

# Milbemycin with Lufenuron (Dogs)

(mil-beh-my-sin with loo-fen-yur-on)

**Category:** Heartworm preventive; Agent to treat & control intestinal parasites & control fleas

**Other Names for this Medication:** Sentinel®

**Common Dosage Forms: Veterinary:** Oral Tablets (milbemycin/lufenuron): 2-10 lbs (2.3 mg/46 mg), 11-25 lbs (5.75 mg/115 mg), 26-50 lbs (11.5 mg/230 mg), 51-100 lbs (23 mg/460 mg). **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

- ▶ Prevents heartworm infection and treats roundworm, hookworm, and whipworm infections. Controls flea populations.
- ▶ Prevents flea eggs from developing; requires additional medication to kill adult fleas.
- ▶ Give medication with food to avoid stomach upset.
- ▶ Appears safe when used as directed on the label.
- ▶ Store flavored tablets out of reach of children and animals; product may be toxic to wildlife, so dispose of unused tablets properly.

## How is this medication useful?

The combination of milbemycin and lufenuron is used in dogs to prevent heartworm infection; treat roundworm, hookworm, and whipworm infections; and control flea populations. Prevents flea eggs from developing, but does not kill adult fleas.

The FDA (U.S. Food & Drug Administration) has approved this drug for use in dogs and puppies 4 weeks of age and older and weighing 2 lb or more. The FDA does allow 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 dogs that are:

- ▶ Allergic to milbemycin, lufenuron, or other avermectin drugs (eg, ivermectin, selamectin).
- ▶ Less than 4 weeks old or that weigh less than 2 lb.

This drug should be used **WITH CAUTION** in dogs that:

- ▶ Are pregnant or nursing.
- ▶ Have not been tested for heartworm infection. Shock-like reactions can occur if milbemycin is given to animals with heartworm infection.

If your pet 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 (rare) that usually are not serious include:**

- ▶ Vomiting, depression (lack of energy), itchy skin, diarrhea, loss of appetite, and red skin (rash).

You don't have to be overly concerned if you see any of these 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 include:**

All are very rare, but may indicate an overdose or toxicity (especially in dogs with the *ABCB1-1Δ* [*MDR1*] genetic mutation):

- ▶ Depression, lack of energy, or weakness.
- ▶ Stumbling or collapse.
- ▶ Seizures or coma.
- ▶ Dilated (big) pupils.
- ▶ Excessive drooling.

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

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

If you witness or suspect an overdose, contact your veterinarian or an animal poison control center immediately 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.

- ▶ Milbemycin with lufenuron must be given to your pet monthly, preferably on the same date each month.
- ▶ The drug should be given immediately after or with a meal. Most dogs will eat the flavored tablet willingly. It also can be broken up and mixed into food. Watch your dog closely following dosing to be sure the entire dose has been eaten. If it is not entirely consumed, re-dose once with the full, recommended dose as soon as possible.
- ▶ 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, so be sure you understand how long your veterinarian wants you to continue giving it. In geographic areas where mosquitoes and fleas are seasonal, the treatment schedule should begin one month prior to the expected onset and should continue until the end of "mosquito and flea season." In areas with year-round infestations, treatment should continue throughout the entire year without interruption. You may need to get refills before the therapy will be complete.

### 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 this product 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 the flavored tablets away from children and other animals, as the flavored forms of the drug can be appealing.

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

There are no specific precautions required when handling this medication unless you are allergic to it. Wash your hands after handling any medication.

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

- ▶ Dispose of milbemycin-lufenuron carefully, as it is can be toxic to 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 left over medication for future use or give it to others to use.

### What other information is important for this medication?

- ▶ Additional medication is needed to kill adult fleas (eg, nitenpyram [Capstar®], spinosad [Comfortis®], or topical flea and tick prevention products).

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