

Heartworm Infections in Dogs



Your veterinarian has prescribed a heartworm preventive to be given to your dog monthly to prevent heartworm disease.

There is a lot of misinformation out there regarding heartworm disease and how to prevent it. Take a look at some of the most common myths and understand the facts.

MYTH: Heartworm Prevention Isn't Important in Winter

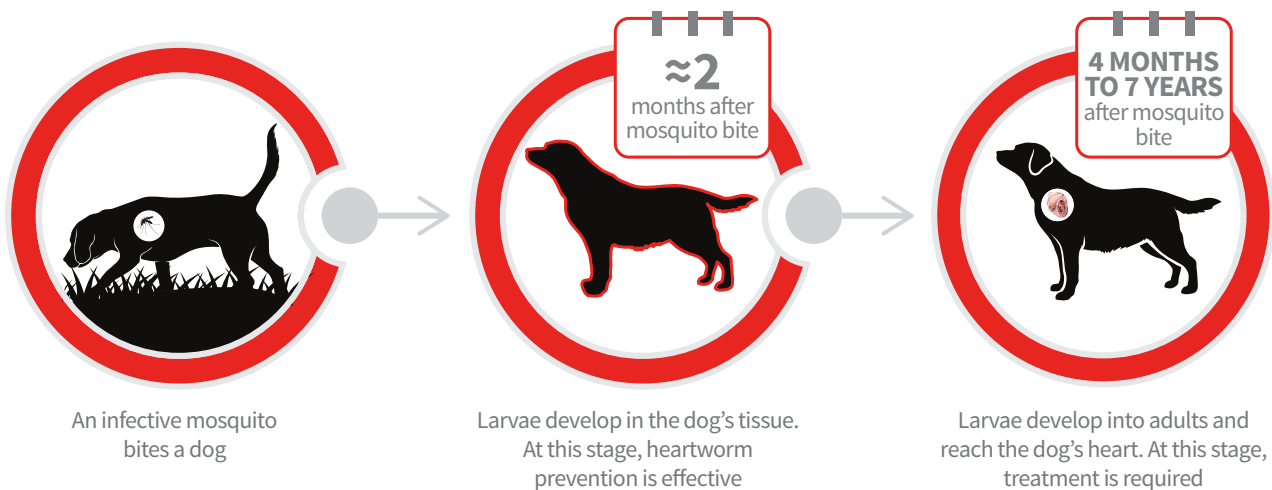
FACT: There are several ways dogs can become infected with heartworm disease during the winter. Heartworms can develop inside of mosquitos when the temperature is $\geq 57^{\circ}\text{F}$ (13.9°C).¹ The temperature in which most humans are comfortable is 68°F to 72°F ($\approx 20^{\circ}\text{C}$), meaning that homes, businesses, and stores can serve as “heat islands” for mosquitos.

During consistent colder weather, mosquitos don't die but are dormant and can become active again during warm spells. As a result, “mosquito season” is often inconsistent year to year, even within the same region. By keeping your dog on prevention year-round, the guesswork involved in deciding whether mosquitos are currently a threat is eliminated.

Heartworm prevention helps kill young heartworms that your pet has been exposed to previously before the heartworms grow into adults that can cause serious damage. So, even if it is snowing when the dose is given, your pet may have been infected when it was warmer.

MYTH: Indoor Pets Do Not Need Heartworm Prevention

FACT: Pets that live indoors part, most, or all of the time are not completely protected from heartworm disease. Many pet



owners who describe their dogs as “indoors” mean that their dog only goes outside to use the bathroom. Unfortunately, this is still enough time for pets to become exposed to heartworm disease. Although there are occasionally dogs that truly do live completely indoors (such as owners who use potty pads), those dogs are also still at risk. Even if pets are kept inside, we still cannot completely protect them from heartworm disease.²

MYTH: My Dog’s Breed Can’t Safely Receive Heartworm Prevention

FACT: Many informed owners of collies, Australian shepherd dogs, and some other breeds know their dog is more at risk for carrying the multidrug sensitivity gene (*MDR1* gene, also known as *ABCB1* gene), a genetic mutation that affects how the dog processes certain medications.³ However, many heartworm preventives have been tested in dogs with the *MDR1* mutation and have been shown to be safe when given at the recommended dose.¹

Discuss with your veterinarian if your dog is an at-risk breed. If your dog is considered an at-risk breed, you can have your dog tested for the gene. A negative test result can give you peace of mind, and a positive result can help prepare for the medication adjustments necessary in your dog’s future.

