Milbemycin

(*mil-beh-my-sin*)

**Description:** Heartworm Preventive; Agent to Treat & Control Intestinal Parasites

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

**Common Dosage Forms: Veterinary:** 2.3 mg, 5.75 mg, 11.5 mg, & 23.0 mg flavored oral tablets. An otic (ear medication) product (Milbemite®) is also available. **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**

- Monthly prevention of heartworm infection and control of roundworms and hookworms in dogs and cats. Also controls whipworms in dogs.
- Appears safe when used at labeled doses.
- Store flavored tablets out of reach of children and animals.

**How is this medication useful?**

In dogs and cats, oral milbemycin tablets are approved by the FDA for prevention of heartworm infection and to control hookworms and roundworms; it also controls whipworms in dogs. In dogs, milbemycin may also used at higher dosages for treating some skin parasitic disease (eg, demodectic mange, scabies). Milbemycin has been used to treat reptiles for intestinal parasites and, unlike ivermectin, appears safe to use in turtles or tortoises.

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 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 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 animal has developed in the past.

How long until I will know if this medication is working, and how long will the effects of this medication last?

This medication has effects on more than one type of parasite. Parasites inside your animal's body begin to die within 1 to 2 days, while most parasites on the skin will begin to die within 24 hours. Your animal's clinical signs should improve after that time. The effects of this medication are moderate in duration, meaning they may last for a few days, although the benefits may be prolonged if your animal has decreased liver and/or kidney function. For this medication to protect your animal against infection by heartworms and intestinal parasites, it must be given monthly.

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.
- Dogs or puppies less than 4 weeks old or that weigh less than 2 lb.
- Cats or kittens less than 6 weeks old or that weigh less than 1.5 lb.

This drug should be used WITH CAUTION in dogs:

- That have not been tested for heartworm infection. Shock-like reactions can occur if milbemycin is given to animals with heartworm infection.

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

What are the side effects of this medication?

At labeled dosages, milbemycin is tolerated well. When used at higher dosages for treating skin parasites, side effects may be seen.

Side effects that usually are not serious include:

- Vomiting after a dose is given. If your animal vomits or acts sick after getting milbemycin on an empty stomach, give with a small amount of food or small treat to see if this helps. If vomiting continues, contact your veterinarian.

You don’t have to be overly concerned if you see this side effect unless it is severe, worsens, or continues to be a problem. Contact your veterinarian if this happens.

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

All are very rare, but may indicate an overdose or toxicity (especially in dogs with the MDR1 genetic mutation most commonly found in “white feet” breeds: collies, Australian shepherds, Shetland sheepdogs [Shelties], long-haired whippets):

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

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

If my animal 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 drug may be given either with food or on an empty stomach. Most dogs and cats will eat the flavored tablet willingly. The milbemycin chewable tablets can be broken up and mixed into food or given directly. Watch your animal 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 your animal vomits after receiving it on an empty stomach, give with food or treat to see if this helps. If vomiting continues, contact your veterinarian.
Compounded 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. In geographic areas where mosquitoes are seasonal, the treatment schedule should begin one month prior to the expected onset and should continue until the end of the mosquito season. In areas with year-round infestations, treatment should continue throughout the 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 away from children and other animals, as the chewable, flavored forms of the drug can be appealing.

Can handling this medication be hazardous to me, my family, or other animals?
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 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 leftover 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. Please check the rules for your pet’s sport before entering it in a competition while you are giving it this medication.

If you have any other questions about this medication, contact your veterinarian or pharmacist.
Milbemycin with Lufenuron (Dogs)

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

**Description:** 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 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 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 animal has developed in the past.

**How long until I will know if this medication is working, and how long will the effects of this medication last?**

This medication has effects on more than one type of parasite. Parasites inside your animal's body begin to die within 1 to 2 days. Your animal's clinical signs should improve after that time. The effects of this medication are moderate in duration, meaning they may last for a few days, although the benefits may be prolonged if your animal has decreased liver and/or kidney function. For this medication to protect your animal against infection by heartworms and intestinal parasites, it must be given monthly.

**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 animal has any of these conditions, 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 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 include:**

All are very rare, but may indicate an overdose or toxicity (especially in dogs with the *MDR1* genetic mutation most commonly found in “white feet” breeds: collies, Australian shepherds, Shetland sheepdogs [Shelties], long-haired whippets):

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

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

**If my animal 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 service.

**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 animal 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 animals?
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 leftover 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).
- Use of this drug may not be allowed in certain animal competitions. Please check the rules for your pet’s sport before entering it in a competition while you are giving it this medication.

