

Lufenuron, Oral

(loo-fen-yur-on)

Category: Agent to control fleas

Other Names for this Medication: Program®

Common Dosage Forms: Veterinary: Oral Suspension: 135 mg, 270 mg; Flavor Tabs®: 45 mg, 90 mg, 204.9 mg, & 409.8 mg. There is also a 6-month injectable product for cats that may only be injected by veterinarians. **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 development of flea eggs. Does not kill adult fleas unless used with another drug. All animals in the household must be treated.
- ▶ Oral products must be used every 30 days to maximize efficacy.
- ▶ Give with food.
- ▶ Side effects are uncommon when given orally. Vomiting after a dose is the most common side effect. If animal vomits within 2 hours after dosing, the drug should be given again.
- ▶ Do not split tablets unless instructed to do so.

How is this medication useful?

Lufenuron is used to control flea infestations in dogs and cats over 6 weeks of age. This drug does not kill adult fleas, but it breaks the flea's life cycle by inhibiting flea egg development. Lufenuron is often used in combination with another product (eg, nitenpyram) to kill adult fleas.

The FDA (U.S. Food & Drug Administration) has approved this drug for use in dogs and cats for treating flea infestations. Lufenuron may also be used to treat certain fungal infections in dogs and cats, but it must be given at much higher doses and given more often than when used for flea control. 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 possibly cause problems when taken 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 or similar 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 lufenuron.

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

- ▶ That are less than 6 weeks of age.

If your animal matches either of these, talk to your veterinarian about the possible risks of using the medication versus the benefits that it might have.

What are the side effects of this medication?

Lufenuron is usually tolerated well when given by mouth to dogs or cats.

Side effects that usually are not serious include:

- ▶ Cats: Vomiting, depression, tiredness, loss of appetite, diarrhea, and itchy skin.
- ▶ Dogs: Vomiting, depression, tiredness, loss of appetite, diarrhea, itchy skin, and red skin (rash).

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

- ▶ Labored or trouble breathing (very rare).
- ▶ Severe skin rashes (very rare).
- ▶ Hives (very rare).

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?

Oral overdoses of lufenuron are unlikely to be harmful, but 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.

- ▶ All dogs and cats in the household must be treated using the lufenuron product that corresponds with the animal's weight.
- ▶ Lufenuron is dosed monthly, preferably on the same date each month. In areas where flea infestations are seasonal, the treatment schedule should begin several weeks prior to the expected onset of "flea season" and continue until the end of "flea season." If there is a chance of exposure to fleas year-round, then treatment should continue the entire year without stopping. Ask your veterinarian for details concerning your geographic area and the most effective treatment schedule for your animal.
- ▶ **Dogs:** Mix medication into food (for tablets or oral suspension), or give the tablet directly to your animal during a normal meal.
- ▶ **Cats:** When using the suspension for cats, mix the entire contents of the appropriate size suspension pack(s) with about 2 tablespoons of the cat's food. As it is a liquid, it mixes easily with canned food. Watch your cat closely to be sure the entire dose has been eaten and then give its regular meal. If the dose 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. 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 the 30-day interval, give it immediately and resume your monthly dosing schedule. It is still important to treat all dogs and cats in the household if this happens. Fleas can reproduce on untreated pets and allow infestations to persist.

How should I store this medication?

- ▶ The commercially available tablets and suspension should be stored in the original prescription bottle or an approved dosage reminder container (ie, pill minder) at room temperature between 59°-77°F (15-25°C); occasional exposure or exposure of less than 48 hours to temperatures outside of storage recommendations for the tablets or suspension should not affect it. Do not store and use opened pouches of the suspension for subsequent doses.
- ▶ 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?

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?

- ▶ 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.

Lufenuron with Nitenpyram

(loo-fen-yur-on with nye-ten-pye-rum)

Category: Flea Control

Other Names for this Medication: Program® Flavor Tabs® and Capstar® Flea Management System™

Common Dosage Forms: Veterinary: Lufenuron Flavor Tabs®: 45 mg, 90 mg, 204.9 mg, & 409.8 mg; Nitenpyram Oral Tablets: 11.4 mg & 57 mg. **Human:** None.

This information sheet does not contain all available information for these medications. 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, contact your veterinarian or pharmacist.

Key Information

- ▶ Lufenuron helps to control fleas by preventing development of flea eggs; it does not kill adult fleas.
- ▶ Nitenpyram kills adult fleas only.
- ▶ Lufenuron is given once monthly to prevent and control flea populations, while nitenpyram is used as needed to kill adult fleas.
- ▶ If your pet currently has fleas, administer nitenpyram once or twice per week until adult fleas are no longer observed.
- ▶ All animals in a household must be treated to control flea populations.
- ▶ Give appropriate tablet sizes, or combination of tablets, based on your animal's weight.

How is this medication combination useful?

Lufenuron is used to control flea infestations in dogs, cats, and rabbits by inhibiting flea egg development. It can be given in combination with nitenpyram to also kill adult fleas. Fleas begin to fall from treated animals about 30 minutes after nitenpyram administration, and a single dose can protect animals for 1-2 days.

