



SHAKING PUPPY SYNDROME (SLEM): INFORMATION FOR BREEDERS AND OWNERS OF BORDER TERRIERS

WHAT IS SLEM?

Shaking Puppy Syndrome or SLEM (spongiform leucoencephalomyelopathy) is an inherited neurological disorder of Border Terriers. It affects puppies in the first few weeks of life when they start to move around the whelping box and attempt to stand and bear weight. The limbs shake and the body sways from side to side. Sadly, most of these puppies are humanely euthanased when they show these severe neurological signs.

HOW IS IT INHERITED?

SLEM is a recessive gene mutation. This means that in order for a puppy to be affected, it must inherit the mutant gene from both parents. Every individual carries two copies of the gene and passes on one or the other of them to each offspring. Because of this, there are three possible combinations of genes:

Clear: The dog has inherited a normal copy of the gene from both parents

Carrier: The dog has inherited a normal copy of the gene from one parent and a mutant gene from the other parent.

Affected: The dog has inherited a copy of the mutant gene from each parent. These will be Shaking Puppies

The only way to differentiate Clear and Carriers is by DNA testing, and we are so thrilled that such a test has become available.

WHAT DOES THIS MEAN FOR PET OWNERS?

Firstly, please be assured that healthy Border Terriers will not develop SLEM later in life. So if you have a pet that is desexed and/or not intended for breeding you do not need to do anything, nor do you need to worry. Your dog may have inherited a mutant gene from one parent, making it a carrier, or it may have received normal genes from both parents, making it a clear. Either

way, your dog is not affected by SLEM. Of course if you want to test just so you know the result, of course you can. But the main purpose of testing is to prevent SLEM puppies from being produced in the future.

WHAT DOES THIS MEAN FOR BREEDERS?

DNA testing of all dogs intended for breeding is crucial, and there are straightforward guidelines to help you make the correct decisions.

We are thankful to Brigitte Belin (Glen Mara Border Terriers, France) for allowing us to adopt her guidelines as the recommendations to our members - see box below.

DNA TEST FOR SLEM

A DNA test has been developed and was released by Animal Health Trust (UK) on 9th October 2017. This is a simple cheek swab test. Information regarding purchase of test kits, submission of samples and cost can be found on their web site.

<http://www.ahtdnatesting.co.uk/>

VETERINARY VERIFICATION

On the submission form, there is provision for veterinary verification but it is not mandatory for testing by AHT.

It is up to each individual to decide whether or not to go to the extra step of veterinary verification. If the testing is for personal use, then there is no need for verification. But if there is a potential in the future for test results to be included on official registers, including ANKC, then veterinary verification may be required.

REGISTER OF TEST RESULTS

At this stage the Border Terrier Club of NSW Inc is not planning on holding a club based register of tested dogs. Instead, our aim is to achieve accreditation with ANKC and ultimately achieve mandatory requirement for testing.

SLEM: Recommended Protocols For Breeding and Testing. **By Brigitte Belin**

With a DNA test available now , there is NO Excuse for producing unsafe litters
Status that may produce affected, carriers or clears (resulting pups need to be tested):

- Not Tested to Not Tested
- Carrier to Not Tested
- .Carrier to Carrier

Status that will produce carriers or clears (resulting pups need to be tested)

- Not Tested to clear
- Carrier to clear

Status that will produce only clears (resulting puppies do not need to be tested)

- Clear to Clear

These puppies are clear by parentage

WHO SHOULD TEST?

Owners of Show Winning Dogs

It is easy to lay the blame for irresponsible breeding on pet owners. However show winning dogs are in demand for breeding and males are very likely to be used widely at stud. This means they have a far greater influence on the general health of the population, therefore owners of top winning dogs should be leading the way.

Owners of Stud Dogs

Stud dog owners have a responsibility to the breed to know not only the status of their own dog but also that of any bitches brought to them and refuse to mate any unsafe pairings.

Why not take a proactive stance and promote yourself as a 'safe' breeder? Get the dog tested then only allow known safe breeding combinations better still, test your stud AND insist that you will only allow a mating with a tested bitch as that will encourage others to test.

Owners of dams

Ensure you know the status of both your own dog and that of any prospective studs. Dogs should not be mated unless you can guarantee that no affected pups will be born.

Breeders of apparently affected puppies

Test will be the best and only way to confirm the condition

Sadly, experience suggests that you cannot always take the word of the owner.
Test Results will be the only safe guarantee.