

Ivermectin, Oral

(eye-ver-mek-tin)

Category: Antiparasitic Agent

Other Names for this Medication: Heartgard®, Ivomec®

Common Dosage Forms: Veterinary: Dogs: Oral tablets (plain or chewable): 68 mcg, 136 mcg, & 272 mcg. Oral tablets are also available for dogs that combine ivermectin with other deworming medications that include pyrantel, or fenbendazole, and praziquantel. **Cats:** Oral tablets (chewable): 55 mcg & 165 mcg. **Horses:** Oral paste: 1.87% (18.7 mg/gram) in 6.08 g syringes. There are also oral pastes that combine ivermectin with praziquantel (used for tapeworms). **Human:** 3 mg and 6 mg tablets.

This information sheet does not contain all available information for this medication. It is to help answer commonly asked questions and help you give the medication safely and effectively to your animal. If you have other questions or need more information about this medication, contact your veterinarian or pharmacist.

Key Information

- ▶ Antiparasitic drug used in many species but can be toxic in some species (eg, turtles, skinks, some birds).
- ▶ Should be used with caution in dog breeds that could have a genetic mutation (eg, *ABCB1-1Δ* [*MDR1*]) until they test negative. This mutation is most commonly found in “white feet” breeds, including collies, Australian shepherd dogs, shelties, and long-haired whippets. Ivermectin, at higher doses, is toxic to dogs with this mutation.
- ▶ May be given with or without food. If your pet vomits or acts sick after receiving the drug on an empty stomach, try giving the next dose with food or a small treat. If vomiting continues, contact your veterinarian.
- ▶ Overdoses can be serious; measure doses carefully and keep flavored, chewable tablets out of reach of children and animals.
- ▶ Usually well tolerated. If you see neurologic signs such as coma, weakness, clumsiness, dilated (ie, big) pupils, trembling, excessive salivation (ie, drooling), or if the animal presses its head against the wall, contact your veterinarian immediately.
- ▶ Dispose of unused product carefully; it can be very toxic to fish and wildlife.

How is this medication useful?

Ivermectin is an antiparasitic drug that is used to treat many different parasites in various species. Ivermectin is also used to treat and prevent heartworm and lung parasite infections, some intestinal parasites, and various kinds of mites that may infect the skin (ie, mange) and ears.

The FDA (U.S. Food & Drug Administration) has approved this drug for use in several species, including dogs, cats, and horses, for treating different parasitic infections or preventing heartworm infection. The FDA allows veterinarians to prescribe and use products containing this drug in different species or for other conditions in certain situations. Ivermectin is also FDA approved for use in humans, but human dosage forms are rarely used in animals due to expense and availability of veterinary-approved products. You and your veterinarian can discuss why this drug is the most appropriate choice.

What should I tell my veterinarian to see if this medication can be safely given?

Many things might affect how well this drug will work in your animal. Be sure to discuss the following with your veterinarian so together you can make the best treatment decisions.

- ▶ Other drugs can interact with this drug, so be sure to tell your veterinarian and pharmacist what medications (including

vitamins, supplements, or herbal therapies) you give your animal, including the amount and time you give each.

- ▶ Tell your veterinarian about any conditions or diseases your animal may have now or may have had in the past.
- ▶ If your animal has been treated for the same disease or condition in the past, tell your veterinarian about the treatment and how well it did or didn't work.
- ▶ If your animal is pregnant or nursing, talk to your veterinarian about the risks of using this drug, especially if your dog has not been tested for the *ABCB1-1Δ* (*MDR1*) genetic mutation. Ivermectin is thought to be safe to use during pregnancy.
- ▶ Tell your veterinarian and pharmacist about any medication side effects (including allergic reactions, lack of appetite, diarrhea, itching, hair loss) your animal has developed in the past.

When should this medication not be used or be used very carefully?

No drug is 100% safe in all patients, but your veterinarian will discuss with you any specific concerns about using this drug in your animal.

This drug **SHOULD NOT** be used:

- ▶ At higher than labeled dosages in dog breeds that may have a certain mutation (*ABCB1-1Δ*, also called *MDR1*) until they are tested for this mutation. This mutation is most commonly found in “white feet” breeds, including collies, Australian shepherd dogs, shelties, and long-haired whippets. Dogs that have this mutation may be overly sensitive to the drug, which can result in toxicity.
- ▶ In animals that are allergic to ivermectin or other avermectin drugs (eg, selamectin, moxidectin).
- ▶ In animals less than 6 weeks of age.
- ▶ In dairy animals or horses that are to be used for food.
- ▶ In turtles, tortoises, indigo snakes, and skinks. Ivermectin is toxic in these species.

