagnose the disease because treatment is more successful at this stage. Early symptoms include fatigue, weight loss, coughing and poor coat. Advanced symptoms include pronounced weight loss, considerable coughing, increased thirst or urination from renal dysfunction, jaundice, abdominal distension, pale mucous membranes, collapse, or sudden death.

11. Can heartworm disease be successfully treated? It depends on the stage of the disease. When heartworm is diagnosed it should be staged prior to treatment. Stages 1 and 2 carry the best prognosis for survival (95% or better). Stage 3 patients have a fatality rate of five to twenty percent. Medical treatment is contraindicated in Stage 4.

12. How many months of the year should I give the preventive? We prefer giving the preventive each and every month all year long. This will protect your pet from heartworm and help control intestinal parasites which are quite prevalent in our region. If you elect season prevention, the medication should be given during the nine months from April 1 to December 1. This will cover the entire mosquito season and its year-to-year fluctuations. Keep in mind that the medication works in retrospect so December's dose will eliminate November's exposure.

13. What if I miss a dose of the oral preventive? Administer a dose of preventive immediately and resume your monthly dosing schedule. You should retest your pet six months later. If you missed more than one dose, please consult your veterinarian for more detailed instructions.

14. Can my dog have heartworm disease and at the same time be on preventive medication? Yes, but this situation is dangerous. This can occur with inadequate or poorly timed tests while using the preventive. The result is an *occult infection* which means that adult worms are present but microfilaria are not. Occult infections are just as harmful to your pet as non-occult infections. Routine testing will detect occult heartworm infection.

15. When should I test for Heartworm? We follow the testing recommendations provided by the American Heartworm Society. Puppies under the age of six months do not need to be tested as they are not old enough to have adult heartworms. Adult dogs should be tested before starting preventive and retested at regular intervals. We advocate a yearly retesting interval. Decisions to retest at intervals greater than one year are made on an individual basis. We do not advocate retesting intervals greater than two years. Dogs with known breaks in prevention should be retested six months later (see 13).

16. If I give preventive medication each and every month, why do I have to retest? Dogs with undetected heartworm disease (occult heartworm disease, see 14) who receive a dose of preventive medication may experience a shock reaction which can be severe and, if not immediately treated, fatal. We do not advocate taking this risk. Prevention failures, although uncommon, do occur for the following reasons: 1) vomiting within ten hours of preventive administration constitutes a missed-dose according to the manufacturers of the oral medications, 2) inadvertent, irregular, or skipped dosing, 3) not using preventive the duration of the mosquito season, and 4) inadequate or improperly timed initial testing. The blood test is not painful, the cost of the test is minimal, the disease is serious, and the prevalence in our region is high. We recommend yearly retesting but will extend the retesting interval to two years under perfect circumstances. We will not take any risks beyond two years, and for your pet's health will not dispense preventive medication to dogs who are not tested at appropriate intervals.

17. What are my prevention options? Safe topical and oral medications that are used once per month will successfully kill larvae before they develop into adults and cause disease.