

Levamisole

(leh-vam-i-sole)

Category: Antiparasitic Agent

Other Names for this Medication: Levasole®, Tramisol®, Ripercol®

Common Dosage Forms: Veterinary: There are various levamisole products labeled for use in cattle (not dairy), sheep, and swine. These would need to be made (compounded) into dosage forms appropriate for small animals (dogs, cats, small mammals) or birds. **Human:** None.

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

- ▶ When given by mouth, giving with food may help prevent vomiting in dogs.
- ▶ Do not administer injectable products intravenously (IV).
- ▶ Most common side effects seen in small animals: vomiting, big pupils (cats), diarrhea, drooling, and lack of energy.
- ▶ Serious side effects can occur, including bone marrow toxicity, skin rashes, shaking, agitation, and behavior changes. Contact your veterinarian immediately if you see any of these signs.
- ▶ Follow your veterinarian's instructions carefully, as toxicities will occur if overdosed.
- ▶ Avoid skin contact with liquid forms, as the drug can be absorbed through skin.
- ▶ Levamisole is not FDA-approved for use in dairy animals of breeding age.

How is this medication useful?

Levamisole can be useful for treating certain intestinal parasitic infections in dogs, cats, birds, and small mammals. Because this drug can have several side effects, it is usually reserved for treating infections that have not responded to other drugs. Levamisole has also been used as an immune stimulant in dogs, cats, and birds.

The FDA (U.S. Food & Drug Administration) has approved this drug for use in cattle (not dairy), sheep, and swine for treating parasites. The FDA allows veterinarians to prescribe and use products containing this drug in different species or for other conditions in certain situations. 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 pet may have now or has 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.
- ▶ Tell your veterinarian and pharmacist about any medication side effects (including allergic reactions, lack of appetite, diarrhea, itching, hair loss) your pet 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 in patients:

- ▶ That are allergic to it.
- ▶ That are lactating or nursing.

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

- ▶ That are stressed because of illness, surgery, transportation, and vaccinations.
- ▶ That are severely weak or frail.
- ▶ That have serious kidney or liver disease.
- ▶ With retroviral infections in cats (ie, Feline Leukemia Virus [FeLV], Feline Immunodeficiency Virus [FIV]).
- ▶ In birds, giving the drug as a shot can be more toxic than when given by mouth.

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:

- ▶ Dogs: Vomiting, diarrhea, excessive salivation (drooling), panting, shaking, agitation (eg, nervous, upset, unable to relax), other behavioral changes, and low energy level.
- ▶ Cats: Excessive salivation (drooling), excitement, dilated (big) pupils, and vomiting.
- ▶ Birds: Vomiting, regurgitation.

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

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

- ▶ Dogs: Extreme lack of energy, bleeding, or bruising may indicate bone marrow depression (rare).
- ▶ Dogs: Trouble breathing (rare)
- ▶ Dogs: Skin sloughing, sores, oozing, rash (rare).
- ▶ Birds: Trouble walking or flying, stumbling, unable to maintain balance.

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

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

Overdoses of levamisole can be serious. 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.

- ▶ Levamisole may be given either with food or on an empty stomach. If your animal vomits or acts sick after receiving the drug on an empty stomach, try giving the next dose with food. 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 reducing 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 will be 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.

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.

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

Wear nonpermeable gloves and avoid skin contact with liquid forms of levamisole, as it can be absorbed through the skin. Skin or eyes exposed to powder or liquids containing the drug should immediately be washed or rinsed off thoroughly. Wash hands after handling tablets or capsules.

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

- ▶ 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 left over medication for future use or give it to others to use.

What other information is important for this medication?

- ▶ 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.