

Moxidectin (Injectable)

- Drug Information

Brand Names:

Proheart® 6 and 12, Cydectin® Injection

Pharmacology:

Avermectin class antiparasitic

Indications:

Cydectin® Injectable is approved for use in beef and non lactating dairy cattle for the treatment of internal and external parasites.

For susceptibility of a particular genus and species consult label information.

In dogs it is approved as an oral monthly heartworm prevention but that product is no longer marketed.

Proheart® 6 is a sustained release injectable once every 6 months and is indicated for use in dogs six months of age and older for the prevention of heartworm disease caused by *Dirofilaria immitis* and for the treatment of existing larval and adult hookworm (*Ancylostoma caninum* and *Uncinaria stenocephala*) infections.

Proheart® 12 is a sustained release injectable once every 12 months and is indicated for use in dogs twelve months of age and older for the prevention of heartworm disease caused by *Dirofilaria immitis* and for the treatment of existing larval and adult hookworm (*Ancylostoma caninum* and *Uncinaria stenocephala*) infections.

Contraindications:

- General

Use of large animal products in small animals may result in death.

Contraindicated in animals previously found to be hypersensitive to this drug.

- Small Animal

- Dog

Prior to administration of ProHeart 6, dogs should be tested for existing heartworm infections.

Infected dogs should be treated to remove adult heartworms. ProHeart is not effective against adult *D. immitis* and, while the number of circulating microfilaria may decrease following treatment, ProHeart is not effective for microfilaria clearance.

Do not administer ProHeart to dogs who are sick, debilitated, underweight or who have a history of weight loss.

Proheart® 6 should not be used more frequently than every 6 months and Proheart® 12 should not be used more frequently than every 12 months .

Proheart® is not effective against adult *D. immitis*.

Proheart® is not effective for microfilaria clearance.

Proheart® 6 is for use in dogs six months of age and older and Proheart® 12 is for use in dogs 12 months of age or older.

Caution should be used when administering ProHeart concurrently with vaccinations. Adverse reactions, including anaphylaxis, have been reported following the concomitant use of moxidectin microspheres and vaccinations.

ProHeart should be administered with caution in dogs with pre-existing allergic disease, including food allergy, atopy, and flea allergy dermatitis. In some cases, anaphylactic reactions have resulted in liver disease and death.

Anaphylactic and anaphylactoid reactions should be treated immediately with the same measures used to treat hypersensitivity reactions to vaccines and other injectable products.

- Large Animal

- Cattle

Contraindicated in female dairy cattle of breeding age, calves less than 8 weeks of age and calves intended for veal.

Do not apply to areas of skin with mange scabs, skin lesions, mud or manure.

Do not use in sick or debilitated or underweight animals.

Cattle should be treated as soon as possible after heel fly (warble fly) season to avoid potential problems associated with killing the migrating larva while they are in vital areas in the body.

Interactions:

- General Interactions

No identified General Interactions at time of publishing.

- Category Interactions

- Benzodiazepine

Effects may be potentiated by moxidectin; use together not advised in humans.

- Drug Interactions

- Amiodarone

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Carvedilol

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Clarithromycin

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- CycloSPORINE

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Diltiazem

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Erythromycin

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Itraconazole

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Ketoconazole

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- QuiNIDine

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Spinosad

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Spironolactone

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

- Verapamil

Caution is advised if using other drugs that can inhibit p-glycoprotein. Those dogs at risk for MDR1 genetic mutation should probably not receive moxidectin with the following drugs, unless tested normal.

Adverse Effects:

- General

The use of these products in species other than those approved for each particular product may result in severe adverse effects including death.

- Small Animal**- Dog**

Proheart® 6 and 12 - Anaphylactic type hypersensitivity reactions that are sometimes severe resulting in recumbency, shock and death have been reported. In rare cases these reactions have resulted in the death of the animal.

Milder cases have experienced angioneurotic edema and urticaria. Anaphylactic and anaphylactoid reactions should be treated immediately with the same measures used to treat hypersensitivity reactions to vaccines and other injectable products.