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

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

**Description:** 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 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 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 animal has developed in the past.

How long until I will know if this medication is working, and how long will the effects of this medication last?

This medication has effects on more than one type of parasite. Parasites inside your animal’s body begin to die within 1 to 2 days. Your animal’s clinical signs should improve after that time. The effects of this medication are moderate in duration, meaning they may last for a few days, although the benefits may be prolonged if your animal has decreased liver and/or kidney function. For this medication to protect your animal against infection by heartworms and intestinal parasites, it must be given monthly.

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 animal has any of these conditions, 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 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 include:

All are very rare, but may indicate an overdose or toxicity (especially in dogs with the MDR1 genetic mutation most commonly found in “white feet” breeds: collies, Australian shepherds, Shetland sheepdogs [Shelties], long-haired whippets):

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

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

If my animal 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 animal 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 animals?
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 leftover 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).
- Use of this drug may not be allowed in certain animal competitions. Please check the rules for your pet’s sport before entering it in a competition while you are giving it this medication.

If you have any other questions about this medication, contact your veterinarian or pharmacist.
Milbemycin with Praziquantel (Dogs)

Description: Agent for Prevention of Heartworm Disease; and for Control and Treatment of Roundworms, Hookworms, Whipworms, & Tapeworms

Other Names for this Medication: Interceptor® Plus

Common Dosage Forms: Veterinary: Flavored, chewable oral tablets (milbemycin oxime/praziquantel): 2-8 lbs (2.3 mg/22.8 mg), 8.1-25 lbs (5.75 mg/57 mg), 25.1 – 50 lbs (11.5 mg/114 mg), & 50.1-100 lbs (23 mg/228 mg). Human: None.

How is this medication useful?
The combination of milbemycin and praziquantel is used in dogs to prevent heartworm infection and to control and treat adult roundworm, hookworm, whipworm, and tapeworm infestations. The FDA (U.S. Food & Drug Administration) has approved this drug for use in dogs and puppies 6 weeks of age and older weighing 2 lb or more. The FDA does allow veterinarians to prescribe and use products containing these drugs 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 combination will work in your animal. Be sure to discuss the following with your veterinarian so you can make the best treatment decisions.

- Other drugs can interact with this product, 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 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 animal has developed in the past.

How long until I will know if this medication is working, and how long will the effects of this medication last?

This medication has effects on more than one type of parasite. Parasites inside your animal’s body begin to die within 1 to 2 days and your animal’s clinical signs should improve after that time. The effects of this medication are moderate in duration, meaning they may last for a few days, although the benefits may be prolonged if your animal has decreased liver and/or kidney function. For this medication to protect your animal against infection by heartworms and intestinal parasites, it must be given monthly.

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 or praziquantel
- Less than 6 weeks old
- Less than 2 lb.

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

- That are pregnant or nursing: this product has not been evaluated in this group of dogs.
- Receiving another heartworm or other parasite preventative medication
- That have not been tested for heartworm infection. Shock-like reactions can occur if milbemycin is given to animals with heartworm infection.

If your animal has any of these conditions, 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, diarrhea, and loss of appetite.

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 include:**

All are very rare, but may indicate an overdose or toxicity (especially in dogs with the MDR1 genetic mutation most commonly found in “white feet” breeds: collies, Australian shepherds, Shetland sheepdogs [Shelties], long-haired whippets):

- Depression, lack of energy, or weakness.
- Stumbling or collapse.
- Seizures or coma.
- Excessive drooling.

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

If my animal 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. It is advised to have the medication packaging available.

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 and package information to be sure you are giving the drug correctly.

- The milbemycin and praziquantel combination product must be given to your animal monthly, preferably on the same date each month.
- The drug may be offered by hand without food or may be added to a small amount of food. Most dogs will eat the flavored tablet willingly. The chewable tablets should be given in a way that encourages the dog to chew rather than swallowing the pill whole. 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.

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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 at least six consecutive months and 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, continue giving the medication monthly and then 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 (between 59°F and 77°F) 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 animals?

There are no specific precautions required when handling this medication unless you are allergic to it, in which case you should choose a different product or consult with a human health professional on how to handle this medication safely. Wash your hands after handling any medication. Keep this and all medications out of the reach of children and animals.

