

# Monthly Flea, Tick, and Heartworm Prevention And Heartworm Testing Information

*At HPVC, we recommend that pets be protected against heartworm, intestinal parasites, fleas and ticks whether they be indoor or outdoor pets as bugs do not avoid coming into houses. :) Heartworms come from mosquitoes and the other internal and external parasites like to hitchhike on our shoes and houseguests. In Pennsylvania, we have many winter days over 35 degrees Fahrenheit, so it is no longer safe to stop giving our pets protection in the winter. In fact, we often see unprotected pets develop fleas and other parasites in the late fall and winter, but if they receive these preventatives monthly they remain protected!*

## HPVC Recommendation for Dogs

### Oral Chew: Simparica Trio

<https://www.zoetispetcare.com/products/simparica-trio>

-Proven safe and effective for puppies and dogs 8 weeks of age and older and 2.8 lbs or higher!

-Size ranges: (2.8-5.5lbs) (5.6-11lbs) (11.1-22lbs) (22.1-44lbs) (44.1-88lbs) (88.1-132lbs)

\*If over 132lbs combine 2 sizes that equal their weight

-The flavoring in Simparica Trio is safe for most food allergy dogs.

*The exception is dogs who have seizures - if the dog has a seizure disorder, the doctor will make an appropriate recommendation but NO over the counter products should be deemed as safe without doctor approval.*

### *Is Simparica Trio better than topical medications?*

- Simparica Trio is an oral medication and does not expose you or your pet to pesticides. Because this is a medication it has had extensive testing and is FDA approved.
- With chewable medications, we know that when your pet swallows the medication, they have received the entire dose. For pets with skin conditions or that enjoy swimming, topical products are generally less effective for them

### *Does my dog need to take the Simparica Trio all year round?*

- Yes, ticks can be active in temperatures as low as 35 degrees even with snow on the ground.
- Fleas can thrive in a warm home all year round.

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### *What is the difference between Simparica Trio and Interceptor and Credelio?*

- Simparica Trio protects your pet from Fleas, ticks, heartworm and intestinal parasites in just 1 chew monthly.
- It contains the same safe classes of drugs as ICP and Credelio but they are combined in 1 chew.
- Most pets prefer the taste and texture of Simparica Trio.
- Simparica Trio kills one extra type of tick!

*Simparica Trio is cheaper online. Why should I buy it here?*

- We have a higher guarantee that you will be getting the correct product and dosage we are recommending and we can ensure this is not a counterfeit product, which is a significant concern with many online pharmacies.
- Some online store are cheaper because they can buy the medication in bulk. As a small business, we purchase our products in smaller bundle's directly from the manufacturer.
- We have rebates for Simparica Trio that you may not be able to get online

**Topical Liquid: Revolution**

<https://www.revolution4dogs.com/>

-Proven safe and effective for puppies and dogs 6 weeks of age and older and 2.8 lbs or higher!

-Size ranges: (up to 5lbs) (5.1-10lbs) (10.1-20lbs) (20.1-40lbs) (40.1-85lbs) (85.1-130lbs)

\*If over 130lbs combine 2 sizes that equal their weight

-Prevents heartworm, treats earmites, treats Sarcoptic mange, and controls one type of tick (Dermacentor American Dog tick), so if patient has heavy tick risk doctor needs to recommend secondary tick protection.

*The exception is dogs who have MDR1 gene mutation or Collies/white footed mixes with unknown MDR1 gene status.*

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## HPVC Recommendation for Cats

### **Topical Liquid: Revolution Plus**      <https://www.zoetisus.com/products/cats/revolution-plus/>

-For Cats and kittens 8 weeks of age and older and greater than 2.8lbs

-Size Ranges: (2.8-5.5lbs) (5.6-11lbs) (11.1-22lbs)

\*Revolution (not plus) can be used on kittens less than 5lbs as long as they are over 6 weeks old

-Not enough for cats that come in heavily covered with deer ticks -so if heavy deer tick problem use Credelio with Heartgard or straight Revolution, not Plus

-Fleas, ticks (3 kinds), ear mites, roundworms, hookworms, heartworms

*-The exception is cats with neurologic disorders and seizures*

Does My indoor cat need preventives? They never go outside.

- Yes- fleas come in easily on shoes or pant legs
- Beetles and crickets that come into the home commonly carry intestinal parasites. Many cats hunt and eat these bugs and can contract parasites that may be contagious to humans

Can cats get heartworm?

- Yes and unlike dogs there is no treatment. Heartworm is fatal in cats.
- One study showed that 25% of heartworm positive cats were indoor only

### **Oral Chew: Credelio for Cats**      <https://www.credelio.com/credelio-cat-close>

-For Cats and kittens 8 weeks of age and older and greater than 2lbs

-Size Ranges: (2-4lbs) (4.1-17lbs) (over 17lbs)

-Fleas, black legged deer ticks - still need heartworm/intestinal parasite control so can use Heartgard or Revolution but NOT REVOLUTION PLUS

*-The exception is cats with neurologic disorders and seizures and breeding, pregnant or lactating cats.*

