

PRA and the Labrador Retriever

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The Labrador Retriever is a breed of dog that is at risk for the development of a number of different hereditary eye diseases. One of the more devastating is a disease of the retina called PRA. In the prcd form of this disease cells in the retina degenerate and die eventually resulting in vision loss. Most dogs first show signs of decreased night vision indicating that the retinal rod cells are losing function. Later in the disease the cone cells of the retina lost their function and daytime vision is lost.

There are other retinal diseases and not all PRA is this prcd form, although it is the most common form in the Labrador Retriever. The Canine Eye Registry Foundation (CERF) maintains a data base of animals that have been examined by a board certified ophthalmologist and have been found to be free of vision damaging inherited disease. These CERF examinations should first be performed by 12 weeks of age to identify early onset retinal disease such as retinal dysplasia and should be continued on an annual basis to identify ocular changes that develop at a later date. Most ophthalmologists suggest that the CERF examination be continued annually on breeding animals at least until the eighth year of life.

It is known that the prcd form of PRA is a recessively inherited meaning that an affected animal inherits genes for the disease from both parents. Thus the parents of an affected dog are either carriers of the gene or affected themselves. Carriers of the disease are heterozygous for the gene (they have one normal and one abnormal gene). A normal dog is homozygous for normal genes (has two normal genes). The disease can be controlled by: (a) identifying affected dogs and eliminating them from breeding programs; (b) by identifying carrier dogs by pedigree analysis or genetic testing;) and, (c) hopefully, by identifying normal dogs. The available genetic test for PRA in the Labrador Retriever is the Optigen test. While a valid and worthwhile test, it is not a substitute for the annual CERF examination. The Labrador Retriever Club continues to recommend annual CERF examinations in all breeding Labradors. Inclusion in the CHIC program requires examination for hips, elbow and eyes with open disclosure of the results. Additional testing is encouraged, but is not required, for a CHIC certificate to be issued.

When buying a puppy or planning a breeding, it is wise to explore the CERF website. Animals that have a current eye examination with normal eyes will be listed and may be identified by either the registered name or the registration number. Ideally, all puppies will be examined for early onset ocular disease prior to being placed in a new home. Even in the worst case (a dog who develops prcd-PRA), the affected dog typically functions very well in a family setting and adapts to the vision loss with ease. The health clearances recommended by the LRC, Inc. are OFA hips, OFA elbow, and a current CERF exam. Labradors who have fulfilled this testing are awarded a CHIC number (Canine Health

Information Center) which is joint venture of the Orthopedic Foundation for Animals and the Canine Health Foundation.

The Labrador Retriever Club, Inc. encourages the use of all validated diagnostic modalities for the detection of inherited genetic problems in the Labrador Retriever Club. The Labrador Retriever Club support the use of OFA Data Bases, Penn Hip, CERF and other individual tests such as the test for CNM1, the Optigen tests for the prcd form of PRA in the Labrador Retriever, and the new test for EIC.