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

Dispose of milbemycin-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 leftover medication for future use or give it to others to use.

What other information is important for this medication?

After administering, do not re-administer for thirty (30) days unless your veterinarian specifically instructs you to do so.

Additional medication is needed to kill adult fleas, such as nitenpyram or spinosad (oral medications) or topical flea and tick prevention products).

Dogs infected with certain types of tapeworms (Echinococcus multilocularis and Echinococcus granulosus) may still be contagious even when treated at the appropriate labeled dose of this medication. This type of tapeworm can infect humans. People living in areas where these tapeworms are found are advised to speak with their veterinarian about minimizing risk of exposure to these parasites.

Use of this drug may not be allowed in certain animal competitions. Please check the rules for your pet’s sport before entering it in a competition while you are giving it this medication.

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

*(spin-oh-sad with mil-beh-my-sin)*

**Description:** Heartworm Preventive; Agent to Treat and Control Intestinal Parasites; Kills Adult Fleas

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

**Common Dosage Forms: Veterinary:** (Spinosad/Milbemycin) 140 mg/2.3 mg, 270 mg/4.5 mg, 560 mg/9.3 mg, 810 mg/13.5 mg, & 1620 mg/27 mg flavored oral tablets. **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**

- Oral combination product given monthly to kill adult fleas, prevent heartworm infection, and control hookworms, roundworms, and whipworms in dogs. This combination product does not kill ticks.
- Give medication with food.
- When used as directed by the label, spinosad with milbemycin appears safe.
- This drug combination can be harmful to wildlife, so dispose of unused drugs carefully.
- Keep chewable tablets well out of reach of children and animals.

**How is this medication useful?**

Spinosad with milbemycin is given for the prevention of heartworm disease, prevention and treatment of flea infestations, and the treatment and control of hookworm, roundworm, and whipworm infections in dogs and puppies 8 weeks of age or older that weigh at least 5 pounds. The FDA (U.S. Food & Drug Administration) has approved this drug combination for use in dogs. 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 combination, 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 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 animal has developed in the past.

How long until I will know if this medication is working, and how long will the effects of this medication last?

Fleas will begin to die within 4 to 8 hours. This medication should start having effects on other parasites within 1 to 2 days. Your animal’s clinical signs should begin to improve after that time. The effects of this medication are long-lived, meaning they may last for multiple (ie, 4 to 6) weeks, although they may be prolonged if your animal has decreased kidney and/or liver function.

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 spinosad, milbemycin, or other avermectin drugs (eg, ivermectin, selamectin).

This drug should be used WITH CAUTION in patients:

- That have not been tested for heartworm infection. Shock-like reactions can occur if milbemycin is given to animals with heartworm infection.
- That are pregnant, nursing, or used for breeding; safe use in these animals has not been determined.
- With a seizure disorder (eg, epilepsy).
- Less than 8 weeks old and that weigh less than 5 lb (dogs); safe use in these animals has not been determined.

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

What are the side effects of this medication?

In dogs, spinosad with milbemycin is usually tolerated well.

**Common but not serious side effects include:**

- Vomiting, diarrhea.
- Excessive salivation (drooling).
- Itching.
- Trembling.
- Depression, lack of energy.
- Reduced appetite.
- Skin reddening.

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:**

- Stumbling, incoordination, weakness.
- Seizures (convulsions).

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

If my animal 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 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 spinosad with milbemycin combination product is given once a month.
- The chewable tablets are usually willingly eaten by dogs when offered just before feeding. Alternatively, the tablets can be mixed in food or given like other tablet medications.
- If vomiting occurs within an hour of administration, re-dose with another full dose.

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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. If you want to stop giving this medication, talk to your veterinarian, as there may be important reasons to continue giving it.

Treatment with fewer than 3 monthly doses after the last exposure to mosquitoes may not provide heartworm prevention.

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 chewable tablets well out of reach of children and animals.

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

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 spinosad with milbemycin 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 leftover medication for future use or give it to others to use.

What other information is important for this medication?

Treatment with spinosad with milbemycin may begin at any time of the year, preferably starting 1 month before fleas or mosquitoes become active and continuing monthly through the end of mosquito or flea season. In areas where fleas or mosquitoes are common year-round, monthly treatment should continue the entire year without stopping.

To reduce the chance of flea reinfestation, all animals in the household must be treated with an approved flea protection product.

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 about this medication, contact your veterinarian or pharmacist.