## **HEARTWORM DIAGNOSTIC SCREENING AND MISSED DOSES**

### **- BASED ON 2020 AMERICAN HEARTWORM SOCIETY RECOMMENDATIONS**

#### ***DOGS Primary Diagnostic Screening***

- The American Heartworm Society recommends annual screening for all dogs over 7 months of age with both an antigen and a microfilaria test.
  - At HPVC, puppies should have a reminder for heartworm/tick disease screening set to match the date of their first adult Rabies vaccination, or should be done at time of pre-anesthetic spay/neuter exam if pet is over 7 months of age and has not yet had their first adult exam.
- All positive antigen tests should be confirmed through additional testing prior to the administration of any therapy. Confirmation is accomplished upon the identification of circulating microfilariae, or when another positive result is obtained utilizing a different manufacturer's antigen test.
- In cases of noncompliance or changing the brand or type of heartworm preventive, the dog should be antigen and microfilaria tested prior to starting or changing products.
- 4dx screening test (Heartworm antigen test) is used at HPVC as annual screening in dogs on regular prevention

Annual testing is an integral part of ensuring that prophylaxis is achieved and maintained. Should an infection be diagnosed, more timely treatment can be provided to minimize pathology.

#### ***Testing Considerations Following Noncompliance (Missed Doses in Dogs)***

When an owner misses a dose of heartworm prevention, the dog should be tested prior to restarting the medication, again at 6 months from the last dose given and again at 12 months from that date.

- When the owner tells us they have missed a dose, we need to find out the date the last dose was given. This also applies if they skipped doses and started dog back on the product themselves - in this situation you want to know what dose they missed and then go back 30 days to do the 6 and 12 month testing. (Note, if owner is unsure and can give you a month, it is best to choose the first of that month as the last dose given date)
- Schedule an appointment for a pet to come see a technician (if examined in the last 5 months) for the blood testing and prevention refill or the doctor if the last exam was >5 months ago. (Note, owner will get the refill along with the testing and they need to be advised that is for the pet's safety per the American Heartworm Society Guidelines.)
- Go to patient TREATMENT SCREEN, under service details CHANGE THE SERVICE DATE to match the date of the last dose given.
- Enter a treatment charge "hwpmis" Heartworm Preventative Missed Dose.
- In the notes under the actual treatment charge - type Last Dose Given - and the date.
- Go to the client section and close this invoice!!!

*When testing before restarting the preventative, a positive test indicates preexisting infection (before missing dose). When retesting 6 months later a positive test would most likely be due to an infection acquired before starting or resuming preventative therapy. Antigen and microfilaria testing should be performed on the one-year anniversary date of the initial test and annually thereafter.*



### **CATS DIAGNOSTIC SCREENING**

**NOTE:** our in-house Idexx Snap test is a heartworm antigen test

- Outdoor cats should be screened for heartworm annually (ideally both antibody and antigen, if pet on reliable preventative dr discretion if both tests needed)
- Due to this and other mentioned considerations, heartworm test results should only be recorded as “positive” or “no antigen detected” (NAD) and should not be written as “negative.”
- Since both juvenile and adult worms are capable of causing clinical disease in the cat, both antibody and antigen tests are useful tools and when used together increase the probability of making appropriate diagnostic decisions.

Table 1. Interpretation of Heartworm Diagnostic Procedures and Tests in Cats

Test	Brief Description	Result	Interpretation	Limitations
Antibody Test	Detects antibodies produced by the cat in response to presence of heartworm larvae. May detect infections as early as 8 weeks post transmission by mosquito	Negative	Lower index of suspicion	Antibodies confirm infection with heartworm larvae, but do not confirm disease causality.
		Positive	Increasing index of suspicion; 50% or more cats will have pulmonary arterial disease; confirms cat is at risk	
Antigen Test	Detects antigen produced by the adult female heartworm or from the dying male (>5) or female heartworms	Negative	Lower index of suspicion	Immature or male-only worm infections are rarely detected.
		Positive	Confirms presence of heartworms	
Thoracic Radiography	Detects vascular enlargement (inflammation caused by juvenile worms and, later, hypertrophy), pulmonary parenchymal inflammation, and edema [the latter only in acute respiratory distress syndrome (ARDS)-like syndrome]	Normal	Lower index of suspicion	Radiographic signs are subjective and affected by clinical interpretation.
		Signs consistent with feline heartworm disease	Enlarged arteries greatly increase index of suspicion	
Echocardiography	Detects echogenic walls of the immature or mature heartworm residing in the lumen of the pulmonary arterial tree, if within the visual window of the ultrasound	No worms seen	No change to index of suspicion	Ultrasonographer experience with heartworm detection appears to influence accuracy rate.
		Worms seen	Confirms presence of heartworms in the structure	

## PREVENTION

Monthly chemoprophylaxis is a safe and effective option for cats living in areas where heartworm infection is considered endemic in dogs and exposure to infective mosquitoes is possible. Many cats live more sheltered lives than do most dogs and are often confined indoors. Unless the home environment provides an effective barrier to the entrance of mosquitoes, these so-called “indoor” cats also may be at risk. In one retrospective study, approximately 25% of cats diagnosed with adult heartworms were considered indoor cats (Atkins et al, 2000). Caregivers should be advised objectively of the potential risk of heartworm infection in their community and for their cat’s living conditions.

- **Missed doses of more than 5 months - should have an antigen test before restarting. This means cats just starting Revolution should have a heartworm test - the easiest way to do this is a triple test**