MYTH: Dogs in My Area Don’t Get Heartworm Disease

FACT: It’s true that certain areas—particularly the southeast United States—see more cases of heartworm disease than others.⁴ However, heartworm infections have been documented in all 50 states, and the 10 cities most affected may not be the ones you would expect, including: Jersey City, NJ; Seattle, WA; Topeka, KS; and San Francisco, CA.⁴

Several factors are also bringing heartworm disease to areas it has not been historically. Over the past 10 years, the proportion of people who travel with their pet has significantly increased. The increased transfer of rescue dogs around the country (due to natural disasters such as flooding) has also increased the incidence of heartworm infections in many regions, and the changing climate has lengthened mosquito season.

You can sign up to receive alerts when heartworm disease is diagnosed in your area at capcvet.org.

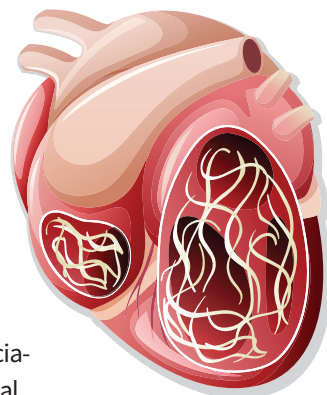
MYTH: If My Dog Has Heartworm Disease, There Is an Easy & Inexpensive Treatment

FACT: Treatment for heartworm disease is an expensive, lengthy, sometimes painful process that carries risk for side effects, including death. The damage parasites cause to the heart and lungs before heartworm disease is diagnosed may never be completely reversed.

Prior to treatment, your dog must undergo many tests to ensure they’re healthy enough to handle the medication. The treatment itself involves injecting an arsenic-derived compound deeply into the muscles of the back. Afterwards, your dog’s activity must be severely restricted, usually by keeping them in a crate or kennel for 6 to 8 weeks, as ongoing activity could put your dog at additional risk for serious and even fatal complications like blood clots in the lungs.

How Can I Protect My Dog from Heartworm Disease?

Heartworm disease can cause irreversible damage to the heart and lungs, and treatments can be painful for pets and costly for owners. The American Heartworm Society, American Animal Hospital Association, American Veterinary Medical Association, Companion Animal Parasite Council, Food and Drug Administration (FDA) all agree that heartworm prevention year-round is the easiest, safest, and most inexpensive way to protect pets against heartworm disease.



References

1. American Heartworm Society. Current canine guidelines for the prevention, diagnosis, and management of heartworm (*Dirofilaria immitis*) infection in dogs. AHS website. https://d3ft8sckhngjm2.cloudfront.net/images/pdf/2020_AHS_Canine_Guidelines.pdf?1580934824. Accessed June 29, 2020.
2. Atkins CE, DeFrancesco TC, Coats JR, et al. Heartworm infection in cats: 50 cases (1985-1997). *J Am Vet Med Assoc*. 2000;217(3):355-358.
3. Merola VM, Eubig PA. Toxicology of avermectins and milbemycins (macrocyclic lactones) and the role of P-glycoprotein in dogs and cats. *Vet Clin North Am Small Anim Pract*. 2012;42(2):313-vii.
4. American Heartworm Society. AHS announces findings of 2019 heartworm incidence survey. AHS website. <https://www.heartwormsociety.org/in-the-news/558-ahs-announces-findings-of-2019-heartworm-incidence-survey>. Accessed June 29, 2020.