

# **BOSTON TERRIER EYE DISEASE**

## **Corneal Ulcers and Prevention**

Corneal Ulcers are the single largest eye problem in Boston Terriers. Perhaps 1 dog in 10 will experience a corneal ulcer sometime during its life based on the 1903 dogs surveyed in the 2000 Boston Terrier Health Survey. The Boston Terrier Standard for the Breed calls for eyes to be "wide apart, large and round and dark in color. The eyes are set square in the skull and the outside corners are on a line with the cheeks as viewed from the front". The ideal Boston Terrier eye does not protrude but is "set square in the skull".

Unfortunately the Boston eye is fairly prone to eye injury because of its large size and prominence. Corneal ulcers are caused initially by injury to the eyes.

The common practice of removing Boston Terrier whiskers may be a reason that eyes become injured due to lack of sensory feelers. Some breeders do not trim whiskers once a dog's show career is finished because they know that whiskers can prevent injury to the eye.

There are a number of external reasons why an injured eye doesn't heal. These may include irritation from eyelashes or from facial hairs, infection, and lack of moisture in the eye. Some of these reasons are hereditary. Internal reasons for an eye not healing include glaucoma and infection.

Corneal ulcers can be difficult and expensive to treat and often result in the loss of the eye. This is a case where an "ounce of prevention is worth a pound of cure".

Some of these reasons for lack of good healing are inherited problems that can be picked up in a CERF examination before a dog is bred.

### **Early Onset Cataracts**

These cataracts, which appear in dogs at a very early age, can lead to blindness in both eyes. Early onset cataracts can be removed but the operation is expensive. About 2.4 % of Boston Terriers are showing up with these juvenile cataracts based on the 2000 Health Survey of 1903 dogs. It is possible that as many as 26 % of Boston Terriers may now be carriers based on the Hardy-Weinberg Law, but since we do not have a truly random population there is no way of knowing for sure.. There is also no way of knowing which dogs are carriers until a genetic test is available.

### **Late Onset Cataracts**

Breeding to clear-eyed older dogs is the best way to avoid cataracts of old age. These cataracts appear to be genetic. Perhaps some day we will have a genetic test for them. About 9 % of Boston Terriers have these older age cataracts based on the 2000 Health Survey.

### **Cherry Eye**

Cherry eye occurs in about 6 % of Boston Terriers according to the 2001 Health Survey. This is because the tear gland may prolapse or bulge out. Surgery may be required to reposition the third eyelid and the tear gland. This is a congenital defect that has a breed predisposition. Mode of inheritance is unknown.

### **Corneal Dystrophy**

According to Dr. Julie Gionfrido, Diplomate ACVO, Boston Terriers have a form of endothelial dystrophy which usually begins in middle life (5 to 7 years) . Its mode of inheritance is unknown. This disease begins as a fluid build-up which causes the cornea to appear white. It begins at the edge of the cornea, progresses centrally and often involves the entire cornea. It can cause a painful corneal ulcer which is difficult to treat.

### **Glaucoma**

You should know that Glaucoma is not something that is checked for at a standard CERF examination. It affects about 1% of Boston Terriers according to our Survey. It is caused by pressure build up in the eye and can result in blindness.

### **Distichiasis**

Distichiasis is a condition where there are abnormally placed hairs on the inner surface of the eye lid. It can cause discomfort to a Boston and may cause corneal ulcers to develop. Corneal ulcers may not heal because of the irritation. Removal of the hairs is usually the solution.

### **Entropion**

Survey numbers show less than 1% of Bostons are affected by entropion. This is a condition in which the lower lid margins roll inward and causes the hair to rub against the eyeball. It can cause a reddened, inflamed eye and cause severe infections and deep ulcerated corneas. Simple surgery to the eye lid can usually take care of this problem which is also believed to be inherited.

### **Keratitis sicca**

This is another name for "dry eye" which occurs in 1 in 50 Boston Terriers very early in life. Inadequate tear production is the cause. It can result in painful and chronic eye infections. It is believed to be inherited but the mode of inheritance is unknown.

### **CERF EXAMINATIONS**

Why do the examination?

The Canine Eye Registry Foundation recommends annual eye examinations for dogs. Since there are almost 20 eye diseases in Bostons that are hereditary (Reference: Dr. George Padgett's "Control of Genetic Disease") it would seem prudent for breeders to have their puppy's eyes examined before they are placed in their new homes. An examination prior to breeding a dog for the first time would also be an excellent idea. Annual examinations in breeding stock are also well advised.

And most important, having your breeding dogs CERFed regularly and breeding only unaffected dogs will reduce genetic eye disease among Boston Terriers.

### **Why do the CERF registration?**

If your dog is registered with CERF it becomes a permanent record that other breeders can refer to when checking for genetic disease and looking at pedigrees. Your dog can be advertised with its CERF registration number. It shows that you support the mutual goal of eliminating heritable eye disease in purebred canines. It provides your puppy buyers and other breeders with proof of your integrity and commitment to maintaining the highest quality bloodlines.

### **How do I register my dog with CERF?**

Your dog must be examined by a canine ophthalmologist who is an ACVO Diplomate.. The examiner completes the form and indicates if any specific eye disease found. Dogs found to be unaffected by major heritable eye disease can then be registered with CERF. The owner must send the form in along with the appropriate fee. The registration is good for one year. Annual re-registration is necessary to maintain an up-to-date CERF registration.

References

**CERF Web site:** <http://www.greyhaven.com/cerf.htm>

American College of Veterinary Ophthalmologists (CERF), Ocular Disorders Presumed to be Inherited in Purebred Dogs, Revised, From the CERF Genetics Committee

Julie Gionfriddo, DVM, Diplomat ACVO

Corneal Dystrophy in Dogs, online article: [www.vet.purdue.edu/~yshen/dx2.html](http://www.vet.purdue.edu/~yshen/dx2.html)

Malcolm B. Willis BSc, PhD, Senior Lecturer in Animal Breeding and Genetics, Faculty of Agriculture, The University of Newcastle upon Tyne, U.K. Genetics of the Dog, Hardy-Weinberg Law pp292-4

BTCA Health Committee 2000 Health Survey of the Breed

George Padgett DVM, Professor of Pathology, Michigan State University, Control of Canine Genetic Diseases.

BTCA Health Committee