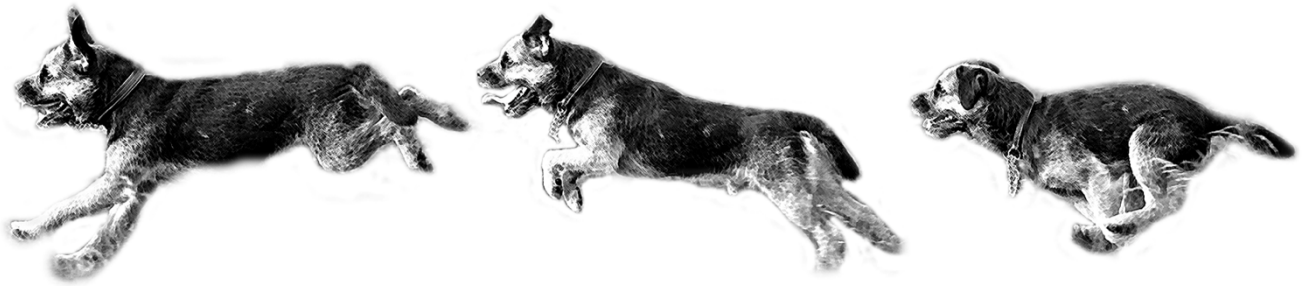


## Border Terriers: Health Matters



### HEALTH AND PEDIGREE DOGS

Like humans, dogs suffer from a wide range of health conditions. Again, as in our own species, some of these conditions may be genetic in origin. There has been a lot of adverse publicity concerning genetic health problems in pedigree dogs and many people are now worried that buying a purebred animal may mean health issues for the dog and emotional and financial distress for the owner.

In fact, one of the main advantages of pedigree dogs is that the animal is a lot more predictable in terms of appearance, temperament and also any health issues which may be encountered.

Mongrels can also suffer from inherited health problems and are a lot less predictable as regards to temperament and appearance.

### HEALTH AND THE BORDER TERRIER

The Border Terrier, bred originally to be capable of withstanding the rigours of hunting in all weathers, has long enjoyed a reputation for longevity and good health. That this reputation is well-founded is borne out by a number of surveys including a major one conducted by the Kennel Club for all breeds. Additionally, since 2001 Professor Steve Dean has been collating health data on behalf of all the Border Terrier Clubs. This is an ongoing survey into the health of the breed and is reviewed by Professor Dean on an annual basis. If anyone owns a Border Terrier we would be very pleased if you wished to participate in this survey, even if your Border is healthy. Questionnaires may be obtained from the Discover Dogs stand or downloaded from the Breed Health Site [www.borderterrierhealth.org.uk](http://www.borderterrierhealth.org.uk) They can also be completed on line from the home page of the Health website or from this link: <https://borderterrierhealth.org.uk/health-survey-form.html> Only Professor Dean has direct access to the data so confidentiality is assured.



The results of the latest Kennel Club survey, published in 2016, gave a median life expectancy for Border Terriers of twelve years, a full two years longer than the median life expectancy of all breeds. This is however two years less than that recorded in 2006 but would confirm that Borders are likely to live to an advanced age. Across all breeds the commonest causes of death were: cancer, old age and cardiac disease. In Border Terriers the top three were: old age, trauma and cancer. The high incidence of trauma-related deaths could be attributed to the breed's independent streak and their ability to "switch off" to their owner's commands when distracted, leading to road deaths and other accidents. As many of the trauma related deaths occur in younger dogs this could help explain the apparent reduction in average life expectancy. Of all the classes of illness surveyed only neurological problems were present in Border Terriers at a level slightly higher than the mean average for these conditions across all breeds.

## THE KENNEL CLUB'S REVIEW OF ALL BREED STANDARDS

In the latter part of 2008, in an attempt to improve the health of pedigree dogs, the Kennel Club carried out a review of the Breed Standards for all breeds. This was an ongoing review, as various amendments have been made to certain Breed standards over the years, always with the health and welfare of the dogs in mind. A Breed Standard is like a "blue print" against which judges measure individual dogs. The purpose of this review was to remove any clauses which might encourage exaggeration of any bodily feature for example, body-length, eye shape etc, which could impact on the health and well-being of the dog. As mentioned earlier, the Border Terrier was originally bred to be a tough, athletic, working dog which was "capable of following a horse, combining activity with gameness." Thus there was nothing within the Breed Standard to encourage any exaggeration. We have fared better than many other breeds in this review in that the only alteration to our standard has been a universally applied introductory paragraph encouraging judges to be mindful of any potentially damaging exaggeration when judging. The full Border Terrier Breed Standard can be found on our website: [www.theborderterrierclub.co.uk](http://www.theborderterrierclub.co.uk).

