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# Can Ivermectin Be Given to Collies?

Is Ivermectin safe for collies and similar breeds with the MDR1 gene mutation?

By [LORIE HUSTON](#) | Updated on 05/31/22



Reviewed by [AMY FOX](#)



Purple Collar Pet Photography / Getty Images

[Ivermectin](#) is one of the most commonly used [heartworm prevention](#) medications used for dogs. It is present in many different heartworm products, including Heartgard Plus®, Iverhart Plus®, Iverhart Max®,

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and others. Ivermectin is an antiparasitic drug used to



Collies and other herding breeds such as border collies, Old English sheepdogs, and Shetland sheepdogs are more likely to have the MDRI gene mutation, putting them at higher risk for toxic effects if given Ivermectin, as well as certain other drugs. Is it safe to use an Ivermectin-based product to prevent heartworm infections in these dogs?

## Collies and Ivermectin Safety

Ivermectin, when dosed at the low dosage necessary to *prevent* infection from heartworms, is generally considered to be safe even for dogs with the MDRI gene mutation.

### WARNING

However, at *higher dosages* used for dogs with other medical conditions, these breeds may be more susceptible to serious side effects. Owners need to know the facts about Ivermectin toxicity as it could end up saving a dog's life.

## Ivermectin Toxicity

Ivermectin may not be safe for collies and similar herding breeds at higher dosages that would be safe in other dogs. The increased sensitivity of these breeds is a result of a mutation of the MDRI (multi-drug resistance) gene. Not every collie and herding dog has this mutation, but on average, about 70% of collies in the US have the mutation. Dogs with this genetic defect lack a certain protein that prevents Ivermectin and certain other drugs from being flushed from the brain and other organs so that it builds up at higher concentrations—this can happen quickly or over a period of time.

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[for this gene mutation](#) that can be performed to determine whether an individual dog carries this gene mutation or



to their offspring. For these reasons, it is a good idea to have any herding dog tested for the mutation to make careful medical and breeding decisions.

## Symptoms of Ivermectin Toxicity

Dogs with sensitivity to Ivermectin can show symptoms of toxicity within 4 to 6 hours of exposure. These include:

- **Neurologic signs:** severe neurologic signs are the most serious and concerning side effects dogs may experience, which include shaking, disorientation, stumbling, seizures, and even coma.
- **Pupil Dilation:** One of the most common early symptoms is the dilation of the pupils and increased sensitivity to light. This can progress to blindness.
- **Appetite and Digestive Problems:** Affected dogs may experience inappetence, vomiting, and/or diarrhea. Without treatment, this can result in dehydration. Dogs may also drool excessively.
- **Motor Impairment:** As the symptoms progress, dogs can fall or stagger as they stand or walk. They can also seem disoriented and unresponsive to you.
- **Lethargy:** Lack of energy is another early indication of toxicity. Your dog may be unable to get up or have difficulty walking as well.

## Treatment for Ivermectin Toxicity

The MDR1 gene mutation cannot be treated or cured, however, your dog can be treated for symptoms of toxicity to a drug like Ivermectin. Your veterinarian will try to manage the symptoms your dog is experiencing. You should also provide supportive care like giving your dog fluids, other

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requires referral to a specialty hospital with specialized equipment. A full recovery can take days to weeks and requires intensive care. For these reasons, it is best to be cautious with herding breeds and discuss any possible concerns with your veterinarian prior to drug administration.

*If you suspect your pet is sick, call your vet immediately. For health-related questions, always consult your veterinarian, as they have examined your pet, know the pet's health history, and can make the best recommendations for your pet.*



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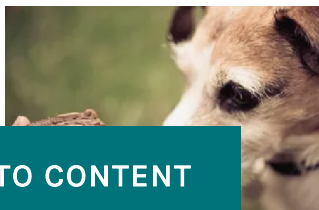
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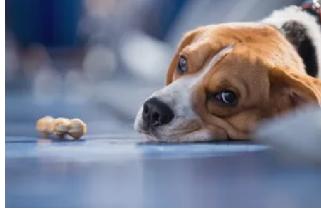


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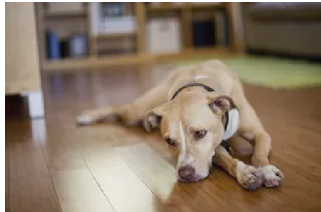
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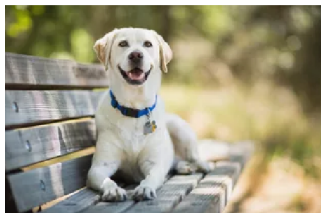
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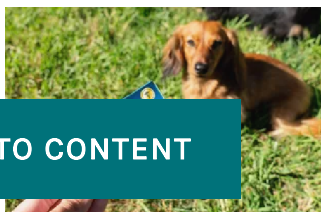


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## Ivermectin for Dogs

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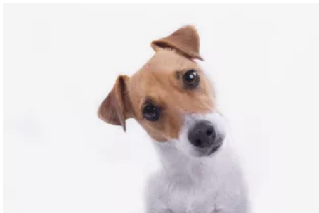
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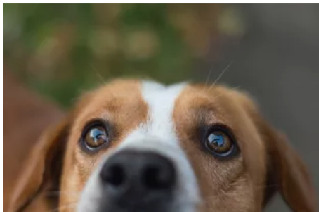
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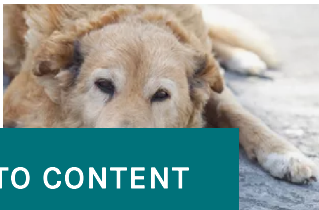
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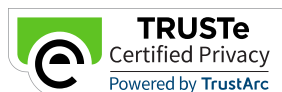
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