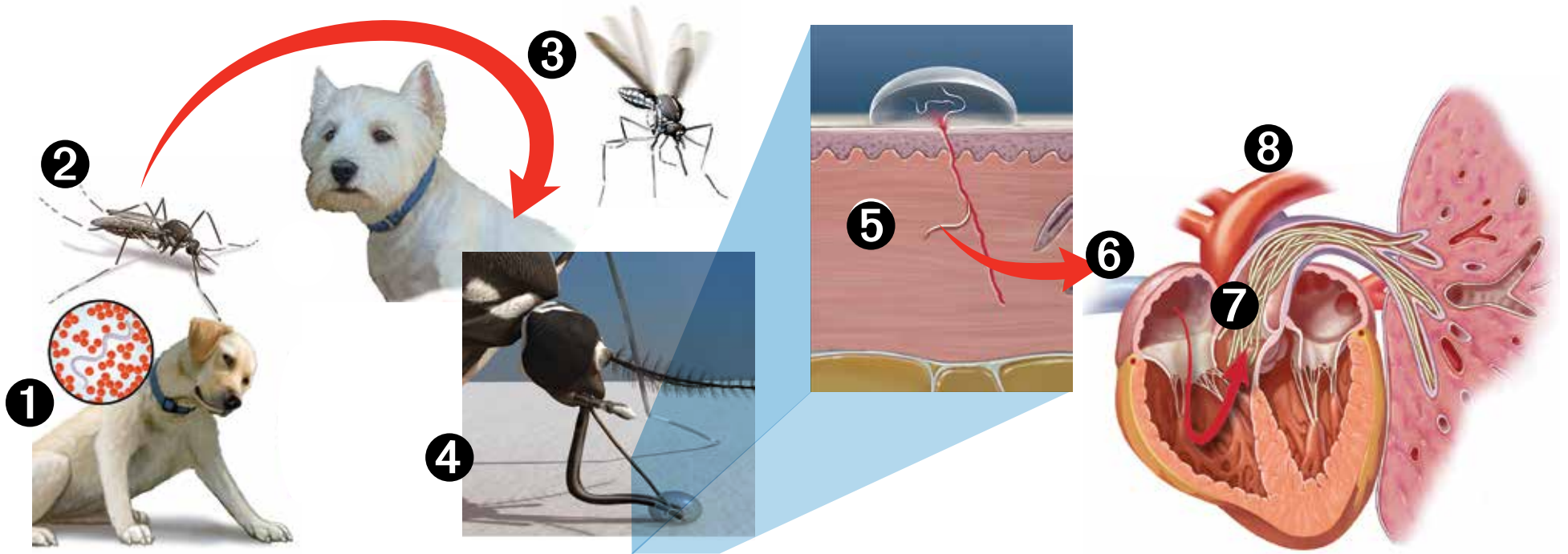


# Understanding the Heartworm (*Dirofilaria immitis*) life cycle



- 1 Dog with active heartworm infection. Microscopic larvae (microfilariae) are produced by adult worms and circulate in blood. Larvae appear in the dog's blood  $\approx$  6-9 months after infection.
- 2 Mosquito bites an infected dog and ingests blood containing microscopic heartworm larvae.
- 3 Microscopic larvae develop within the mosquito and into the infective stage  $\approx$  2 weeks under ideal conditions.
- 4 Infective larvae are contained in the saliva of the mosquito.
- 5 The infective larvae enter the bite wound from mosquito and migrate into the tissue of the dog.
- 6 Larvae migrate through tissue and mature to enter bloodstream, making their way to the dog's heart and pulmonary arteries  $\approx$  70 days after infection.

- 7 Larvae develop into adult heartworms and reside in the pulmonary arteries. In heavy infections, adult worms may invade the chambers of the heart and cause symptoms including coughing, sluggishness and difficulty breathing, though some dogs may show no signs at all.
- 8 Adult heartworms produce microscopic larvae that are released into the bloodstream.

## Year-round heartworm protection is important

Heartworm disease can be deadly, and it is difficult and costly to treat. But it is preventable in your dog. Annual testing and year-round monthly administration of a preventative is recommended by the American Heartworm Society (AHS)<sup>1</sup> and the Companion Animal Parasite Council (CAPC).<sup>2</sup>

<sup>1</sup> <https://www.heartwormsociety.org/images/pdf/Canine-Guidelines-Summary.pdf>. Accessed March 28, 2018.

<sup>2</sup> <http://www.petsandparasites.org/resources/capc-guidelines>. Accessed March 28, 2018.

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