## THE ANIMAL HEALTH TRUST

The Animal Health Trust ("AHT") is an internationally respected charity which has been at the forefront of canine medical research for over 60 years. Their Canine Genetics Group has developed DNA marker tests for a number of genetic diseases and is researching further conditions. The Kennel Club Charitable Trust provides generous financial support for this research and a partnership between the two organisations aims to accelerate this work over the forthcoming years.

**2016 saw the launch of the Give a Dog a Genome project**, an exciting initiative aimed at mapping the genome of as many breeds of dog as possible. The Kennel Club Charitable Trust is donating one thousand pounds per breed towards this project, this donation being equaled by the participating breeds. All seven of our Breed Clubs could see the value of this research and were happy to contribute in order that the Border Terrier could be one of those breeds studied in the first phase of the project.

**There is little difference in the basic genome of different breeds of dog** and by finding the location of a gene in one breed we will normally find it in the same location in any other. Determining the sequence of "normal" genes allows us to work out those which are abnormal and responsible for disease and facilitates the development of DNA tests which allow us to identify not only those dogs which will suffer from a disease but also those which although clinically normal carry these defective genes.

## CODE OF ETHICS

Keen to promote the breeding of healthy dogs, the Kennel Club has introduced a standardised Code of Ethics, to be adopted by all breeds. The Code of Ethics lists the responsibilities of owners and breeders towards their dogs and includes paragraphs relating to breeding. In the case of the Border Terrier Club, we have permission from the Kennel Club to add extra paragraphs onto the basic code and it can be found in full on our website: [www.theborderterrierclub.co.uk](http://www.theborderterrierclub.co.uk) Club members who do not abide by this code risk expulsion.

**The Border Terrier Club's Code of Ethics was amended to add the following words at our Annual General Meeting in March 2018**, to encompass use of the tests for SLEM/Shaking Puppy Syndrome (see page 3), recently approved by the Kennel Club and any other tests which may become available for the breed in the future:

### ***Members will:***

- a) *Ensure that all of their dogs to be used for breeding undergo all health screening tests recommended from time to time by the Border Terrier Breed Health Group (BHG).*
- b) *When such tests become officially recognised by the Kennel Club they will be automatically reported in KC publications and on the KC website. Until such time as the tests are officially KC recognised, all*

*such results should be reported to the Breed Health Co-ordinator and permission should be given for them to be published on the BHG Website and any officially published club register.*

- c) *When breeding dogs, use the test results in accordance with breeding recommendations published on the BHG Website.*

## **ASSURED BREEDERS SCHEME**

Another initiative from the Kennel Club is the Assured Breeders Scheme. Again designed to promote the responsible breeding of healthy dogs, assured breeders must fulfil a number of criteria and are open to inspection from the Kennel Club. Full details may be found on the Kennel Club website at [www.kennelclub.org.uk](http://www.kennelclub.org.uk). Buying a puppy from someone who is a member of this scheme, or a member of a breed club, should help to ensure that you acquire a pup which has been well reared and bred with health and temperament in mind.

**The Kennel Club asked Breed Clubs to review the health of their Breeds:** In the latter part of 2008, the Kennel Club wrote to all the breed clubs providing them with data from its own health survey along with information supplied from Agria Pet Insurance listing the most common cause of insurance claims for each breed. Additionally, details were supplied of health conditions reported within specific breeds in scientific literature. Breed Clubs were invited to submit their response to this. After the information provided was reviewed by Prof. Steve Dean BVet Med, MRCVS, DVR and Mr. Eddie Houston, BVMS, MRCVS, both Veterinary Surgeons who at that time were Chairs of the Southern Border Terrier Club and the Border Terrier Club respectively, they formulated a reply. This was done on behalf of all seven Border Terrier clubs. Professor Dean was also formally announced as the Breed Health Coordinator.

**The responses to the ongoing Breed Health Survey** would seem to mirror those of the Kennel Club one, confirming that the breed has good general health status.

