

# HEARTWORM WINDOW OF INFECTION



## WAS THERE A GAP IN PREVENTION THAT LEFT THIS DOG SUSCEPTIBLE?

The “Window of Infection” is the time frame when a dog was likely infected with *Dirofilaria immitis* to result in a positive test for adult heartworm.

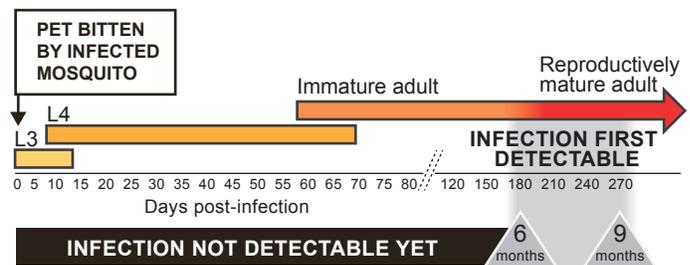
This time frame is based on the pet’s heartworm testing history and the life-cycle of *Dirofilaria immitis*. It extends from 6-9 months prior to the dog’s last negative test up to 6 months before the current positive test.

### WHAT IS THE BASIS FOR THE WINDOW OF INFECTION TIME FRAME?

Heartworm tests use a blood sample to detect either a specific antigen released by mature female heartworms or the offspring (microfilariae) of these worms.

It generally takes 6 months from the time the pet is infected with heartworm larvae by a mosquito bite until female worms can be detected. The administration of heartworm preventives to dogs with mature female worms can delay their detection for up to 9 months after infection.

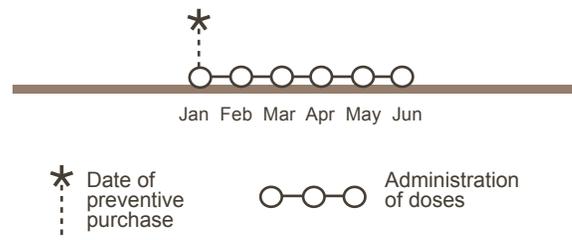
This means that a dog may test “negative” for heartworms, even though it has adult worms in the heart and blood vessels of the lungs.



### HOW DOES THE TOOL USE THE WINDOW OF INFECTION TIME FRAME?

The tool uses the Window of Infection WOI time frame along with the pet’s heartworm test results and matches these with the purchase history of heartworm preventive.

The tool assumes that the first dose of heartworm preventive was given to the pet at the time of purchase, and that the remaining purchased preventive was administered at 30 day intervals.



### HOW IS THE WINDOW OF INFECTION USED?

The WOI tool is used to determine if there may have been gaps in administering heartworm preventive to a dog that has tested positive for the presence of mature female heartworms.



### WHAT ARE REASONS THAT DOGS ON HEARTWORM PREVENTIVE MAY TEST POSITIVE?

- The most frequent reasons are that **doses of heartworm preventive were not given.**
  - **Insufficient amount of product was purchased** for each pet in the household.<sup>1</sup>
  - A monthly dose of **preventive was available but not given.**
- The dog may have been **infected with heartworms, including immature adult worms, when started on preventive.**
- The heartworm preventive may have **failed to eliminate all migrating tissue larvae at the time of administration.**

<sup>1</sup>Atkins CE, et al. Heartworm 'lack of effectiveness' claims in the Mississippi delta: Computerized analysis of owner compliance - 2004-2011. *Veterinary Parasitology* 2014;206:106-113.