



Australian Shepherd Health & Genetics Institute, Inc



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Multi-Drug Resistance 1 (MDR1) Gene Mutation

Carrying even one copy of the mutation of the gene called Multi-Drug Resistance 1 (MDR1) can make a dog sensitive to certain medications, sometimes to the point of serious neurological illness or death. Fortunately, there is an extremely accurate DNA test that will let you know whether your dog has this mutation.

The mutation is so common in Australian Shepherds (roughly half have at least one copy) that *all* of them, and even Aussie-mixes should be tested. There is only one exception: If *both* parents of a dog have tested clear (no copies of the mutation) they cannot pass on the gene and their offspring will not need to be tested. The test only needs to be done once.

If your dog's test results show it has one or two copies of the mutation, keep a copy of the results and a copy of the [drug list](#) on file. Give copies of both these documents to any veterinarian that treats your dog and instruct him/her to place it in your dog's file and not to administer any of the listed drugs without your express permission.

Ivermectin was the first drug recognized to cause a reaction, but it is not the only one. Ivermectin at low dosage, as in heartworm medications, will not cause a reaction. Other common drugs to avoid include acepromazine (a tranquilizer) and Imodium. Fortunately, there are alternative medications available if your dog requires them.

This site offers a "medic alert" type collar tag for MDR1 dogs and has more extensive drug list, including alternate and generic names: www.busteralert.com

Get your Aussie tested for MDR1. His life could depend on it!