**The commonest conformational defects reported are:** retained testes (7%); tail kinks(3%) and undershot jaw(3%). A low incidence of deafness, cataracts and heart murmurs are reported, mainly associated with age. Occasional orthopaedic issues such as Perthe's disease, hip dysplasia and rupture of the anterior cruciate ligament have also been reported.

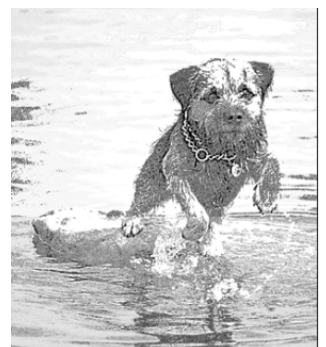
**When asked to comment on conditions prevalent in the breed which could possibly be of genetic origin the following were listed:** 1/ Age related cataract, 2/Demodectic mange, 3/Seizures including Canine Epileptoid Cramping Syndrome (CECS) and 4/Liver shunt. It should be noted that none of these conditions occur at a level above the all breed average.

**The conditions most likely to impact on general health and welfare in the breed were not those listed above but were:** 1/ Old age, 2/Trauma, 3/Alimentary problems (gingivitis, gastritis, colitis), 4/Skin disease including ear problems and 5/Cancer (non-specific).

**In recent years two neurological conditions, Spongiform-Leuco-Encephalo-Myelopathy (SLEM) aka Shaking Puppy Syndrome (SPS) and Paroxysmal Gluten Sensitive Dyskinesia (PGSD) aka Canine Epileptoid Cramping Syndrome(CECS) have been under investigation.**

**A major advance in 2017 has been the development of a DNA test for SLEM/SPS;** this is an uncommon neurological condition which normally becomes apparent at 2-3 weeks of age although a few rare cases haven't presented until 8-12 weeks. It is thus unlikely to pose a problem to puppy buyers but is something which breeders must address.

Affected pups have uncontrollable muscle tremors, particularly of the hindquarters and most die or are euthanised. With careful nursing a few of those less severely affected can be reared and may show improvement with maturity although their mobility is unlikely to be fully normal. Affected pups which survive should never be bred from.



**SLEM/SPS has now been shown to be due to a single autosomal recessive gene.** This means that for a pup to be born with SLEM it must inherit a copy of the defective gene from both parents. With the advent of the new DNA test breeders can now select pairings which will prevent the birth of affected pups and we would encourage breeders to test all breeding stock.

- Dogs which test CLEAR** do not possess the mutant gene and cannot therefore pass it on to their offspring.
- Dogs which test as CARRIER** are clinically normal but have one normal copy of the gene and one mutant copy. On average, taken over a number of matings, half of their pups will inherit the mutant gene and if mated to another CARRIER there is a 25% chance of any of the resulting pups being affected by SLEM.
- Dogs which test as AFFECTED** have inherited a copy of the mutant gene from both parents and **will** develop the condition. The test can be used to confirm the diagnosis in puppies. At a practical level if one parent has tested CLEAR no affected pups will be born but if the other parent is untested or a CARRIER then any pups should be tested before they are used for breeding.

**Two CARRIERS should never be mated together nor should a CARRIER be mated to an untested animal unless it is clear by parentage.**

**The DNA testing is being carried out by the Animal Health Trust** and results of all UK based dogs which have been tested are published by the Kennel Club. Links to these may be accessed via the Breed Health Site on [www.borderterrierhealth.org.uk](http://www.borderterrierhealth.org.uk) and on the KC website at <https://www.thekennelclub.org.uk/health-for-breeders/dna-screening-schemes-and-results/dna-screening-for-breeds-a-b/border-terrier-dna-screening/>

**One of the main current areas of research is regarding Paroxysmal Gluten Sensitive Dyskinesia (PGSD)/Canine Epileptoid Cramping Syndrome (CECS).** This remains an uncommon condition within the breed in the UK although the precise incidence is unknown. We are now much closer to understanding the aetiology of the disease and there is hope that a genetic marker may be found to identify dogs which may be affected. On the Home Page of the BHG website (<https://borderterrierhealth.org.uk/index.html>), there is an announcement (**September 2019**) that the Animal Health Trust ("AHT") is now almost ready to go live with a survey into PGSD/CECS and sample collection for this study. Further information on the study will shortly be issued by the AHT research team in the form of a flyer. It will give all of the information people need to know about who can take part and how. As soon as it is released, details will be given on the Border Terrier Breed Health Group Website. It has long been suspected that dietary factors are involved in PGSD/CECS and recent studies suggest a similarity between the condition and coeliac disease in humans with gluten appearing to be the trigger for episodes in some dogs, these animals either ceasing to have episodes or having them far less frequently when fed on a gluten-free diet.

