

## Heartworm Positive How to Treat Heartworms in Dogs

PREVENTICIDE HEARTWORM MANAGEMENT - TYPICAL MONTH, AFTER LOADING			
Week One	Week Two	Week Three	Week Four
<u>Heartguard</u> preventative Prednisone and famotidine every other day.	Doxycycline for 5-7 days Prednisone and famotidine every other day.	Sentinel preventative Prednisone and famotidine every other day.	Prednisone and famotidine every other day.

LOADING: The first month, Prednisone loads at one dose twice a day x 3 days then one dose a day x 3 days then one dose every other day to span the first 6 to 8 weeks of treatment. Some vets would keep on Prednisone every other day for a very long time. I'm not crazy about that.

LOADING: The first month, Doxycycline is every day for 3 to 4 weeks.

WHILE ON PREDNISONE: Something like Famotidine to protect the stomach is recommended. |

**Every dog is different. What if your dog is diabetic, also? Would it get the same treatment as a normal dog? What if your dog is a 13 year old couch potato. Would it be treated the same as a 3 year old sled dog?**

Every case is different but what we KNOW to be true is that there are three options in treating Heartworms.

The worst option is to do a surgery to manually remove the heartworms from the dog's ventricles and atria via surgery through the caudal vena cavae. Yeahhhhhhhhhhhh no. If that's needed I'll tell you. Nope. Otherwise there are actually TWO ways to treat heartworms.

1. One treatment is **preventicide** – meaning you give preventative until the dog is NEGATIVE, which is the way I prefer to manage these, with exceptions.
2. The other is **adulticide** which is a couple shots of medicine to kill the adult worms FASTER. Not my favorite.

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The nuts and bolts of:

### PREVENTICIDE

Basically you start the dog on “actual heartworm prevention” and never miss a dose. It's a game of attrition. The adult worms age out. It takes a while. Here's how it works. The worms fail to reproduce. In one or two years, the adult worms die. And without babies to repopulate during the previous 18-24 months – the dog's “Clear”. Oftentimes. But not always. We have had a few that resisted that.

## DOXYCYCLINE

So my preference is to dose a heart worm preventative **every TWO weeks** and give Doxycycline accordingly:

1. 30 days the first month.
2. Then cycle 7 days on, 21 days off, 7 days on, 21 days off repeating.

Doxycycline is hostile to, and even kills certain life phases of heartworm, and can kill weaker adult heartworms. It just makes life REALLY tough on all phases, and the whole life cycle of heartworms. So we use it. The idea is to FURTHER ENSURE that spending all that money on heartworm prevention and risking the case, is WORTH IT BECAUSE IT ALWAYS WORKS. Doxycycline is your insurance.

Heartworm preventative every two weeks. We alternate Sentinel and Heartguard. There are differences in how sensitive certain worms are to Ivermectin versus milbemycin oxime.

## PREDNISONE

On the first day of administration of heartworm prevention, we start Prednisone to combat possible anaphylaxis from 'large numbers of dying microfilaria' clogging the brain, lungs and kidneys. This is a very real but very rare risk. Prednisone and an antihistamine are a Good Idea.

Prednisone 1/2mg/lb PO BID x 3 days then 1/2mg/lb PO SID x 3 days then 1/2mg/lb PO EOD until treatment is done or until you're well into the second month. Judgment call.

## Preventicide Heartworm Control

- Heartguard every month on the 1st
- Sentinel every month on the 15th
- Doxycycline\* once a month for 7 days.
- The first month: Doxy is 21-30 days straight.
- Prednisone\* every other day
- The first month: Pred is Q12 Hours x 3 days and tapering.
- Famotidine or similar antacid to prevent gastric lesions from Prednisone long term.

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### Drawbacks of Preventicide

1. It takes a long time.
2. The risk of embolism is drawn out over a much longer time.
3. Heart valve damage is more likely.

### Pros of Preventicide

- It is considerably less expensive for all but the biggest dogs, than Immiticide is.

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The nuts and bolts of:

### ADULTICIDE

This is basically the administration of a modified "Cyanide" molecule. Yeah, the poison. And we give a couple injections in the muscle of the dog's back. It hurts enough to wanna keep the dogs in the hospital for a day or two. They need pain medicine. They can still embolize or have a shock reaction in the lung, just like with Preventicide.

1. **Immiticide** injections x 2
2. Bloodwork is done to assess organ function before and after the immiticide.
3. Pain medications.
4. Sometimes Xrays boost the profit on the treatment, while showing customers a cool picture of a dog's lungs and lesions associated with microembolism of the lungs if present. They don't really make a material difference to the case except the commission to the vet is tastier. You wouldn't call off the treatment over an Xray, because think about it: The dog dies if you don't do *something*.
5. Medications to prevent a catastrophic result if the dog embolizes, such as Prednisone, antihistamines, Doxycycline the first month. These are discussed in the Preventicide discussion.

**Pros of Adulticide**

- Recovery is faster, and the results are more certain.
- Short time span risking shock or embolism

**Cons of Adulticide**

- Painful
- More expensive

**“Is this the way everybody treats heartworms? Is this “industry standard”?”**

I don't know but it's close. The preventicide regimen we use is because of ONE case that we dribbled heartworm prevention to, FOR YEARS and the dog didn't clear past 24 months. The owner was spending twice what they should on heartworm pills because we were dosing every 2 weeks – and we had done Doxycycline at the beginning but not during. So, we checked in with some colleagues and did some reading and figured out the above ways to improve the success rate. AND so that's where the above regimens came from.