

Canine Heartworm Treatment



What is heartworm disease?

Heartworm disease is caused by long slender worms that can reach up to a foot in length and can affect dogs, cats, ferrets, and wildlife, such as coyotes, wolves, foxes, mountain lions, bobcats, etc. These parasites are commonly called heartworms, and are transmitted from one animal to another by mosquitoes. After a mosquito bites an infected animal, they can transmit the larva to other animals when they take a blood meal. As mosquitoes can get inside your home, both indoor and outdoor pets are at risk for heartworm disease. After being bitten by an infected mosquito, the heartworms migrate to the right side of the heart where they grow into adults and are capable of causing substantial permanent damage to the heart and lungs before your pet shows any signs of disease.

What is the treatment for heartworm disease?

- **Day 1:** The veterinary team may perform blood work to make sure the disease has not affected other vital organs such as the kidneys and liver. They may also perform radiographs (x-rays) and an ECG (electrocardiogram) to examine heart size and functionality. Performing these diagnostics will assist your veterinarian in determining a treatment plan based on the severity of the heartworm infection.
- **Day 7:** An injection of Immiticide® (melarsomine) is given to your pet, and often they will remain in the hospital under the veterinary team's supervision for the remainder of the day. The injection can sometimes be painful, so your veterinarian may prescribe pain medication to keep your pet comfortable through the duration

of the treatment. **Your dog must be restricted to leash walks only and have minimal activity throughout the entire duration of treatment.** Because the medication kills the heartworms while they are still inside your pet, it is imperative that you limit the activity level of your pet during treatment and follow all recommendations from your veterinarian. Too much activity can cause discomfort, complications and even death. Your veterinarian will let you know when it is safe for your dog to resume normal activity.

- **Day 30:** Two injections of Immiticide are given 24 hours apart, and on occasion, your veterinarian may ask to hospitalize your pet overnight between administrations of Immiticide. Pain medications may again be prescribed as indicated by your doctor. A complete blood cell count (CBC) and differential will be performed as indicated. As described above, activity is restricted to leash walks and very limited exercise for the next 30 days.
- **Day 60:** A dose of oral Ivermectin (antiparasitic) will be given while your pet is in the hospital under veterinary team's supervision for the day. Your veterinarian may discuss beginning an appropriate exercise regime at this time.
- **Day 90:** One month after the oral Ivermectin treatment your pet should be restarted on monthly oral heartworm preventive. Your veterinary team can help you determine which product is best for your pet.
- **Day 270 (9 months from beginning treatment):** Your pet should be retested for heartworm disease and continue on the monthly oral heartworm preventive. Due to the 6 month life-cycle of heartworm, this is the earliest opportunity to determine if treatment was successful. If this test is still positive the above treatment may need to be repeated.

For additional information, please contact your Banfield medical team.

What are the risks associated with treatment?

It is important to realize that the treatment for heartworm disease is neither simple nor risk-free. By the time the heartworms were detected, it is possible that severe damage to the heart, vessels and lungs may have occurred. The primary post-treatment complication is the development of severe pulmonary thromboembolism (clots within the lungs). Pulmonary thromboembolism results from the obstruction of blood flow through pulmonary arteries due to the presence of dead heartworms. If heartworm treatment is effective, some degree of pulmonary thromboembolism will occur. When dead worms are numerous, widespread obstruction of arteries can occur. Exercise after the Immiticide injections can increase the complication of pulmonary thromboemboli, which is why exercise restriction is so important. Clinical signs most commonly observed include fever, cough with a possible expectoration of blood, lethargy and difficulty breathing. In some instances acute death can occur.

Are there any side effects to the medications?

- Immiticide may cause some pain, swelling, tenderness and reluctance to move after receiving an injection. Most of these signs resolve within a week, but rarely severe injection reactions can occur. Firm nodules at the injection site can persist indefinitely.
- Ivermectin may cause dizziness, lethargy, weakness, tremors, vomiting, diarrhea and/or anorexia.

Contact your Banfield medical team immediately or take your pet to the nearest emergency hospital if you notice any of these signs.

Can heartworm disease be prevented?

Heartworm disease can be prevented by administering a safe, oral, topical (given monthly) or injectable (given every 6 months) heartworm preventive that kills immature worms before they can cause damage. The best way to prevent this disease is to administer preventive year round for the life of your pet.



For additional information, please contact your Banfield medical team.