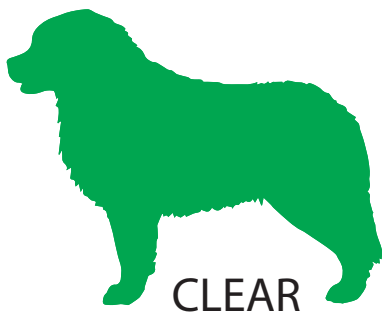


# BERNESE MOUNTAIN DOGS - DEGENERATIVE MYELOPATHY



An allele is an alternative form of a gene. Bernese have three alleles of the SOD1 gene:

- n – clear of any mutation
- A – the SOD1-A mutation (or exon 2)
- B – the SOD1-B mutation (or exon 1)

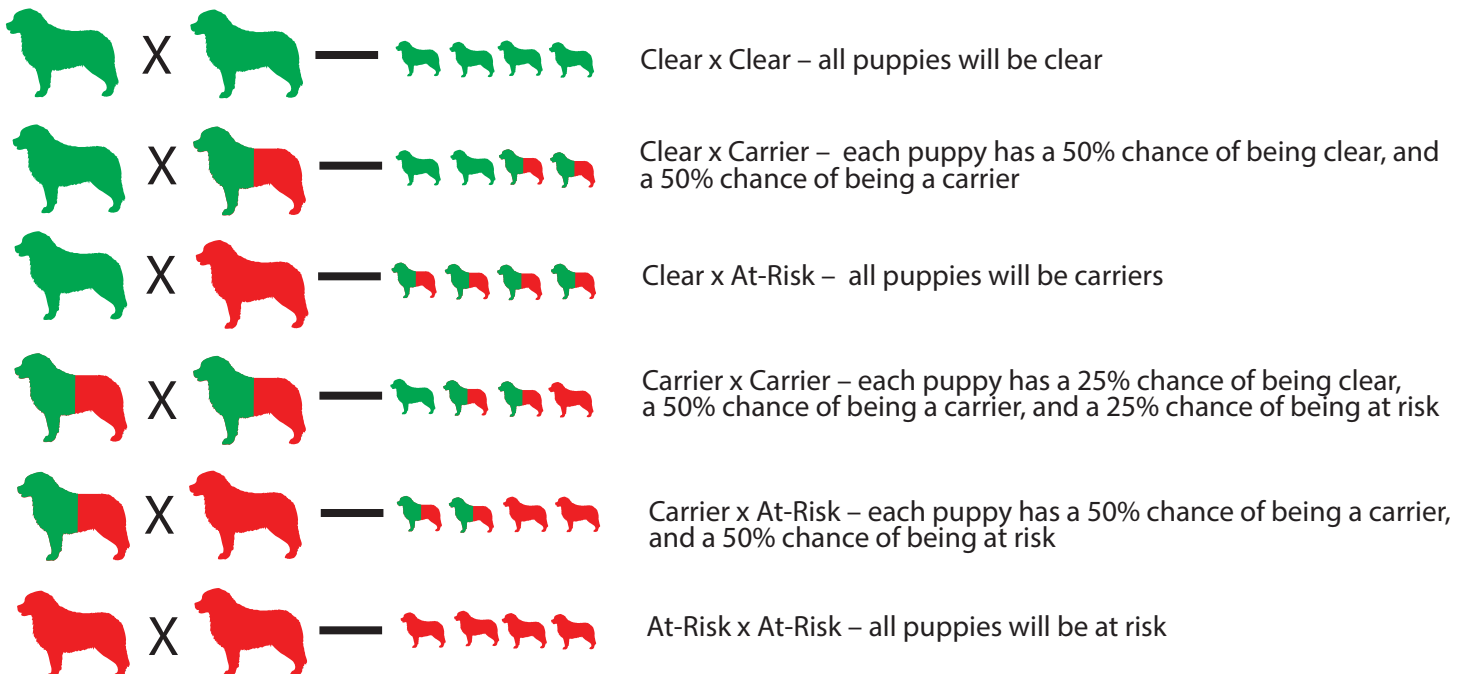
Then we have three types of dogs:

- clear of any mutation
- carrier – one mutated copy of the SOD1 gene (either A/n or B/n\*)
- at-risk – both SOD1 genes have a mutation (either A/A, B/B, or A/B)

*\* In Bernese it has been determined that the SOD1 gene will have either the A or B mutation, not both. If a Berner is at risk for SOD1-A (both copies of the SOD1 gene have the A mutation), then the DNA test for the SOD1-B mutation does not need to be done, and vice versa.*

## - MATING PAIRS -

**There are six possible combinations, and each combination has four possible outcomes:**



Also see: [http://www.bmdinfo.org/Health/Degenerative\\_Myelopathy\\_Bernese\\_Mountain\\_Dog\\_Breeding\\_Strategy.pdf](http://www.bmdinfo.org/Health/Degenerative_Myelopathy_Bernese_Mountain_Dog_Breeding_Strategy.pdf)

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