**A Breed Health Group ("BHG") was set up in 2016** to assist Professor Dean in monitoring emerging health issues and he continues to manage the ongoing breed health survey and will keep us informed of any changes which may occur.

## **NEWS FROM THE BREED HEALTH GROUP**

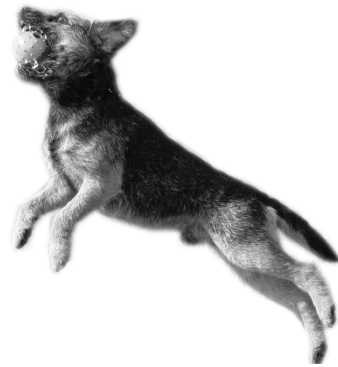
**A number of conditions are being flagged as significant in the breed**, some in the UK and some elsewhere. These include Juvenile cataracts (Early onset), Cushing's disease, Gall Bladder Mucocoele, Glioma (brain tumour) and Legge-Calve-Perthe's Disease (Perthe's Disease). Anyone with information of confirmed cases of these conditions in Border Terriers is requested to send their information please, to the Border Terrier Breed Health Co-ordinator Professor Steve Dean at [stevedean@tyrianborder.com](mailto:stevedean@tyrianborder.com). Confidentiality will be respected if requested.

The Breed Health Group website now has a separate page, added in **September 2019**, dedicated to information about **Gall Bladder Mucocele (“GBM”)**, which can be viewed at <https://borderterrierhealth.org.uk/gbm.html> This describes the condition and gives details of which breeds have previously been most affected (Shetland Sheepdog, Cocker Spaniel and Miniature Schnauzer) to which, sadly, the Border Terrier must now be added. It advises that Borders with other disorders (especially those with Cushing’s) are at increased risk of developing GBM, lists the symptoms, how it is diagnosed and how diagnosis has improved now that ultrasound scans are being used. It also gives the treatment options and stresses that early diagnosis is essential for a good outcome, as mortality rates are much higher in very ill patients. There is also a study being undertaken at Willow Referral Centre and people whose Border Terriers have been diagnosed with this, are asked to complete an on-line survey which can be accessed at [https://www.surveymonkey.com/r/border\\_terrier\\_gall\\_bladder\\_study](https://www.surveymonkey.com/r/border_terrier_gall_bladder_study). The BHG also request that owners consider completing a Health Questionnaire which is also available to complete on-line on the BHG website.

## FINALLY

No breed of dog, indeed no living creature, is completely healthy. However, the Border Terrier appears to be one of the healthiest breeds in existence. Most go through their lives without requiring a great deal of veterinary intervention but

no animal is guaranteed good health. These days it is worth considering Pet Health Insurance for any dog though the owners of Border Terriers will hopefully not need to claim too often. Given average luck, a well-bred, properly reared and trained Border Terrier will be a healthy and active member of your family for many years. If not allowed to run to fat most stay active into old age and enjoy participating in all family activities. They will walk for miles, participate in agility, play ball with the children or snuggle up to you on the settee. A versatile little terrier with a true zest for life.



**Eddie Houston BVMS, MRCVS, Chairman, The Border Terrier Club.** Compiled by and on behalf of The Border Terrier Club February 2009, for Discover Dogs at Crufts March 2009.

**Latest update 10/19.** Professor Dean’s Health update is published annually and may be found on the Breed Health Group website at [www.borderterrierhealth.org.uk](http://www.borderterrierhealth.org.uk) and/or in the Club’s current Year Book.

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With thanks to Professor Steve P Dean, BVetMed, MRCVS, DVR (Breed Health Coordinator).

Thanks also to Joyce Martin of Joyce Martin Photography ([www.k9.joycemartin-photography.co.uk/](http://www.k9.joycemartin-photography.co.uk/)) for the illustrations used in this leaflet.