



## Rabbits & Rectal Temperature

Maintenance of normal body temperature is critical because decreases in body temperature affect every organ system. Rabbits have a high surface-area-to-volume ratio, which makes them susceptible to rapid changes in body temperature. The hypothesis of this study was that rabbits hypothermic on admission to an exotics-only hospital would have an increased risk for death compared to normothermic rabbits. A rabbit was considered normothermic if its rectal temperature was between 38.0°C (100.4°F) and 39.9°C (103.8°F). Hypothermia was defined as a rectal temperature  $\leq 37.9^\circ\text{C}$  ( $\leq 100.2^\circ\text{F}$ ).

During the study period, 316 rabbits were hospitalized and owners were contacted 7 days later for follow-up. Of these, 61.1% were normothermic, 36.7% were hypothermic, and 2.2% were hyperthermic at the time of hospital admission. Of the 316 rabbits, 95 (30.1%) died during hospitalization or within 7 days of discharge. Rabbits with hypothermia were 3 times more likely to die before or within 1 week of discharge than nonhypothermic rabbits. Older age, suspicion of systemic disease, and GI stasis were significantly associated with risk for death. The authors conclude that rectal temperature at admission is a significant prognostic indicator for hospitalized rabbits and should always be part of physical examination.

### Commentary

The results highlight how important it is to measure rectal temperature on intake, especially for any rabbit not clinically well. Clinicians should not be stopped by the fear of stress or possible trauma to the rabbit; having adequate numbers of properly trained team members to assist with rabbits can minimize these concerns. As a clinician, I routinely use rectal temperature to assess how severely compromised the patient is and decide how aggressively to pursue diagnostics and treatment. Rectal temperature can be especially helpful in cases of GI stasis, as it can indicate a response to treatment.—Karen A. Moriello, DVM, DACVD

### Source

Di Girolamo N, Toth G, Selleri P. Prognostic value of rectal temperature at hospital admission in client-owned rabbits. *JAVMA*. 2016;248(3):288-297.

### Caution

Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

### Indications

SENTINEL<sup>®</sup> SPECTRUM<sup>®</sup> (milbemycin oxime/lufenuron/praziquantel) is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*; for the prevention and control of flea populations (*Ctenocephalides felis*); and for the treatment and control of adult roundworm (*Toxocara canis*, *Toxascaris leonina*), adult hookworm (*Ancylostoma caninum*), adult whipworm (*Trichuris vulpis*), and adult tapeworm (*Taenia pisiformis*, *Echinococcus multilocularis* and *Echinococcus granulosus*) infections in dogs and puppies two pounds of body weight or greater and six weeks of age and older.

### Dosage and Administration

SENTINEL SPECTRUM should be administered orally, once every month, at the minimum dosage of 0.23 mg/lb (0.5 mg/kg) milbemycin oxime, 4.55 mg/lb (10 mg/kg) lufenuron, and 2.28 mg/lb (5 mg/kg) praziquantel. For heartworm prevention, give once monthly for at least 6 months after exposure to mosquitoes.

Dosage Schedule				
Body Weight	Milbemycin Oxime per chewable	Lufenuron per chewable	Praziquantel per chewable	Number of chewables
2 to 8 lbs.	2.3 mg	46 mg	22.8 mg	One
8.1 to 25 lbs.	5.75 mg	115 mg	57 mg	One
25.1 to 50 lbs.	11.5 mg	230 mg	114 mg	One
50.1 to 100 lbs.	23.0 mg	460 mg	228 mg	One
Over 100 lbs.	Administer the appropriate combination of chewables			

To ensure adequate absorption, always administer SENTINEL SPECTRUM to dogs immediately after or in conjunction with a normal meal.

SENTINEL SPECTRUM may be offered to the dog by hand or added to a small amount of dog food. The chewables should be administered in a manner that encourages the dog to chew, rather than to swallow without chewing. Chewables may be broken into pieces and fed to dogs that normally swallow treats whole. Care should be taken that the dog consumes the complete dose, and treated animals should be observed a few minutes after administration to ensure that no part of the dose is lost or rejected. If it is suspected that any of the dose has been lost, redosing is recommended.

### Contraindications

There are no known contraindications to the use of SENTINEL SPECTRUM.

### Warnings

Not for use in humans. Keep this and all drugs out of the reach of children.

### Precautions

Treatment with fewer than 6 monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention.

Prior to administration of SENTINEL SPECTRUM, dogs should be tested for existing heartworm infections. At the discretion of the veterinarian, infected dogs should be treated to remove adult heartworms. SENTINEL SPECTRUM is not effective against adult *D. immitis*.

Mild, transient hypersensitivity reactions, such as labored breathing, vomiting, hypersalivation, and lethargy, have been noted in some dogs treated with milbemycin oxime carrying a high number of circulating microfilariae. These reactions are presumably caused by release of protein from dead or dying microfilariae.

Do not use in puppies less than six weeks of age.

Do not use in dogs or puppies less than two pounds of body weight.

The safety of SENTINEL SPECTRUM has not been evaluated in dogs used for breeding or in lactating females. Studies have been performed with milbemycin oxime and lufenuron alone.

### Adverse Reactions

The following adverse reactions have been reported in dogs after administration of milbemycin oxime, lufenuron, or praziquantel: vomiting, depression/lethargy, pruritus, urticaria, diarrhea, anorexia, skin congestion, ataxia, convulsions, salivation, and weakness.

To report suspected adverse drug events, contact Virbac at 1-800-338-3659 or the FDA at 1-888-FDA-VETS.

### Information for Owner or Person Treating Animal

*Echinococcus multilocularis* and *Echinococcus granulosus* are tapeworms found in wild canids and domestic dogs. *E. multilocularis* and *E. granulosus* can infect humans and cause serious disease (alveolar hydatid disease and hydatid disease, respectively). Owners of dogs living in areas where *E. multilocularis* or *E. granulosus* are endemic should be instructed on how to minimize their risk of exposure to these parasites, as well as their dog's risk of exposure. Although SENTINEL SPECTRUM was 100% effective in laboratory studies in dogs against *E. multilocularis* and *E. granulosus*, no studies have been conducted to show that the use of this product will decrease the incidence of alveolar hydatid disease or hydatid disease in humans. Because the prepatent period for *E. multilocularis* may be as short as 26 days, dogs treated at the labeled monthly intervals may become reinfected and shed eggs between treatments.

Manufactured for: Virbac AH, Inc.  
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