This drug should be used **WITH CAUTION**:

- ▶ In dogs without a current heartworm test. Dogs must be tested for heartworm infection before being given ivermectin-containing products. Dogs infected with heartworms are at risk of having a serious adverse reaction (caused by the rapid die off of immature heartworms) following drug administration.
- ▶ In birds. Ivermectin can be toxic in several species of birds, including orange-cheeked waxbill finches & budgerigars. It should only be used under the direct guidance of a veterinarian with experience treating birds.
- ▶ In cats younger than 1 year, which may be at higher risk for neurologic toxicity.

If your animal has any of these conditions or signs, talk to your veterinarian about the potential risks versus benefits.

What are the side effects of this medication?

Side effects that usually are not serious include:

- ▶ Horses: Itching, irritation, pain, swelling of the skin. When parasites begin to die, a mild allergic reaction to the dead and dying parasites can occur.

You don't have to be overly concerned if you see any of these unless they are severe, persistent, or worsen. Contact your veterinarian if this happens.

Side effects that may be serious or indicate a serious problem:

- ▶ Neurologic toxicity. Toxicity is more commonly seen with higher doses in kittens and dogs with the *ABCB1-1Δ* genetic mutation. Neurologic signs can include: coma, weakness, blindness, clumsiness, dilated (big) pupils, trembling, excessive drooling or foaming, or the animal pressing its head against the wall.

If you see any of these, contact your veterinarian immediately.

If my animal gets too much of this medication (an overdose), what should I do?

Overdoses can be serious. Overdoses in dogs or cats can cause vomiting, diarrhea, stumbling, lethargy (ie, tiredness, lack of energy), rapid heartbeat, excessive drooling, dilation of pupils, coma, and seizures. If you witness or suspect an overdose, contact your veterinarian or an animal poison control center for further advice. Animal poison control centers that are open 24 hours a day include: **Pet Poison HELPLINE** (855-764-7661) and **ASPCA Animal Poison Control Center** (888-426-4435); a consultation fee is charged for these services.

How should this medication be given?

For this medication to work, give it exactly as your veterinarian has prescribed. It's a good idea to always check the prescription label to be sure you are giving the drug correctly.

- ▶ Ivermectin and combination products can be given by mouth as tablets, chewable tablets, oral liquids, oral pastes, oral drenches, injection, and topical formulations.
- ▶ The drug may be given either with food or on an empty stomach. If your pet vomits or acts sick after receiving the drug on an empty stomach, try giving the next dose with food or a small treat. If vomiting continues, contact your veterinarian.
- ▶ Liquid forms of this medication must be measured carefully. Your veterinarian or pharmacist can help by providing special measuring spoons or syringes.
- ▶ If you have difficulty getting your animal to take the medicine, contact your veterinarian or pharmacist for tips to help with dosing and to reduce the stress of medication time.
- ▶ This medication can be given for various lengths of time. Be sure you understand how long your veterinarian wants you to continue giving this medication. Prescription refills may be necessary before the therapy is complete. Before stopping this medication, talk to your veterinarian, as there may be important reasons to continue its use.

What should I do if I miss giving a dose of this medication?

If you miss a dose, give it when you remember and then wait the amount of time between doses recommended by your veterinarian before giving another dose. Do not double up or give extra doses. When using ivermectin for heartworm prevention: If more than 8 weeks have passed without giving this medication, start giving the drug as soon as you remember. After that, continuing giving the medication monthly, but make sure to have your animal tested for heartworm infection 6 months later, as your dog may have become infected during the time the medication was not given.

How should I store this medication?

- ▶ Store this medication in the original prescription bottle or an approved dosage-reminder container (ie, pill minder) at room temperature and protected from light.
- ▶ If your veterinarian or pharmacist has made (compounded) a special formulation for your animal, follow the storage recommendations and expiration date for the product.
- ▶ Keep away from children and other animals, especially the chewable or flavored forms of the drug.

Can handling this medication be hazardous to me, my family, or other pets?

There are no specific precautions required when handling small animal products of this medication unless you are allergic to it. When using any large animal formulation, do not eat or smoke, and wash your hands well after use to avoid accidentally getting any of the drug into your mouth. Avoid contact with eyes.

How should I dispose of this medication if I don't use it all?

- ▶ Dispose of ivermectin carefully; it can be very toxic to fish, turtles, and other wildlife.
- ▶ Do not flush this medication down the toilet or wash it down the sink. If a community drug "take-back" program is available, use this option. If there is no take-back program, mix the drug with coffee grounds or cat litter (to make it undesirable to children and animals and unrecognizable to people who might go through your trash), place the mixture in a sealable plastic bag to keep it from leaking out, and throw the bag out with the regular trash.
- ▶ Do not save leftover medication for future use or give it to others to use.

What other information is important for this medication?

- ▶ Using the large animal injectable products orally (ie, by mouth) in small animals is not recommended. They are very concentrated and can be easily overdosed.
- ▶ Use of this drug may not be allowed in certain animal competitions. Check rules and regulations before entering your animal in a competition while this medication is being administered.

If you have any other questions or concerns about this medication, contact your veterinarian or pharmacist.