

# Heartworm and Tick Borne Diseases in Dogs

## What diseases are tested for on an IDEXX SNAP 4DX?



The IDEXX SNAP 4DX tests for 4 types of diseases. The first is a mosquito transmitted disease called heartworms (*Dirofilaria immitis*). The other three are all tick borne diseases and include Lyme disease (*Borrelia burgdorferi*), Ehrlichiosis (*Ehrlichia canis* and *Ehrlichia ewingii*) and Anaplasmosis (*Anaplasma phagocytophilum* and *Anaplasma platys*).

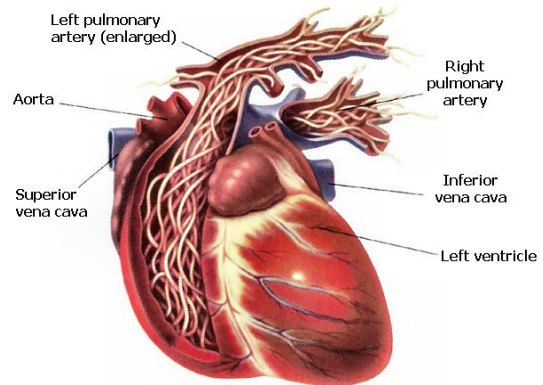
## Who should be tested?

Based on the life cycle of these diseases, AACACC recommends that any dog over the age of 6 months have a SNAP 4DX performed before leaving the shelter. It is particularly imperative if these dogs spent a great amount of time outdoors or have had any tick-exposure. The cost of testing at AACACC is \$40, which is typically significantly less expensive than having it done elsewhere.

Your primary care veterinarian may recommend repeating this test 6 months after your pet's last possible exposure to these diseases (last time without heartworm prevention or their last tick bite).

## How are these diseases transmitted?

Heartworm disease is transmitted via a mosquito bite to your dog, but don't worry this is not a disease that humans can contract. Once an infected mosquito bites a dog, larvae are transmitted into the subcutaneous tissues. Over the next 50-60 days the larvae continue to mature and migrate through the body. Eventually, they find themselves in the pulmonary arteries (blood vessels leaving the heart) where they live and reproduce as adults. Adults living in the pulmonary arteries are what causes heartworm disease and its associated clinical signs.



Lyme disease, Ehrlichiosis and Anaplasmosis are all caused by various tick bites. They are all bacterial diseases that you can't get directly from your dog - you too would have to be bitten by a tick.

## What are the clinical signs of these diseases?

Due to the life-cycle of the heartworm, it takes about 6 months for the heartworms to become reproductively active and cause a "true" infection. Initially a dog may not have any clinical signs if their worm burden is low. As more adult heartworms find their way to the pulmonary arteries, the clinical signs will

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progress to coughing, exercise intolerance, weight loss, difficulty breathing and ultimately death.

Tick borne diseases have a variety of clinical signs that can range from being asymptomatic to vague non-specific signs. If dogs are clinical they can develop a fever, joint pain/swelling with an associated lameness, inappetance, weight loss, vomiting, diarrhea, increased drinking and urination and abnormal bleeding.

## **What should I do if my dog is positive?**

If your dog is tested at AACACC and found to be positive for heartworm disease, we will assume responsibility for your pet's treatment over the next several months. While you do not have to pay anything for this treatment you do have to be committed to bringing your pet in for treatment at specific times, giving medications at home and keeping your pet rested and quiet during recovery. Thorough instructions are provided.

If your dog tests positive for one of the tick borne diseases, don't fret! AACACC recommends that you follow up with your primary care veterinarian to have general bloodwork, a urinalysis and a blood pressure performed. If these are all normal, the current recommendation is no treatment, but certainly follow your primary care veterinarian's recommendations.

## **Is there any prevention from these diseases?**

The best news is that all of these diseases are absolutely preventable! There are several options for preventing heartworm disease in dogs that include

tablets/chews, topicals and injectables. The frequency that these are given is based on the medication, but typically speaking the oral and topical medications should be given once a month year-round and the injectable is every 6-12 months. These are all prescription medications, so please follow any recommendations from your primary care veterinarian. The other great thing about most of these options is that they also treat/prevent various intestinal parasites that you could contract from your pet.

Some Collie breed dogs do have a genetic mutation that causes them to not tolerate ivermectin based heartworm preventatives. Please talk to your primary care veterinarian about a safe alternative.

Flea and tick prevention is the only way to prevent most tick borne diseases. Again these come in a variety of options including tablets/chews, topicals and collars. Please discuss with your primary care veterinarian which option is best for you and your pet. Most importantly ensure that your pet is on this prevention year-round as it is often not cold enough in this area to kill all of the fleas and ticks during the winter.

There is also a safe and effective vaccine for Lyme Disease that is recommended for dogs in this area.

## **Can you safely introduce a positive dog into your home with other dogs?**

Since all of these diseases require a bite from another source you can safely adopt a pet with any of these diseases as long as your other pet(s) is/are currently and continue being given prevention.