The FDA (U.S. Food & Drug Administration) has approved this drug combination for use in dogs and cats for treating flea infestations. The FDA has allowed veterinarians to prescribe and use products containing this drug combination in different species or for other conditions in certain situations. You and your veterinarian can discuss why this drug combination is the most appropriate choice.

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

Many things might affect how well this drug combination 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 these medications, 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 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 did not 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 animal has developed in the past.

- ▶ Ask your veterinarian how long you should give these medications and if you should continue to give it even after your animal seems back to normal.
- ▶ Ask your veterinarian what this drug combination is expected to do and how long it will take to know if it is working.
- ▶ Ask if a recheck appointment is necessary.

When should this medication combination 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 combination in your animal.

This drug combination **SHOULD NOT** be used in:

- ▶ Animals that are allergic to either lufenuron or nitenpyram.
- ▶ Animals that are less than 4 weeks of age.
- ▶ Animals that weigh less than 2 lb (0.9 kg).

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

- ▶ Animals that are between 4 and 8 weeks old as there is a higher risk for serious side effects.
- ▶ Animals that are in poor health or body condition as there is a higher risk for serious side effects.
- ▶ Pregnant or lactating females.

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

What are the side effects of these medications?

Lufenuron and nitenpyram are usually tolerated well when given by mouth to dogs or cats. Serious side effects, including neurologic signs and death, are more likely in animals weighing less than 2 pounds, are less than 8 weeks of age, and/or in poor body condition.

Side effects of lufenuron that usually are not serious include:

- ▶ Loss of appetite, vomiting, diarrhea.
- ▶ Tiredness, lack of energy.
- ▶ Itchy skin; skin redness (dogs).

Side effects of nitenpyram that usually are not serious include:

- ▶ Itching and scratching are the most common side effects especially as fleas begin to die; this usually improves after a while.
- ▶ Hyperactivity, nervousness, trembling, panting, loss of energy, depression, vocalization, vomiting, decreased appetite, diarrhea.

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

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

- ▶ Incoordination (eg, stumbling, clumsiness), weakness, seizures, excessive salivation (drooling), labored or trouble breathing, serious skin rashes, hives, excessive panting (dogs), and big pupils (cats).

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

- ▶ Incoordination (eg, stumbling, clumsiness), weakness, and seizures.

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

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

If you witness or suspect an overdose, contact your veterinarian or an animal poison control center for further advice. Animal poison control centers open 24-hours a day include **Pet Poison HELPLINE** (855-764-7661) and **ASPCA Animal Poison Control Center** (888-426-4435); a consultation fee may be charged for these services.

How should this medication combination be given?

For this drug combination to work properly, give it exactly as your veterinarian has prescribed. Check the prescription label to be sure you are giving the drug correctly.

- ▶ It is important to treat all dogs and cats in the household using the product that corresponds with the animal's weight. Do not mix up the tablet sizes when treating different animals in the household.
- ▶ Give these medications either mixed into food (tablets or oral suspension) or with a normal meal (dog, tablets).
- ▶ 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 for both you and your animal.
- ▶ These medications can be given for various lengths of time. Be sure you understand how long your veterinarian wants you to continue giving these medications. Prescription refills may be necessary before the therapy will be complete. If you want to stop giving these medications, talk to your veterinarian, as there may be important reasons to continue giving them.

What should I do if I miss giving a dose of these medications?

If you miss the 30-day interval for the lufenuron tablet, give it immediately and resume your monthly dosing schedule. If this happens, it is important to treat all dogs and cats in the household. Fleas can reproduce on untreated pets and allow infestations to persist.

How should I store these medications?

- ▶ Store these medications in the original containers at room temperature and protected from light.
- ▶ Keep away from children and other animals.

Can handling these medications be hazardous to me, my family, or other pets?

There are no specific precautions required when handling these medications unless you are allergic to them. Wash your hands after handling any medication.

How should I dispose of these medications if I don't use them all?

- ▶ Do not flush these medications down the toilet or wash them 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 these medications?

- ▶ Use of this drug may not be allowed in certain animal competitions. Check rules and regulations before entering your animal in a competition while these medications are being administered.

If you have any other questions or concerns about these medications, contact your veterinarian or pharmacist.

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 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.

Milbemycin with Lufenuron and Praziquantel (Dogs)

(mil-beh-my-sin with loo-fen-yur-on and pra-zi-kwon-tel)

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

Other Names for this Medication: Sentinel® Spectrum®

Common Dosage Forms: Veterinary: Flavored, chewable, oral tablets (milbemycin/lufenuron/praziquantel): 2-8 lbs (2.3 mg/46 mg/22.8 mg), 8.1-25 lbs (5.75 mg/115 mg/57 mg), 25.1 – 50 lbs (11.5 mg/230 mg/114 mg), & 50.1-100 lbs (23 mg/460 mg/228 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, whipworm, and tapeworm 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.

How is this medication useful?

The combination of milbemycin, lufenuron, and praziquantel is used in dogs to prevent heartworm infection; treat roundworm, hookworm, tapeworm, 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 6 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, other avermectin drugs (eg, ivermectin, selamectin), or praziquantel.
- ▶ Less than 6 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.

- ▶ The milbemycin, lufenuron, and praziquantel combination product 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-praziquantel 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.