Post approval experience in decreasing order of frequency:

General: Anaphylaxis/toid reactions, depression/lethargy, anorexia, fever, weight loss.

Gastrointestinal: Vomiting (with and without blood), diarrhea (with and without blood), hypersalivation.

Neurological: Convulsions, ataxia, trembling, hind limb paresis

Dermatological: Urticaria, head/facial edema, injection site pruritus/swelling, erythema multiforme.

Hematological: Immune-mediated hemolytic anemia, leukocytosis, immune-mediated thrombocytopenia

Hepatic: Elevated liver enzymes, hepatopathy, hypoproteinemia, hyperbilirubinemia.

Respiratory: Dyspnea, polypnea, coughing.

In rare situations, death has been reported as an outcome of the adverse events listed above.

Heartworm positive dogs may experience vomiting, bloody diarrhea, lethargy, coughing, dyspnea or cardiopulmonary signs if treated with Proheart 6.

- Large Animal**- Cattle**

Severe adverse effects including death may result particularly if used in sick, debilitated or underweight animals.

Cydetin Injectable may cause local tissue reactions that may result in trim loss if animals are slaughtered within 35 days of treatment.

Dosages:**- General**

The use of these products in species other than those approved for each particular product may result in severe adverse effects including death.

- Small Animal**- Dog**

Proheart® Oral Tablets - 3 microgram/kg by mouth monthly - No longer on the market

For treatment of demodexis - extra label use: 0.2 - 0.4 mg/kg by mouth once daily. Clinical cure is 75 days average and parasite cure is 112 days average.

Proheart® - injection should be administered within one month of the dog's first exposure to mosquitoes.

Follow-up treatments may be given every six months for Proheart 6 and every twelve months for Proheart 12 if the dog has continued exposure to mosquitoes.

When replacing another heartworm preventive product, Proheart® should be given within one month of the last dose of the former medication.

To ensure accurate dosing, calculate each dose based on the dog's weight at the time of treatment. Do not overdose growing puppies in anticipation of their expected adult weight. The dosage chart may be used as a guide.

Product must be mixed at least 30 minutes prior to the intended time of use. Once constituted, swirl the bottle gently before every use to uniformly re-suspend the microspheres.

Withdraw 0.05 mL of suspension/kg body weight into an appropriately sized syringe fitted with an 18G or 20G hypodermic needle. Dose promptly after drawing into dosing syringe. If administration is delayed, gently roll the dosing syringe prior to injection to maintain a uniform suspension and accurate dosing.

Using aseptic technique, inject the product subcutaneously in the left or right side of the dorsum of

the neck cranial to the scapula.

No more than 3 mL should be administered in a single site. The location(s) of each injection (left or right side) should be noted so that prior injection sites can be identified and the next injection can be administered on the opposite side.

Dose: 0.05 mL/kg SQ The following dosage chart may be used as a guide. This delivers 0.17 mg/kg moxidectin in ProHeart 6 injection and 0.5 mg/kg moxidectin in ProHeart 12 injection.

DOSAGE CHART

11 pound. (5 kg): Give 0.25 mL

22 pound. (10 kg): 0.50 mL

33 pound. (15 kg): 0.75 mL

44 pound. (20 kg): 1 mL

55 pound. (25 kg): 1.25 mL

66 pound. (30 kg): 1.50 mL

77 pound. (35 kg): 1.75 mL

88 pound. (40 kg): 2 mL

99 pound. (45 kg): 2.25 mL

110 pound. (50 kg): 2.5 mL

121 pound. (55 kg): 2.75 mL

132 pound. (60 kg): 3 mL

Proheart® - 3 microgram/kg by mouth monthly

For treatment of demodecosis - extra label use: 0.2 - 0.4 mg/kg by mouth once daily. Clinical cure is 75 days average and parasite cure is 112 days average.

- Large Animal

- Cattle

Cydectin® Injectable : Use 1/2 - 3/4 inch needle and 16 - 18 gauge needle - 0.2 mg/kg (1 mL/50 kg) given as a SQ injection under the loose skin in front of or behind the shoulder.

Special Notes:

None